Grade 4
MATH
Fall STAAR™ Walk

80 Daily Learning Opportunities

"Journey of Knowledge"

Fall Semester

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Important Request to Amara Resource Purchasers:

Amara Publishing is not a large education conglomerate. It is a small group consisting of 4 public school teachers, 3 administrators and a graphic artist that teamed up and collaboratively created these resources. A tremendous amount of time, years of professional classroom work in both Title 1 and non-Title 1 schools, and extensive research went into the formation of Amara resources.

As every educator is acutely aware, classroom teaching requires a significant investment in time and preparation in both core lessons and lesson resources. The Amara educators that created these resources not only prepared for teaching in their classrooms but invested additional time away from the classroom to produce these resources as well. The purchase cost of any Amara resource does not yield a high profit margin. However, it is our hope and goal to provide quality resources at a low price per teacher and grade level, and that these curricular resources are effective for children's learning in all socioeconomic settings.

Piracy of copyrighted products is against the law, but there are ethical issues as well. If Amara resources are implemented at your school, please respect the Amara copyright and officially purchase the curriculum.

Thank you,

Amara

AMARA 4
EDUCATION

Introduction and Implementation – Bridge Resource

Thank you for purchasing an instructional product from Amara 4 Education.

This introduction is intended to:

- Enhance teacher understanding on the overall design of the daily resource
- Detail recommended implementation processes to increase student performance
- Provide strategies for efficient and effective pedagogy to heighten student numeracy in the classroom

Intermediate Bridge Resource Design: *Fall and Spring Semester*

Both the fall and spring semester Bridge Resources consist of eighty (80) daily learning opportunities with a detailed answer key located at the end of the 80 exercises. These two resources provide a simultaneous review of content as well as a daily opportunity for students to solve application word problems. The grade level is indicated by a series of triangles, dots, circles or stars in the learning opportunity header. These symbols are used in lieu of numbers to reduce self-esteem issues of children receiving special education services working in a below grade level Bridge Resource.

The ***fall semester*** Bridge Resource has a two-fold objective - build grade level numeracy and support the daily core lessons as well as rectify prior grade level numeracy skill gaps. The Bridge Resource is specifically designed for students to acquire rudimentary mathematical operational skills from both a conceptual and physical mathematics perspective. Each of the 80 Learning Opportunities in the fall semester is divided into three sections:

PART 1 -- Numeracy Development
PART 2 -- Application Practice
PART 3 -- Reflection and Conceptual Understanding.

The daily learning opportunities are designed to sequentially build and provide a spiral review. Students are exposed to skills and concepts prior to engaging in the associated application process on a daily opportunity and are provided repeated practice on specific skills to ensure verification of mastery.

If students require pre-requisite skill building practice, a *Skill Support Package* is available for purchase. This 50 plus page resource with solutions contains specific numeracy skills that provide additional practice and support to students in key numeracy areas at each grade level.

The ***spring semester*** Bridge Resource is aimed at solidifying numeracy and basic application, and it also has a design objective to prepare students for the expected rigor of your State's accountability spring assessment. Hence, each learning opportunity may begin in the Fall Semester format, but then separates into Numeracy Development and Application Rigor. The daily resource transitions to a landscape design to prepare students for the formatting and problem rigor of the state assessment.

Bridge Resource Implementation

The implementation and consistent daily use are key aspects to the overall performance of any system. A Bridge Resource is not an exception to this thinking. In addition to the core lesson, it is paramount that a daily learning opportunity be a structural and consistent part of the daily ninety (90) minute math block. Students master skills and applications if sufficient practice is provided. Conversely, students will not master skills that are not adequately practiced.

It is important to note that effective implementation of a Bridge Resource usually requires more time at the beginning of the semester to set up and establish efficient routines and clearly communicate teacher

expectations. However, as students are consistently engaged in the daily process, the time required for a student to complete a single daily learning opportunity is significantly lessened within a few weeks of implementation. With any pedagogy or instructional resource, the teacher must guide and hold students accountable to ensure quality engagement each day.

Prior to implementation, it is advisable and frequently less expensive for a local reproduction company to copy all 80 learning opportunities pages and secure the pages with a plastic binder that allows a 'daily student resource' to lie flat on a desk when fully opened. It is also recommended that the pages be reproduced on single-sided sheets. Doing so will allow students to use the corresponding blank page to neatly show their work in an organized manner – as conveyed by the classroom teacher.

When each student is provided their own bound Bridge Resource, a running record is created so each child's work history can be reviewed by a teacher, administrator or parent to provide documentation of a student's daily progress over time. Individually bound Bridge Resources also afford time efficiency in a teacher's daily routines since he or she is not required to make Xerox copies each day or distribute and collect papers. Students readily retrieve their bound Bridge Resource from their desk and independently engage that day's learning opportunity.

The **implementation recommendations** listed below are intended to maximize student learning and academic performance using an Amara Bridge Resource.

1. It is highly recommended that the teacher solves the learning opportunity for that day in advance, so they are aptly prepared for the exercise solutions and any pedagogical points to emphasize on each exercise. Therefore, the teacher must also have an assigned booklet.
2. When students are first introduced to this resource, teachers should model their expectations on the quality and specific organizational structure of student daily work. The teacher may model these expectations with a guided practice for at ***least*** 3 separate learning opportunities. At that point, students may work independently via a structured setting – complete a numbered exercise in accordance with teacher expectations – stop – and check the problem together. A deliberate and clearly modeled implementation process ensures high quality, accountable student work.
3. An effective means to accomplish this task is to require students to draw a rectangular grid on the corresponding blank page and show their computations for each numbered learning opportunity exercise in one of the grid's boxes.
4. Once the students begin to work through each of the problems, the teacher should continue to monitor the completion of problems by:
    - Stamping or 'marking with a check' that the problem(s) are/is correct.
    - Providing corrective feedback on those that are incorrect. If a student has made a computational error, have them check the problem and complete again, correctly.
    - Annotating in his/her own teacher booklet any conceptual or computational issues students may be struggling with due to lack of understanding. This assists the teacher to determine specific exercises that must be modeled and reviewed. Also, refer to the ***Skill Support Package*** or to the Formative Loop Resource Library to select appropriate skill practice and direction.
5. This resource and process serves as a daily diagnostic tool. If the teacher observes students incorrectly answer a specific skill or application, it is a clear indicator of a lack of skill or application mastery/retention. A short mini-lesson or spaced repetition instruction for three or four days invariably remedies a previous skill deficiency.

6. Upon completion of your allotted time for a learning opportunity, teacher may decide to guide students through a think-aloud of 1 or 2 problems that were challenging for the majority of students.

Recommendations on Numeracy Development

The 80 Learning Opportunities can be completed in less than 15 minutes each day ***with*** heightened student numeracy in basic math facts, multiple towers, and whole number line/fractional number line proficiency. One of the most important numeracy aspects that an elementary student must master to automaticity is the four basic math fact operations in addition, subtraction, multiplication and division. For example, the vast majority of operations involved in adding or subtracting mixed numbers, improper fractions, and proper fractions with unlike denominators is highly dependent upon a student's ability to efficiently apply prior math fact knowledge. Fortunately, nearly all intermediate grade level students can master the four operations during third (3^{rd}) grade, but an effective procedure must be securely in place.

A recommended and inexpensive daily numeracy program that assists students in learning and mastering both math fact and processing math skills is *Formative Loop*. This numeracy program requires a daily 5 minute paper-pencil ***written*** assessment and the program digitally tracks each student's progress. The *Formative Loop* numeracy program is individualized for each student, but a teacher can account for each student's progress in real time. The *Formative Loop* numeracy program also possesses a math fact sequence mastery in manageable chunks of daily exposure until the student is adequately prepared to successfully complete 100 mixed addition (or, subtraction, multiplication, or division) one-digit facts. Finally, *Formative Loop* offers a skill resource library that assists the classroom teacher with skill practice on almost any mathematical topic readily available for immediate download.

In order to aid students in mastering the four math fact operations and processing skills, specific numeracy skills are presented within the daily learning opportunities. These numeracy skills include: Making 10, Multiples (1-12) and Finding the Missing Factor (1-3), (4-6) and (7-9). Those support skill sheets are included in the ***Skill Support Package*** available for purchase on the Amara 4 Education website. Additionally, Amara offers free downloadable math incentives that are singularly designed to intrinsically motivate students to master their math facts. The website also provides free downloadable white papers and resources on various instructional pedagogy.

If any educator has constructive criticism on what we can do better, please contact us at the email address on the front cover. We appreciate any and all feedback that our team of teachers and administrators can use to better serve the needs of your students.

Thank you,

Amara

Bridge Resource - Table of Contents

AMARA 4 EDUCATION

Grade 4

Mathematics

for STAAR

Fall Semester

80 Daily Learning Opportunities

Student Name: _____

Teacher Name: _____

FALL STAAR WALK - Learning Opportunity 01
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. Find the *sum*:

a.) 10 + 13 = ☐

b.) 42 + 20 = ☐

c.) 30 + 49 = ☐

d.) 66 + 40 = ☐

2. Find the *difference*:

a.) 58 - 10 = ☐

b.) 65 - 30 = ☐

c.) 83 - 20 = ☐

d.) 90 - 60 = ☐

3. Find the missing *addend* to sum 100.

a.) 20 + _____ = 100

b.) 50 + _____ = 100

c.) 90 + _____ = 100

d.) 70 + _____ = 100

4. Is the number *even or odd*?

a.) 21 ⇨ _____

b.) 84 ⇨ _____

c.) 110 ⇨ _____

d.) 97 ⇨ _____

5. Expand each number to show each digit's *value*.

a.) 2,387 = ***2,000 + 300 + 80 + 7***

b.) 5,029 = _____

c.) 3,080 = _____

d.) 9,707 = _____

PART 2: *Application Practice*

6. John is thinking of a number. It is a *two digit number* that is *greater* than 36. The number is also an *odd number*. Find John's number.

Ⓐ 28 Ⓒ 108

Ⓑ 42 Ⓓ 73

7. Alfred has 58 plants in his garden. If he removes 36 plants, what will be the total number of plants that remain in his garden?

Ⓐ 27 Ⓒ 9

Ⓑ 22 Ⓓ 29

8. A teacher wrote the number, "3,089" on the white board in class. What is the *place value* and *value* of the '0' digit in the number 3,089?

☐

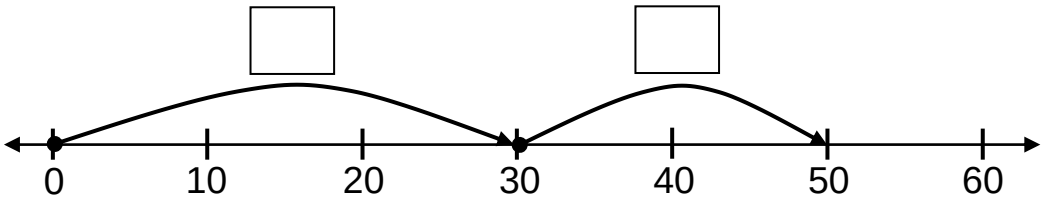
9. Dao is 20 years old. His brother, Chao-Lin, is 9 years older. How old is Chao-Lin?

☐

PART 3: *Reflection and Conceptual Understanding*

What is the **addition equation** shown on the *number line* below? *Write* the *equation* in the box provided.

_____ + _____ = _____



FALL STAAR WALK - Learning Opportunity 02
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. Find the *sum*:

a.) 15 + 13 = ☐

b.) 56 + 21 = ☐

c.) 70 + 39 = ☐

d.) 65 + 36 = ☐

2. Find the *difference*:

a.) 72 - 12 = ☐

b.) 64 - 31 = ☐

c.) 75 - 34 = ☐

d.) 82 - 37 = ☐

3. Find the missing *addend* to sum 100.

a.) 30 + _____ = 100

b.) 40 + _____ = 100

c.) 80 + _____ = 100

d.) 50 + _____ = 100

4. Is the number *even or odd*?

a.) 90 ⇨ _____

b.) 127 ⇨ _____

c.) 390 ⇨ _____

d.) 515 ⇨ _____

5. Expand each number to show each digit's *value*.

a.) 7,081 = _____

b.) 2,405 = _____

c.) 8,006 = _____

d.) 4,900 = _____

PART 2: *Application Practice*

6. A *two digit number* that is *greater* than 65 but *less* than 95. The number is also an *even number*. What is that number based on those clues?

Ⓐ 64 Ⓒ 92

Ⓑ 87 Ⓓ 75

7. Yessica broke open her piggy bank and counted a total of 97 cents. Her sister gave her another 56 cents. What is the total amount of money Yessica has after her sister's gift of 56 cents?

Ⓐ $ 0.41 Ⓒ $ 1.53

Ⓑ $ 0.49 Ⓓ $ 2.09

8. 4,980 is a number written in *standard form*. What is the *value* and the *place value* of the '4' in that number?

☐

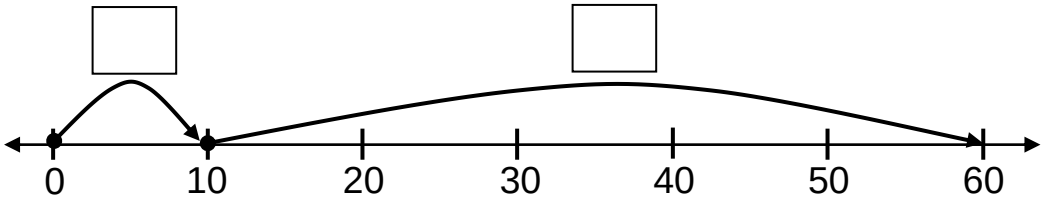
9. Priscilla is 27 years old. Her brother, Pedro, is 18 years younger. How old is Pedro?

☐

PART 3: *Reflection and Conceptual Understanding*

What is the **addition equation** shown on the *number line* below? *Write* the *equation* in the box provided.

_____ + _____ = _____



FALL STAAR WALK - Learning Opportunity 03
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. Find the *sum*:

a.) 150 + 100 = ☐

b.) 200 + 270 = ☐

c.) 175 + 100 = ☐

d.) 300 + 120 = ☐

2. Find the *difference*:

a.) 180 - 100 = ☐

b.) 250 - 100 = ☐

c.) 375 - 100 = ☐

d.) 525 - 100 = ☐

3. Find the missing *addend* to sum 100.

a.) 80 + _____ = 100

b.) 85 + _____ = 100

c.) 90 + _____ = 100

d.) 95 + _____ = 100

4. Is the number *even or odd*?

a.) 4,057 ⇨ _____

b.) 2,871 ⇨ _____

c.) 3,564 ⇨ _____

d.) 5,009 ⇨ _____

5. Expand each number to show each digit's *value*.

a.) 27,935 = ***20,000 + 7,000 + 900 + 30 + 5***

b.) 32,209 = _____

c.) 16,048 = _____

d.) 56,002 = _____

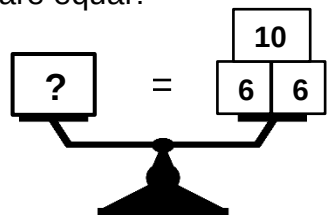
PART 2: *Application Practice*

6. Frank has 32 dollars. Henry has saved 17 dollars. How much more money does Frank have than Henry?

Ⓐ $ 15.00 Ⓒ $ 25.00

Ⓑ $ 49.00 Ⓓ $ 5.00

7. What is the mass of the '? Block' so the scale is balanced and both sides are equal?



Ⓐ 46 kg. Ⓒ 12 kg.

Ⓑ 16 kg. Ⓓ 22 kg.

8. What is the *place value* and the *value* of the '**6**' in 62,981?

☐

9. Jon is older than Betty by 12 years. Jesus is 10 years younger than Betty. If Jon is 39 years old, how old is Jesus?

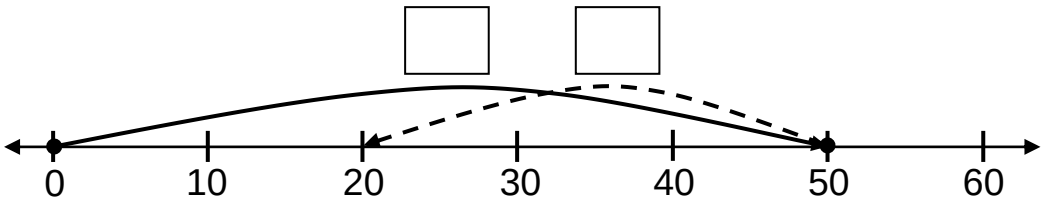
☐

PART 3: *Reflection and Conceptual Understanding*

What is the **subtraction equation** shown on the *number line* below? *Write* the *equation* in the box.

☐

_____ − _____ = _____



FALL STAAR WALK - Learning Opportunity 04
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. Add:

a.) $135 + 203$

b.) $412 + 367$

2. Subtract:

a.) $729 - 417$

b.) $558 - 33$

3. Write the missing *addend* to sum to 100 – *Make 100.* **ADD UP!**

a.) 75 ⇨ ***25*** **e.)** 95 ⇨ _____

b.) 85 ⇨ _____ **f.)** 80 ⇨ _____

c.) 60 ⇨ _____ **g.)** 65 ⇨ _____

d.) 55 ⇨ _____ **h.)** 70 ⇨ _____

4. Is the number *even or odd*?

a.) 16,801 ⇨ _____

b.) 44,444 ⇨ _____

c.) 53,275 ⇨ _____

d.) 25,316 ⇨ _____

5. Expand each number to show each digit's *value*.

a.) 45,015 = _____

b.) 30,200 = _____

c.) 17,000 = _____

d.) 94,003 = _____

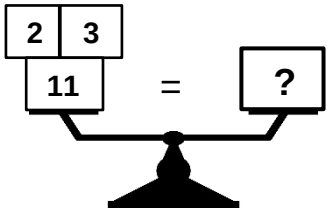
PART 2: *Application Practice*

6. Vic earns 45 dollars in June, 62 dollars in July and 86 dollars in August. How much was earned combined in all 3 months?

Ⓐ $ 173.00 Ⓒ $ 193.00

Ⓑ $ 183.00 Ⓓ $ 203.00

7. What is the mass of the '? Block' so the scale is balanced and both sides are equal?



Ⓐ 46 kg. Ⓒ 12 kg.

Ⓑ 16 kg. Ⓓ 22 kg.

8. Given the number 45,251. What are the place values of both underlined 5's?

_____

9. Hugh has 16 baseballs. Jose has 23 more baseballs than Hugh, and Ronny has 10 less than Jose. Compute each boys' baseball totals and order their numbers from greatest to least.

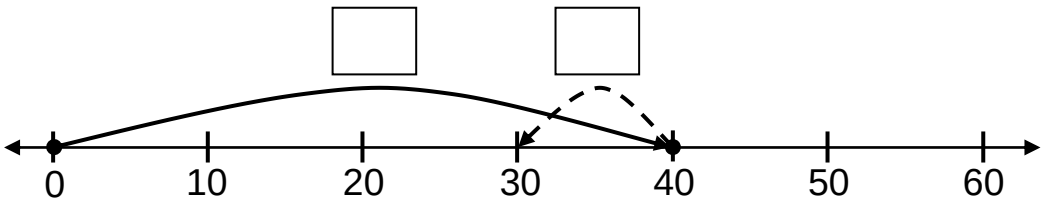
> **>**

_____

PART 3: *Reflection and Conceptual Understanding*

What is the **subtraction equation** shown on the *number line* below? *Write* the *equation* in the box.

_____



FALL STAAR WALK - Learning Opportunity 05
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. Add:

a.) $\begin{array}{r} 263 \\ +\ 356 \\ \hline \end{array}$

b.) $\begin{array}{r} 537 \\ +\ 245 \\ \hline \end{array}$

2. Subtract:

a.) $\begin{array}{r} 563 \\ -\ 271 \\ \hline \end{array}$

b.) $\begin{array}{r} 426 \\ -\ 218 \\ \hline \end{array}$

3. Write the missing *addend* to sum to 100 – *Make 100.* **ADD UP!**

a.) 85 ⇨ ____ **e.)** 70 ⇨ ____

b.) 30 ⇨ ____ **f.)** 95 ⇨ ____

c.) 25 ⇨ ____ **g.)** 15 ⇨ ____

d.) 45 ⇨ ____ **h.)** 10 ⇨ ____

4. Is the number *even or odd*?

a.) 86,792 ⇨ _____

b.) 50,030 ⇨ _____

c.) 81,421 ⇨ _____

d.) 97,763 ⇨ _____

5. Expand each number to show each digit's *value*.

a.) 31,050 = _____

b.) 15,604 = _____

c.) 9,530 = _____

d.) 80,008 = _____

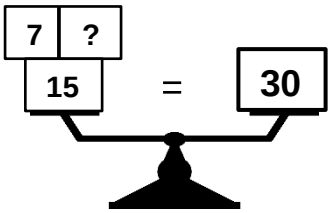
PART 2: *Application Practice*

6. Ashley makes paper kites. She made 17 kites last week. This week she made 10 fewer kites than the week before. How many kites has Ashley made in the last 2 weeks?

Ⓐ 10 kites Ⓒ 24 kites

Ⓑ 19 kites Ⓓ 26 kites

7. What is the mass of the '? Block' so the scale is balanced and both sides are equal?



Ⓐ 52 kg. Ⓒ 9 kg.

Ⓑ 10 kg. Ⓓ 8 kg.

8. Given the number **9**3,071. What is the place value and value of the underlined and bolded '9' in that number?

_____

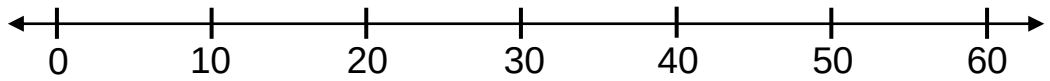
9. Kim tells Val and Jan she has 42 pennies. Val checks her purse and counts 15 pennies less than Kim. Jan has 10 fewer pennies than Kim. Compute each girls' penny total and order them from greatest to least.

_____ **>** _____ **>** _____

PART 3: *Reflection and Conceptual Understanding*

Draw the arrows (↷) that represent the **addition equation** provided in the box. Remember that the first arrow must begin at '0'.

30 + 20 = 50



FALL STAAR WALK - Learning Opportunity 06
for TEKS/STAAR
"Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Add:

a.) 462 + 277

b.) 409 + 365

2. Subtract:

a.) 470 − 146

b.) 508 − 275

3. Write the missing *addend* to sum to 100 – *Make 100.* **ADD UP!**

a.) 55 ⇨ ____
b.) 10 ⇨ ____
c.) 25 ⇨ ____
d.) 15 ⇨ ____
e.) 50 ⇨ ____
f.) 75 ⇨ ____
g.) 5 ⇨ ____
h.) 80 ⇨ ____

4. Calculate *half* of each number.

a.) 20 ⇨ *10*
b.) 40 ⇨ ____
c.) 10 ⇨ ____
d.) 30 ⇨ ____

5. Expand each number to show each digit's *value*.

a.) 97,056 = _____
b.) 19,807 = _____
c.) 50,009 = _____
d.) 75,900 = _____

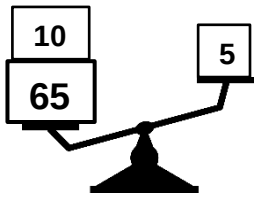
PART 2: *Application Practice*

6. Jasper ran against Ken for class president. Ken lost to Jasper, but Ken got 358 votes. Jasper received 409 votes. How many total votes were cast in the election?

Ⓐ 867 votes Ⓒ 867 votes
Ⓑ 757 votes Ⓓ 767 votes

7. How much *more* mass must be placed on the right side of the scale so both sides are equal?

Ⓐ 60 kg. Ⓒ 70 kg.
Ⓑ 15 kg. Ⓓ 75 kg.



8. Given the number 6**4**,702. What is the place value and value of the underlined and bolded '4' in that number?

_____

9. *Solve* each equation and *order* on the line below.

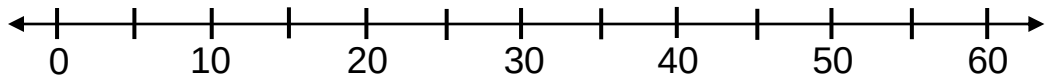
a.) 30 + 10 – 5 = ____
b.) 35 – 5 + 15 = ____
c.) 55 – 20 + 5 = ____

_____ **>** _____ **>** _____

PART 3: *Reflection and Conceptual Understanding*

Draw the arrows (↷) that represent the **addition equation** provided in the box. Remember that the first arrow must begin at '0'. *Hint: Place the correct number under all 'tick' marks on the number line.*

15 + 30 = 45



FALL STAAR WALK - Learning Opportunity 07
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. Add:

a.) $\begin{array}{r} 958 \\ +\ 374 \\ \hline \end{array}$

b.) $\begin{array}{r} 1{,}344 \\ +\ 2{,}065 \\ \hline \end{array}$

2. Subtract:

a.) $\begin{array}{r} 730 \\ -\ 421 \\ \hline \end{array}$

b.) $\begin{array}{r} 800 \\ -\ 362 \\ \hline \end{array}$

3. Write the missing <u>*addend*</u> to sum to 100 – *Make 100.* **ADD UP!**

a.) 25 ⇨ ____ **e.)** 55 ⇨ ____

b.) 5 ⇨ ____ **f.)** 15 ⇨ ____

c.) 65 ⇨ ____ **g.)** 45 ⇨ ____

d.) 35 ⇨ ____ **h.)** 75 ⇨ ____

4. Calculate <u>*half*</u> of each number.

a.) 60 ⇨ _____

b.) 50 ⇨ _____

c.) 100 ⇨ _____

d.) 80 ⇨ _____

5. Expand each number to show each digit's <u>*value*</u>.

a.) 125,739 = ***100,000 + 20,000 + 5,000 + 700 + 30 + 9***

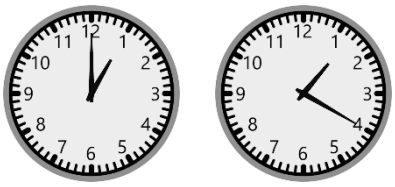
b.) 139,007 = _____

c.) 180,503 = _____

d.) 205,400 = _____

PART 2: *Application Practice*

6. What is the <u>*elapsed time*</u> between the two clocks shown below in minutes?

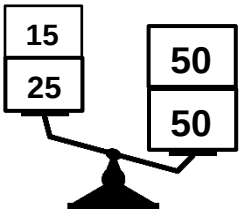


_____ **minutes**

7. How much <u>*more*</u> mass must be placed on the left side of the scale so both sides are equal?

Ⓐ 60 kg. Ⓒ 70 kg.

Ⓑ 15 kg. Ⓓ 75 kg.



8. Rachel read for a total of 209 minutes last week. Her friend, Mia, recorded 177 minutes of reading during the same week. How much more did Rachel read than Mia?

Ⓐ 72 minutes Ⓒ 42 minutes

Ⓑ 32 minutes Ⓓ 486 minutes

9. <u>*Solve*</u> each equation and <u>*order*</u> on the line below.

a.) 50 + 20 – 5 = ____ **b.)** 45 + 5 + 20 = ____

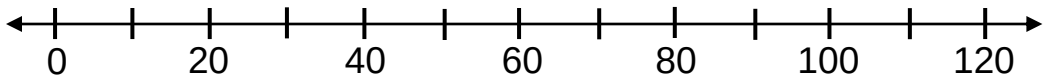
c.) 75 – 30 + 15 = ____

_____ **<** _____ **<** _____

PART 3: *Reflection and Conceptual Understanding*

Draw the arrows (↷) that represent the **<u>addition equation</u>** provided in the box. Remember that the first arrow must begin at '0'. *Hint: Place the correct number under all 'tick' marks on the number line.*

30 + 60 = 90



FALL STAAR WALK - Learning Opportunity 08 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Add:

a.) 5,582 + 2,474

b.) 4,637 + 3,608

2. Subtract:

a.) 500 − 263

b.) 907 − 668

3. Write the missing *addend* to sum to 1,000 – *Make 1,000.* **ADD UP!**

a.) 200 ⇨ *800*

b.) 400 ⇨ ____

c.) 600 ⇨ ____

d.) 300 ⇨ ____

e.) 500 ⇨ ____

f.) 900 ⇨ ____

g.) 0 ⇨ ____

h.) 700 ⇨ ____

4. Calculate *half* of each number.

a.) 30 ⇨ _____

b.) 40 ⇨ _____

c.) 50 ⇨ _____

d.) 80 ⇨ _____

5. Expand each number to show each digit's *value*.

a.) 140,730 = _____

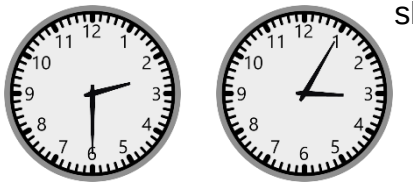
b.) 249,008 = _____

c.) 370,900 = _____

d.) 600,704 = _____

PART 2: *Application Practice*

6. Cindy started and finished playing at the times shown on the two clocks. How long did she play the piano?



_____ **minutes**

7. A rope is pulled from each end. How much force in pounds (lbs.) must the "**?**" person on the right side of the rope pull so both sides are *equal?*

30 + 50 ← = → **?**

Ⓐ 80 lbs. Ⓑ 50 lbs. Ⓒ 60 lbs. Ⓓ 30 lbs.

8. Keisha ran around the track for 30 minutes each day for 2 days. Then, she ran 20 minutes each day for two more days. How many total minutes Keisha run around the track?

Ⓐ 60 minutes Ⓒ 80 minutes

Ⓑ 30 minutes Ⓓ 100 minutes

9. *Solve* each equation and *order* on the line below.

a.) 90 – 30 + 15 = ____ **b.)** 80 + 5 – 20 = ____

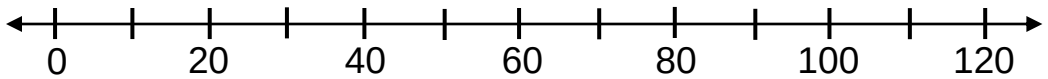
c.) 100 – 50 + 30 = ____

_____ **>** **>** _____

PART 3: *Reflection and Conceptual Understanding*

Draw the arrows ( and ) that represent the **subtraction equation** provided in the box. Remember that the first arrow must begin at '0'.

80 - 30 = 50



FALL STAAR WALK - Learning Opportunity 09
for TEKS/STAAR
"Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Add:

a.) 8,267 + 2,943

b.) 4,603 + 1,607

2. Subtract:

a.) 704 − 216

b.) 880 − 665

3. Write the missing *addend* to sum to 1,000 – *Make 1,000.* **ADD UP!**

a.) 100 ⇨ ____ **e.)** 600 ⇨ ____

b.) 500 ⇨ ____ **f.)** 200 ⇨ ____

c.) 0 ⇨ ____ **g.)** 800 ⇨ ____

d.) 1,000 ⇨ ____ **h.)** 700 ⇨ ____

4. Calculate *half* of each number.

a.) 100 ⇨ _____

b.) 30 ⇨ _____

c.) 70 ⇨ _____

d.) 50 ⇨ _____

5. Expand each number to show each digit's *value*.

a.) 500,934 = _____

b.) 630,430 = _____

c.) 506,800 = _____

d.) 708,206 = _____

PART 2: *Application Practice*

6. Jeff started and finished practicing soccer at the two times shown on the clocks. How many minutes did he practice playing soccer?


_____ **minutes**

7. A rope is pulled from each end. How much force in pounds (lbs.) must the "**?**" person on the left side of the rope pull so both sides are *equal?*

? + 70 ← = → **120**

Ⓐ 80 lbs. Ⓑ 50 lbs. Ⓒ 60 lbs. Ⓓ 30 lbs.

8. Joshua saved 709 dollars working during his eighth grade summer. If he spends 545 dollars on a new bike, how much does he have left?

Ⓐ 244 dollars Ⓒ 1,254 dollars

Ⓑ 164 dollars Ⓓ 154 dollars

9. *Solve* each equation and *order* on the line below.

a.) 70 – 30 + 50 = ____ **b.)** 75 + 5 – 20 = ____

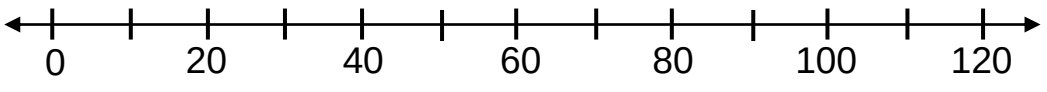
c.) 120 – 40 – 30 = ____ **d.)** 45 + 15 + 5 = ____

_____ **>** **>** **>** _____

PART 3: *Reflection and Conceptual Understanding*

Draw the arrows ( ) that represent the **addition equation** provided in the box. Remember that the first arrow must begin at '0'.

70 + 40 = 110



FALL STAAR WALK - Learning Opportunity 10 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Add:

a.) 2,468 + 9,933 = _____

b.) 3,607 + 4,298 = _____

2. Subtract:

a.) 600 − 468 = _____

b.) 501 − 299 = _____

3. Write the missing *addend* to sum to 1,000 – *Make 1,000.* **ADD UP!**

a.) 800 ⇨ ____ **e.)** 900 ⇨ ____

b.) 100 ⇨ ____ **f.)** 300 ⇨ ____

c.) 1,000 ⇨ ____ **g.)** 400 ⇨ ____

d.) 0 ⇨ ____ **h.)** 200 ⇨ ____

4. Calculate *half* of each number.

a.) 120 ⇨ _____

b.) 160 ⇨ _____

c.) 70 ⇨ _____

d.) 140 ⇨ _____

5. Expand each number to show each digit's *value*.

a.) 290,065 = _____

b.) 808,670 = _____

c.) 423,007 = _____

d.) 900,500 = _____

PART 2: *Application Practice*

6. Tom and Jerry played a cat and mouse game for the clock times shown below. What is the length of time they played?

_____ **hour**

_____ **minutes**

7. A rope is pulled from each end. How much force in pounds (lbs.) must the "**?**" person on the left side of the rope pull so both sides are *equal?*

? + 70 + 30 ← = → **160**

Ⓐ 80 lbs. Ⓑ 50 lbs. Ⓒ 60 lbs. Ⓓ 30 lbs.

8. Pat is half of Jim's age. Jim is 10 years older than Val. If Val is 14, how old is Pat?

Ⓐ 10 Ⓒ 24

Ⓑ 12 Ⓓ 4

9. *Solve* each equation and *order* on the line below.

a.) 150 – 20 + 15 = ____ **b.)** 200 – 5 – 60 = ____

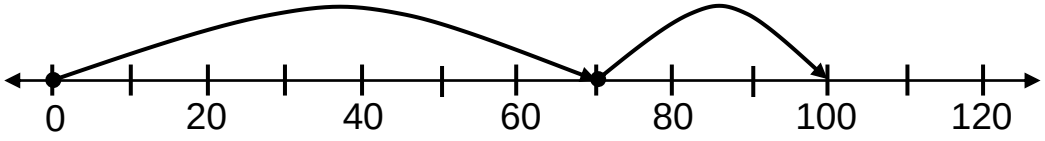
c.) 130 – 30 + 25 = ____ **d.)** 95 + 5 + 45 = ____

_____ **=** **>** **>** _____

PART 3: *Reflection and Conceptual Understanding*

Write the equation in the box that is represented by the two arrows on the number line below. Label all the missing numbers on the number line with the correct values.

_____



FALL STAAR WALK - Learning Opportunity 11
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. Subtract:

a.) 300 − 169 = _____

b.) 907 − 535 = _____

2. Multiply:

a.) 10 × 2 = _____

b.) 20 × 3 = _____

3. Write the missing *addend* to sum to 1,000 – *Make 1,000.* **ADD UP!**

a.) 850 ⇨ ____ **e.)** 750 ⇨ ____

b.) 150 ⇨ ____ **f.)** 650 ⇨ ____

c.) 950 ⇨ ____ **g.)** 50 ⇨ ____

d.) 450 ⇨ ____ **h.)** 250 ⇨ ____

4. Calculate *half* of each number.

a.) 200 ⇨ _____

b.) 180 ⇨ _____

c.) 90 ⇨ _____

d.) 150 ⇨ _____

5. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 2:* **0**, **2**, **4**, **6**, **8**, ___, ___, ___, ___, ___, ___

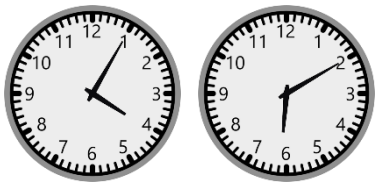
b.) *Multiples of 20:* **0**, **20**, **40**, **60**, ___, ___, ___, ___, ___, ___, ___

c.) *Multiples of 3:* **0**, **3**, ___, ___, ___, ___, ___, ___, ___, ___, ___

d.) *Multiples of 30:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

PART 2: *Application Practice*

6. The baseball game lasted for the times shown on the clocks below. How many hours and minutes was the game played?



_____ **hours**

_____ **minutes**

7. A rope is pulled from each end. How much force in pounds (lbs.) must the "**?**" person on the left side of the rope pull so both sides are *equal?*

? + 10 + 30 ← = → **55 + 15**

Ⓐ 80 lbs. Ⓑ 50 lbs. Ⓒ 60 lbs. Ⓓ 30 lbs.

8. Barney worked on his lawn for 120 minutes. His neighbor, Fred, worked for *half* the time Barney did. How long did Fred work on his lawn? *(Note: 1 hour = 60 minutes)*

Ⓐ ¼ hour Ⓑ ½ hour Ⓒ ¾ hour Ⓓ 1 hour

9. *Solve* each equation and *order* on the line below.

a.) 200 – 50 + 10 = ____ **b.)** 190 + 5 – 50 = ____

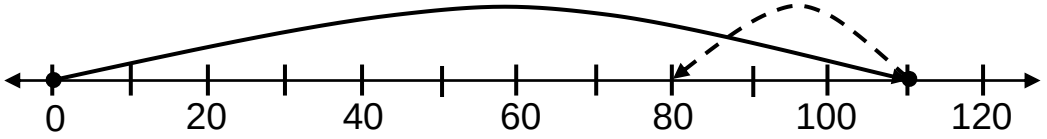
c.) 180 – 30 + 25 = ____ **d.)** 105 + 35 + 5 = ____

_____ = _____ < _____ < _____

PART 3: *Reflection and Conceptual Understanding*

Write the equation in the box that is represented by the two arrows on the number line below. Label all the missing numbers on the number line with the correct values.

_____



FALL STAAR WALK - Learning Opportunity 12 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Subtract.

a.) 3,578 − 1,437

b.) 7,085 − 5,068

2. Products.

a.) 30 x 3

b.) 20 x 4

3. Write the missing *addend* to sum to 1,000 – *Make 1,000.* **ADD UP!**

a.) 750 ⇨ ____ e.) 550 ⇨ ____

b.) 950 ⇨ ____ f.) 850 ⇨ ____

c.) 650 ⇨ ____ g.) 350 ⇨ ____

d.) 500 ⇨ ____ h.) 50 ⇨ ____

4. Calculate *half* of each number.

a.) 500 ⇨ _____

b.) 300 ⇨ _____

c.) 70 ⇨ _____

d.) 110 ⇨ _____

5. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 2:* 0 , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

b.) *Multiples of 20:* 0 , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

c.) *Multiples of 3:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

d.) *Multiples of 30:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

PART 2: *Application Practice*

6. Rachel went to ballet practice for the times shown on the clocks. How many hours and minutes was she at ballet?

____ **hours**

____ **minutes**

7. A rope is pulled from each end. How much force in pounds (lbs.) must the "**?**" person on the right side of the rope pull so both sides are *equal?*

4 x 20 ← = → **50 + ? + 15**

Ⓐ 65 lbs. Ⓑ 80 lbs. Ⓒ 15 lbs. Ⓓ 25 lbs.

8. Chris has 60 dimes. His friend, Dao, has half as many dimes as he does. Chris' sister, May, has 20 more dimes than Dao. How many dimes do Chris, Dao and May have combined?

Ⓐ 140 dimes Ⓒ 150 dimes

Ⓑ 90 dimes Ⓓ 30 dimes

9. *Solve* each equation and *order* on the line below.

a.) 300 - 200 - 10 = ____ **b.)** 500 - 300 - 50 = ____

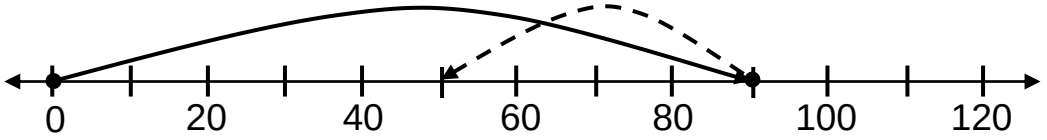
c.) 400 - 100 +15 = ____ **d.)** 200 + 150 - 25 = ____

_____ < _____ < _____

PART 3: *Reflection and Conceptual Understanding*

Write the equation in the box that is represented by the two arrows on the number line below. Label all the missing numbers on the number line with the correct values.

_____



FALL STAAR WALK - Learning Opportunity 13
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. Subtract.

a.) _ 7,455 / 3,493

b.) _ 8,790 / 975

2. Multiply.

a.) x 50 / 4

b.) x 40 / 3

3. Write the missing *addend* to sum to 1,000 – *Make 1,000.* **ADD UP!**

a.) 150 ⇨ ____ e.) 350 ⇨ ____

b.) 50 ⇨ ____ f.) 850 ⇨ ____

c.) 750 ⇨ ____ g.) 250 ⇨ ____

d.) 950 ⇨ ____ h.) 450 ⇨ ____

4. *Double* each number.

a.) 2 ⇨ *4*

b.) 20 ⇨ *40*

c.) 3 ⇨ ____

d.) 30 ⇨ ____

5. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 2:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

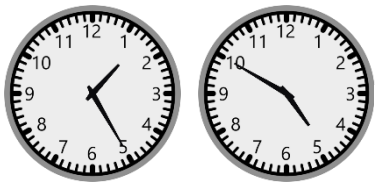
b.) *Multiples of 20:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

c.) *Multiples of 3:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

d.) *Multiples of 30:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

PART 2: *Application Practice*

6. Compute the *elapsed time* between the two clocks shown below.



____ **hours**

____ **minutes**

← ***or*** →

____**hrs.** ____**min.**

_____ **:** _____

7. A rope is pulled from each end. How much force in pounds (lbs.) must the "**?**" person on the right side of the rope pull so both sides are *equal?*

50 x 4 ← ⟶ = ⟶ → **150 + 25 + ?**

Ⓐ 65 lbs. Ⓑ 80 lbs. Ⓒ 15 lbs. Ⓓ 25 lbs.

8. Ginny and Lori combine their money. Ginny has $ 2.40. Lori has half of Ginny's amount. How much money do they have altogether?

Ⓐ $ 2.60 Ⓒ $ 3.60

Ⓑ $ 1.20 Ⓓ $ 3.40

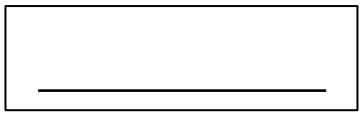
9. Mr. Simpson is building a patio at the back of his house. He tells his son, Henry, to place exactly 40 bricks each in 3 separate stacks. How many total bricks are placed in all three stacks?

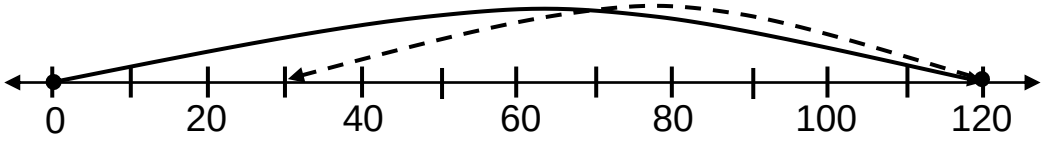
Ⓐ 37 bricks Ⓒ 43 bricks

Ⓑ 120 bricks Ⓓ 46 bricks

PART 3: *Reflection and Conceptual Understanding*

Write the equation in the box that is represented by the two arrows on the number line below. Label all the missing numbers on the number line with the correct values.





FALL STAAR WALK - Learning Opportunity 14
for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Subtract.

a.) 9,806 − 2,275

b.) 5,070 − 2,356

2. Multiply.

a.) 60 x 2

b.) 40 x 3

3. Write the missing *addend* to sum to 1,000 – *Make 1,000.* **ADD UP!**

a.) 250 ⇨ ____ e.) 450 ⇨ ____

b.) 350 ⇨ ____ f.) 750 ⇨ ____

c.) 950 ⇨ ____ g.) 150 ⇨ ____

d.) 50 ⇨ ____ h.) 550 ⇨ ____

4. *Double* each number.

a.) 6 ⇨ _____

b.) 60 ⇨ _____

c.) 4 ⇨ _____

d.) 40 ⇨ _____

5. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 4:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

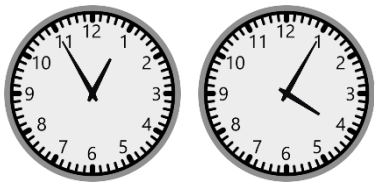
b.) *Multiples of 40:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

c.) *Multiples of 5:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

d.) *Multiples of 50:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

PART 2: *Application Practice*

6. Compute the *elapsed time* between the two clocks shown below.



____ **hours**

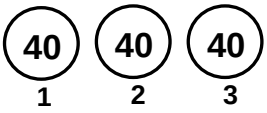
____ **minutes**

← *or* →

____**hrs.** ____**min.**

_____ **:** _____

7. Determine the *equation* based on the group model below.



Ⓐ 40 + 3 = 43 Ⓒ 40 x 3 = 120

Ⓑ 40 – 3 = 37 Ⓓ 40 ÷ 3 = 120

8. Pete is 15 years old and has two brothers. Sam's age is *double* Pete's age, and Hal is 5 years younger than Sam. What is the difference in the ages of Hal and Pete?

Ⓐ 5 years Ⓒ 15 years

Ⓑ 10 years Ⓓ 20 years

9. There were 150 mourning doves sitting on a telephone wire. Then, 55 more doves landed on the telephone wire. Twenty minutes later, 125 doves flew away. How many doves are left on the wire?

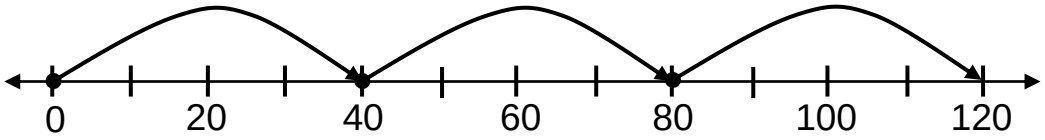
Ⓐ 235 doves Ⓒ 530 doves

Ⓑ 205 doves Ⓓ 80 doves

PART 3: *Reflection and Conceptual Understanding*

Write the multiplication equation in the box that the arrows represent on the number line below.

x = _____



FALL STAAR WALK - Learning Opportunity 15
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. Subtract.

a.) 5,006 − 3,532

b.) 8,400 − 5,291

2. Multiply.

a.) 30 x 6

b.) 50 x 5

3. *Fact Family* completion.

a.) 4 + 5 = 9

_____

9 – 5 = 4

_____

b.) 40 + 50 = 90

50 + 40 = 90

_____

90 – 40 = 50

4. *Double* each number.

a.) 8 ⇨ ____

b.) 80 ⇨ ____

c.) 15 ⇨ ____

d.) 50 ⇨ ____

5. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 4:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

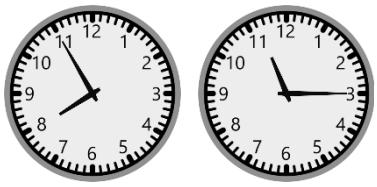
b.) *Multiples of 40:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

c.) *Multiples of 5:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

d.) *Multiples of 50:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

PART 2: *Application Practice*

6. Compute the *elapsed time* between the two clocks shown below.



_____ **hours**

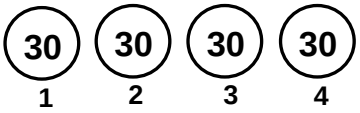
_____ **minutes**

← ***or*** →

_____**hrs.** _____**min.**

_____ **:** _____

7. Determine the *equation* based on the group model below.



Ⓐ 30 + 4 = 34 Ⓒ 30 x 4 = 90

Ⓑ 30 x 4 = 120 Ⓓ 30 x 5 = 120

8. Mateo has 30 marbles. George has half of Mateo's amount. Jim has 25 marbles, and his brother, Tim, has double his amount. How many marbles do George and Tim own?

Ⓐ 55 marbles Ⓒ 60 marbles

Ⓑ 50 marbles Ⓓ 65 marbles

9. 4 groups of adults boarded buses to travel to a football game if there were 60 adults in each group, how many adults traveled to the football game on the buses?

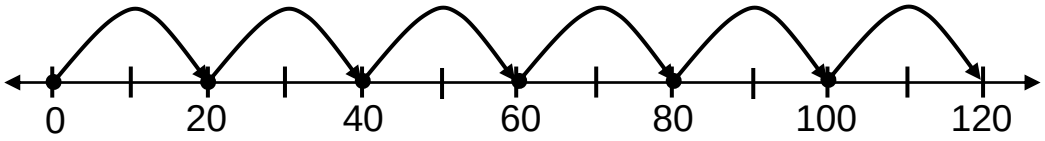
Ⓐ 240 adults Ⓒ 55 adults

Ⓑ 45 adults Ⓓ 255 adults

PART 3: *Reflection and Conceptual Understanding*

Write the multiplication equation in the box that the arrows represent on the number line below.

x = _____



FALL STAAR WALK - Learning Opportunity 16 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Subtract.

a.) 8,000 − 4,582

b.) 9,600 − 6,091

2. Multiply.

a.) 60 x 6

b.) 80 x 5

3. *Fact Family* completion.

a.) 6 + 2 = 8

_____

_____

8 – 2 = 6

b.) 70 + 10 = 80

_____

80 – 70 = 10

_____

4. *Double* each number.

a.) 50 ⇨ ____

b.) 90 ⇨ ____

c.) 35 ⇨ ____

d.) 45 ⇨ ____

5. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 4:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

b.) *Multiples of 40:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

c.) *Multiples of 5:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

d.) *Multiples of 50:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

PART 2: *Application Practice*

6. Use the table to answer the questions.

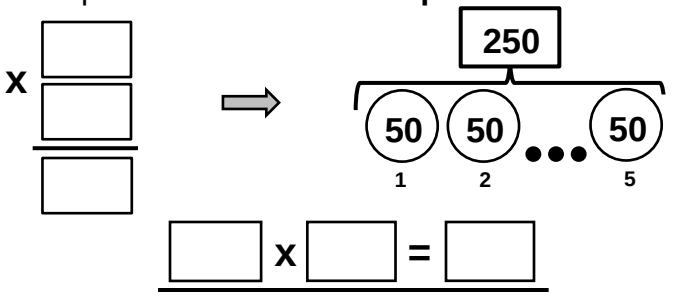
4th Grade Classrooms - Hillcrest Elementary	
Teacher	**Number of Students**
Ms. Schultz	27
Ms. Johnson	26
Mr. Rodriguez	34

a.) What is the total number of 4th graders at Hillcrest Elementary? _____

b.) How many students are in both female teachers' classrooms? _____

c.) How many more students are in the female teachers' classroom than Mr. Rodriguez's? _____

7. Complete: The **factors** and **product** below.



8. A young sheep herder divided his flock into 7 equal groups of with 40 sheep in each group. How many sheep are in his flock?

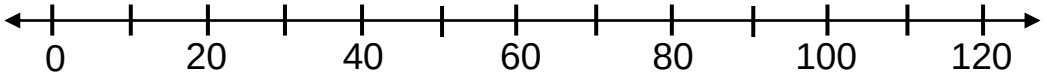
Ⓐ 250 sheep Ⓒ 270 sheep

Ⓑ 260 sheep Ⓓ 280 sheep

PART 3: *Reflection and Conceptual Understanding*

Draw the arrows on the number line that represent the *multiplication equation* in the rectangle below.

2 x 50 = 100



FALL STAAR WALK - Learning Opportunity 17 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Subtract.

a.) 4,002 − 1,304

b.) 7,401 − 3,681

2. Multiply.

a.) 70 x 9

b.) 90 x 6

3. *Fact Family* completion.

a.) 10 + 25 = 35

_____

_____

_____

b.) 70 + 20 = 90

_____

_____

_____

4. *Double* each number.

a.) 70 ⇨ ____

b.) 80 ⇨ ____

c.) 75 ⇨ ____

d.) 100 ⇨ ____

5. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 4:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

b.) *Multiples of 40:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

c.) *Multiples of 5:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

d.) *Multiples of 50:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

PART 2: *Application Practice*

6. Use the table to answer the questions.

Old Mr. McDonald's Animal Farm	
Animal	**Mass (kg.) of Animal**
Cow	954
Horse	**?**
Hog	309

a.) If all three animals have a total mass of 1,585 kilograms (kg), what is the mass of the horse?

_____

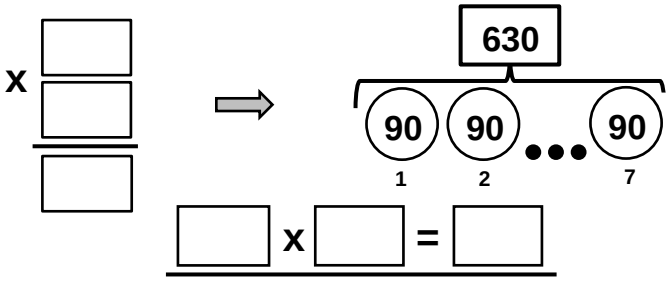
b.) How much is the mass of horse and the cow combined?

_____

c.) How much more mass does the cow have than the hog?

_____

7. Complete: The **factors** and **product** below.



8. Alejandro's cross country team made a goal to run 20 miles every day for a week – 7 days. If the team makes its goal, how many total miles will be run?

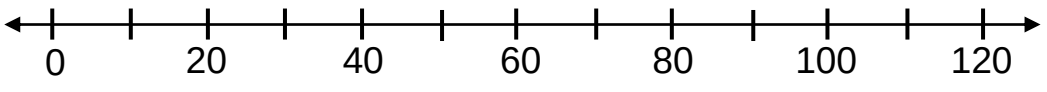
Ⓐ 120 miles Ⓒ 110 miles

Ⓑ 100 miles Ⓓ 140 miles

PART 3: *Reflection and Conceptual Understanding*

Draw the arrows on the number line that represent the *multiplication equation* in the rectangle below.

20 x 5 = 100



FALL STAAR WALK - Learning Opportunity 18
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. Missing *Factors:*

a.)
$$\square \times 7 = 21$$

b.) $\square \times 8 = 16$

2. Multiply.

a.) $70 \times 9 =$ _____

b.) $31 \times 3 =$ _____

3. *Write* the *Fact Family* for the 3 numbers.

a.) 25, 15, 40

_____
_____
_____
_____

b.) 120, 50, 70

_____
_____
_____
_____

4. *Double* each number.

a.) 15 ⇨ _____

b.) 25 ⇨ _____

c.) 75 ⇨ _____

d.) 150 ⇨ _____

5. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 6:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

b.) *Multiples of 60:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

c.) *Multiples of 7:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

d.) *Multiples of 70:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

PART 2: *Application Practice*

6. Use the table to answer the questions.

Areas of Three U.S. National Parks	
National Park	**Area (square miles)**
Grand Canyon	**?**
Yellowstone	3,471
Yosemite	1,169

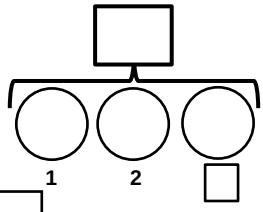
a.) What is the combined area in square miles of Yellowstone and Yosemite? _____

b.) If all three National Parks' total area is 6,542 square miles, what is the area of the Grand Canyon? _____

c.) Order the National Park's areas from *least to greatest*. _____

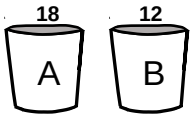
7. Complete: The **factors** and **product** below.

$$31 \times 3 = 93$$



_____ x _____ = _____

8. Bucket A contains 18 tacks, and Bucket B contains 12 tacks. Tacks are moved from Bucket A to Bucket B until the same number of tacks are in each bucket. How many tacks will be in each bucket when they both contain an equal amount?



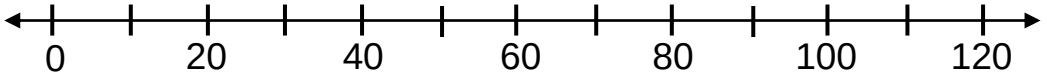
Ⓐ 16 tacks Ⓒ 20 tacks

Ⓑ 34 tacks Ⓓ 15 tacks

PART 3: *Reflection and Conceptual Understanding*

Draw the arrows on the number line that represent the *multiplication equation* in the rectangle below.

7 x 10 = 70



FALL STAAR WALK - Learning Opportunity 19
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. Missing *Factors:*

a.) $\square \times 9 = 27$

b.) $\square \times 6 = 24$

2. Multiply.

a.) 12×4

b.) 43×3

3. *Write* the *Fact Family* for the 3 numbers.

a.) 50, 75, 25

b.) 40, 84, 44

4. *Double* each number.

a.) 250 ⇨ ____

b.) 150 ⇨ ____

c.) 500 ⇨ ____

d.) 350 ⇨ ____

5. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 6:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

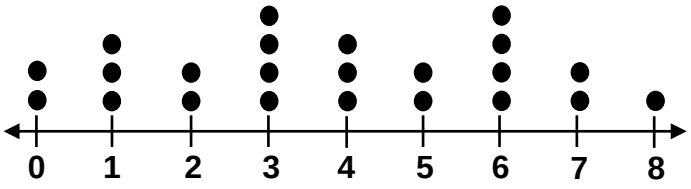
b.) *Multiples of 60:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

c.) *Multiples of 7:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

d.) *Multiples of 70:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

PART 2: *Application Practice*

6. Each dot equals 1 student on the ***Dot Plot***.



The *dot plot* represents the number of times each student in Mr. Pele's class played soccer last month. Answer the two questions below.

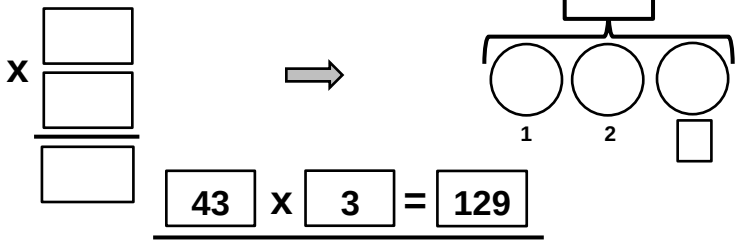
a.) How many students are in Mr. Pele's class?

_____

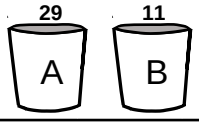
b.) How many students played soccer less than 4 times?

_____

7. Complete.



8. Bucket A contains 29 pins, and Bucket B contains 11 pins. Pins are moved from Bucket A to Bucket B until the same number of pins are in each bucket. How many pins will be in each bucket when both contain an equal number?



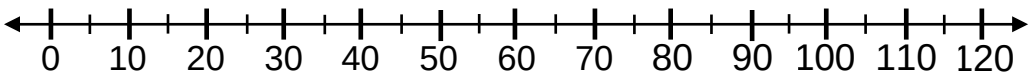
Ⓐ 40 pins Ⓒ 20 pins

Ⓑ 30 pins Ⓓ 25 pins

PART 3: *Reflection and Conceptual Understanding*

Draw the arrows on the number line that represent the *multiplication equation* in the rectangle below.

5 x 15 = 75



FALL STAAR WALK - Learning Opportunity 20
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. Missing *Factors:*

a.) 90 x ☐ = 270

b.) ☐ x 6 = 240

2. Multiply.

a.) 13 x 3 = ____

b.) 51 x 6 = ____

3. *Write* the *Fact Family* for the 3 numbers.

a.) 23, 16, 39

_____
_____
_____
_____

b.) 100, 65, 35

_____
_____
_____
_____

4. *Double* each number.

a.) 450 ⇨ ____

b.) 300 ⇨ ____

c.) 250 ⇨ ____

d.) 150 ⇨ ____

5. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 6:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

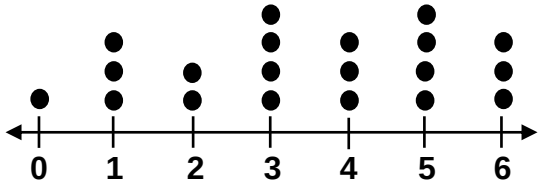
b.) *Multiples of 60:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

c.) *Multiples of 7:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

d.) *Multiples of 70:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

PART 2: *Application Practice*

6. Using the *Dot Plot*, answer the questions.

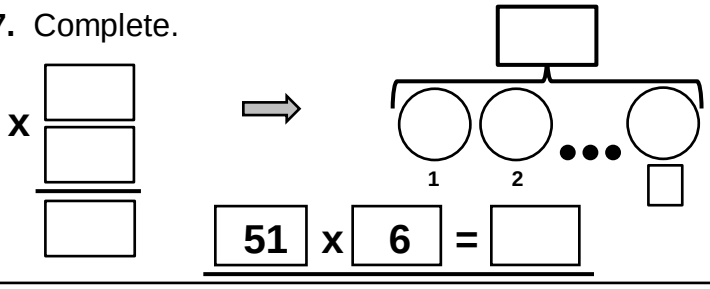


The *Dot Plot* represents the number of field trips that 20 teachers at Elm Crest Elementary took last year. Each dot represents 1 field trip.

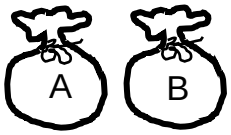
a.) How many teachers went on 2 or fewer field trips last year? _____

b.) How many teachers took their class on an *odd number* of field trips last year? _____

7. Complete.



8. Bag A contains 17 baseballs, and Bag B contains 53 baseballs. Jon moves baseballs from Bag B to Bag A until both bags contain an equal number. How many baseballs (B balls) are in each bag when Jon is finished?



Ⓐ 40 B balls Ⓒ 45 B balls

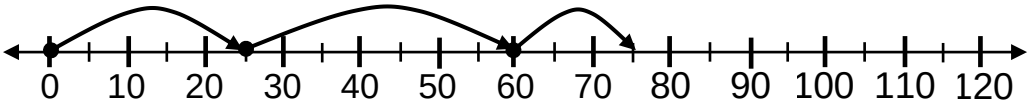
Ⓑ 35 B balls Ⓓ 50 B balls

PART 3: *Reflection and Conceptual Understanding*

Are the arrows shown on the number line below the correct model for 3 x 25 = 75? **Write** on the lines provided to justify your reasoning. _____

_____

_____



FALL STAAR WALK - Learning Opportunity 21 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Missing *Factors:*

a.) 30 x ☐ = 240

b.) ☐ x 60 = 240

2. Multiply.

a.) 64 x 3 = ____

b.) 43 x 5 = ____

3. *Round* each number to the *nearest 10 or 100* as directed.

	To nearest 10:		To nearest 100:
a.)	89 ⇨ ***90***	e.) 78 ⇨ ____	i.) 214 ⇨ ***200***
b.)	45 ⇨ ***50***	f.) 65 ⇨ ____	j.) 450 ⇨ ____
c.)	26 ⇨ ____	g.) 18 ⇨ ____	k.) 134 ⇨ ____
d.)	55 ⇨ ____	h.) 42 ⇨ ____	l.) 505 ⇨ ____

4. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 6:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

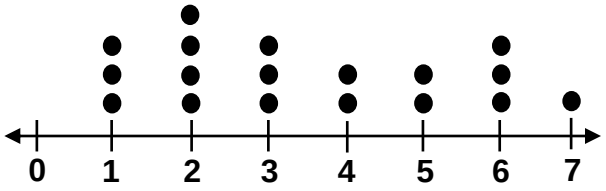
b.) *Multiples of 60:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

c.) *Multiples of 7:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

d.) *Multiples of 70:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

PART 2: *Application Practice*

5. Using the *Dot Plot*, answer the questions.

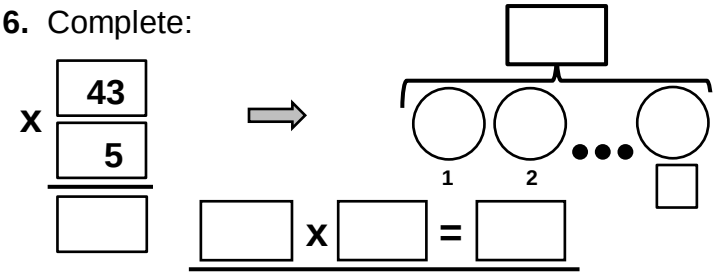


The *Dot Plot* represents the number of plays that 18 thespians auditioned during the summer. Each dot represents 1 play.

a.) How many thespians auditioned in *more* than 4 plays during the summer? _____

b.) How many thespians auditioned in an *even number* of plays during the summer? _____

6. Complete:



7. There were 3 separate groups of blackbirds sitting on a telephone wires along the highway. Marco estimated there were 65 blackbirds in each group. What is the total number of blackbirds that Marco believes are sitting on the telephone wires?

Ⓐ 68 birds Ⓒ 195 birds

Ⓑ 62 birds Ⓓ 185 birds

PART 3: *Reflection and Conceptual Understanding*

Chao-lin stated to his classmates, "*When I add an odd number and an even number together, it always sums to an odd number.*"

Is Chao-lin correct? **Write** a response after testing Chao-lin's statement to determine if it is true.

FALL STAAR WALK - Learning Opportunity 22 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Find the Missing *Factor* and *Quotient*:

a.) $8 \times \square = 240$

b.) $14 \div 2 = \square$

2. Multiply.

a.) 76×4

b.) 66×5

3. *Round* each number to the *nearest 10 or 100* as directed.

	To nearest 10:		To nearest 100:
a.)	41 ⇨ ____	e.) 94 ⇨ ____	i.) 142 ⇨ ____
b.)	64 ⇨ ____	f.) 95 ⇨ ____	j.) 550 ⇨ ____
c.)	65 ⇨ ____	g.) 4 ⇨ ____	k.) 679 ⇨ ____
d.)	6 ⇨ ____	h.) 15 ⇨ ____	l.) 87 ⇨ ____

4. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 8:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

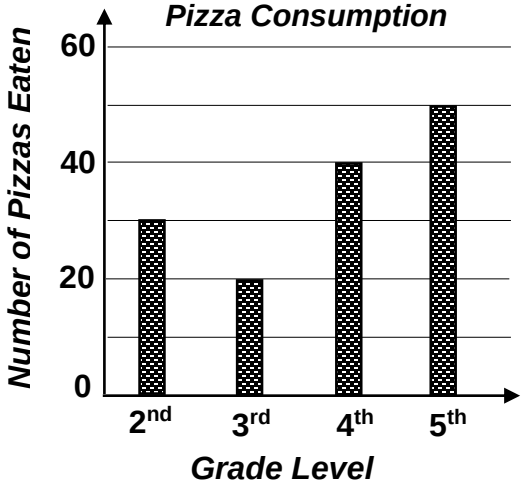
b.) *Multiples of 80:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

c.) *Multiples of 9:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

d.) *Multiples of 90:* ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

PART 2: *Application Practice*

5. The *bar graph* shows the number of pizzas eaten by 2nd through 5th grade students at PS No. 47.



a.) Label the pizzas eaten by each grade on the graph.

b.) What grade levels consumed the least and most pizzas?

Least: _____ **Most:** _____

c.) What two grades consumed a sum of 50 pizzas?

_____

d.) What two grades have a difference of 30 pizzas eaten?

_____

e.) Compute the total pizzas eaten at Public School No. 47.

_____

PART 3: *Reflection and Conceptual Understanding*

Chao-lin's teacher challenged the class on even and odd numbers. She said, "*Add any two odd numbers. Is the **sum** always an even number or is it an odd number?*"

Write a response to the teacher's question.

_____

FALL STAAR WALK - Learning Opportunity 23 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Find the Missing *Factor* and *Quotient:*

a.) $9 \times \square = 630$

b.) $24 \div 6 = \square$

2. Multiply.

a.) 85×7

b.) 92×8

3. *Round* each number to the *nearest 10 or 100* as directed.

	To nearest 10:		To nearest 100:
a.)	87 ⇨ ____	e.) 22 ⇨ ____	i.) 150 ⇨ ____
b.)	49 ⇨ ____	f.) 28 ⇨ ____	j.) 32 ⇨ ____
c.)	35 ⇨ ____	g.) 5 ⇨ ____	k.) 762 ⇨ ____
d.)	2 ⇨ ____	h.) 64 ⇨ ____	l.) 971 ⇨ ____

4. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 8:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

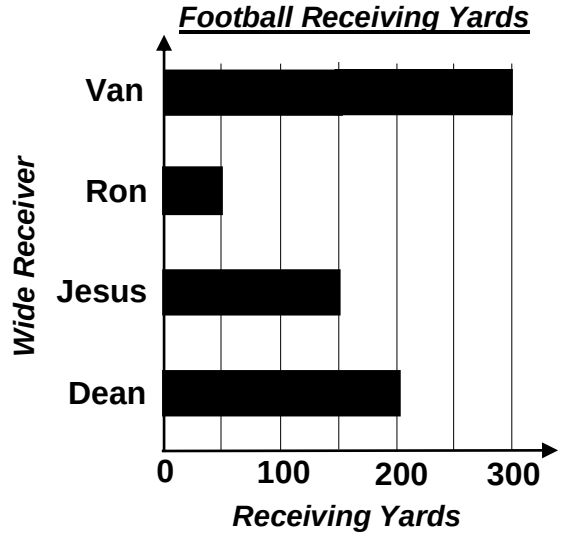
b.) *Multiples of 80:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

c.) *Multiples of 9:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

d.) *Multiples of 90:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

PART 2: *Application Practice*

5. The *bar graph* provides the Yates HS varsity football wide receivers' 2017 receiving yardage.



a.) Label the yardage by player on the graph.

b.) What football players have the lowest/highest yardage?

Lowest: _____ **Highest:** _____

c.) Which player has 150 more yards than Ron? _____

d.) Double Ron's yardage. _____ After doubling, does he still have the lowest receiving yardage? _____

e.) If Van's yardage was cut in half, what wide receiver would he equal in receiving yards? _____
Write Van's new total. _____

PART 3: *Reflection and Conceptual Understanding*

Prove that '48' is an **even number**, given that 48 = 40 + 8. Remember, an even number is a number that is always *divisible* by 2 or the number can be *halved* – divided in to two equal groups. **Write** your response below on the lines provided.

FALL STAAR WALK - Learning Opportunity 24 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Find the Missing *Factor* and *Quotient:*

a.) 4 x ☐ = 360

b.) 42 ÷ 7 = ☐

2. Multiply.

a.) 93 x 8 = _____

b.) 71 x 7 = _____

3. *Round* each number to the *nearest 10 or 100* as directed.

	To nearest 10:			To nearest 100:	
a.)	85 ⇨ _____	**e.)**	12 ⇨ _____	**i.)**	952 ⇨ _____
b.)	84 ⇨ _____	**f.)**	55 ⇨ _____	**j.)**	92 ⇨ _____
c.)	9 ⇨ _____	**g.)**	98 ⇨ _____	**k.)**	129 ⇨ _____
d.)	3 ⇨ _____	**h.)**	92 ⇨ _____	**l.)**	481 ⇨ _____

4. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 8:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

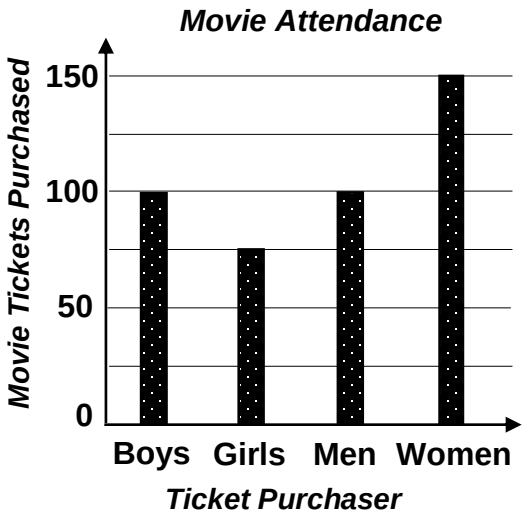
b.) *Multiples of 80:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

c.) *Multiples of 9:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

d.) *Multiples of 90:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

PART 2: *Application Practice*

5. The *bar graph* shows the number of movie tickets purchased by gender at Park Crest Theater.



a.) Label the bars by gender category on the graph.

b.) Who purchased the fewest and most movie tickets?

Fewest: _____ **Most:** _____

c.) What two groups purchased an equal number of tickets? _____

d.) Which group, if their ticket purchases were doubled, equals the women's total? _____

e.) What is the sum of the tickets purchased by both the girls' and the women's groups? _____

PART 3: *Reflection and Conceptual Understanding*

Ms. Jackson, a fourth grade teacher, wrote the daily math investigation on the white board, "*Quinton and Alicia each chose an even number. If they add their two even numbers, will their* ***sum*** *always be an even number or will it be an odd number? Prove your answer and* **write** a response that justifies your thinking.

FALL STAAR WALK - Learning Opportunity 25 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Factors*, *Products*, and *Quotients:*

a.) 40 x 6 = ☐

b.) 2 x ☐ = 80

c.) ☐ x 10 = 60

d.) 90 x 3 = ☐

e.) 21 ÷ 3 = ☐

f.) 27 ÷ 3 = ☐

g.) 15 ÷ 3 = ☐

h.) 18 ÷ 3 = ☐

2. *Round* each number as directed.

	To nearest 10:		To nearest 100:
a.)	97 ⇨ _____	**e.)**	532 ⇨ _____
b.)	85 ⇨ _____	**f.)**	682 ⇨ _____
c.)	52 ⇨ _____	**g.)**	250 ⇨ _____
d.)	35 ⇨ _____	**h.)**	53 ⇨ _____

3. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 8:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

b.) *Multiples of 80:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

c.) *Multiples of 9:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

d.) *Multiples of 90:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

PART 2: *Application Practice*

4. The table below provides information on a group of fourth graders' selections of their favorite sports.

4th GRADERS' FAVORITE SPORTS	
Sport	**1 Vote = 1 Tally Mark**
Hockey	𝍸 |||
Basketball	𝍸 𝍸 𝍸 𝍸 |
Football	𝍸 𝍸 𝍸 ||||
Soccer	𝍸 𝍸 𝍸 |
Baseball	𝍸 𝍸 𝍸 ||
Gymnastics	|||

a.) Calculate the *value* for each row of tally marks.

b.) What sport is least favorite of 4th graders? Most?

Least: _____ **Most:** _____

c.) What sport has a difference of 5 votes with Basketball?

_____

d.) Which sport, if their votes were doubled, equals the vote total for soccer?

_____

e.) If a 4th grader could only vote once, how many 4th graders voted in this survey?

_____

PART 3: *Reflection and Conceptual Understanding*

It is the **one's digit** in any number that determines if that number is classified as either an **even number** or an **odd number**. Given the following two numbers: 43 and 18. ***Why is 43 odd, and why is 18 even?***

Explain on the lines below. *Hint:* 43 = 40 + 3 and 18 = 10 + 8. Remember, an *even number* may always be divided into two equal groups. _____

FALL STAAR WALK - Learning Opportunity 26 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Factors*, *Products*, and *Quotients*:

a.) 80 x 5 = ☐

b.) 4 x ☐ = 80

c.) ☐ x 20 = 60

d.) 32 x 4 = ☐

e.) 12 ÷ 4 = ☐

f.) 20 ÷ 4 = ☐

g.) 36 ÷ 4 = ☐

h.) 24 ÷ 4 = ☐

2. *Round* each number as directed.

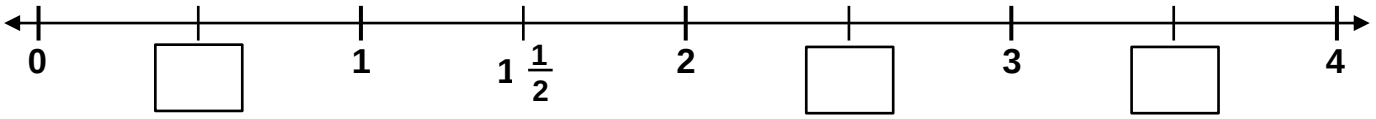
To nearest 100:	**To nearest 1,000:**
a.) 979 ⇨ _____	**e.)** 2,300 ⇨ ***3,000***
b.) 150 ⇨ _____	**f.)** 6,082 ⇨ _____
c.) 30 ⇨ _____	**g.)** 2,500 ⇨ _____
d.) 98 ⇨ _____	**h.)** 5,934 ⇨ _____

3. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 11:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

b.) *Multiples of 12:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

4. W*rite* the missing **fractions** and **mixed numbers** in the empty boxes that complete the number lines.



PART 2: *Application Practice*

5. The table below provides information on a how a group of 10 year olds spend their time at home.

Things Kids Like to Do at Home	
Choice	**1 Vote = 1 Tally Mark**
Exercise	𝍸 ||||
Sleep/Rest	𝍸
Watch TV	𝍸 𝍸 𝍸 𝍸 |
Video Games	𝍸 𝍸 |
Text Friends	𝍸 𝍸 𝍸 |||
Call Friends	𝍸 𝍸 𝍸 𝍸 ||

a.) Calculate *value* for each row of tally marks.

b.) What is least liked thing to do at home? The most?

Least: _____ **Most:** _____

c.) What two 'Choices' have a difference of 11 votes?

_____

d.) Which 'Choice', if the votes were halved, equals the vote total for Exercise?

_____

e.) What is the sum of Text Friends, Call Friends and Video Games?

_____

PART 3: *Reflection and Conceptual Understanding*

Given the following two numbers: 65 and 34. ***Why is 65 odd, and why is 34 even?***

Hint: 65 = 60 + 5 and 34 = 30 + 4; Remember: an *even number* can always be separated in two equal groups.

FALL STAAR WALK - Learning Opportunity 27 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Factors*, *Products*, and *Quotients*:

a.) 90 x 7 = ☐

b.) 3 x ☐ = 30

c.) ☐ x 40 = 160

d.) 45 x 3 = ☐

e.) 32 ÷ 4 = ☐

f.) 40 ÷ 4 = ☐

g.) 20 ÷ 5 = ☐

h.) 36 ÷ 4 = ☐

2. *Round* each number as directed.

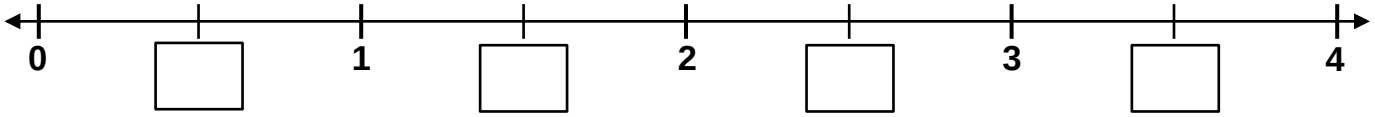
To nearest 100:	**To nearest 1,000:**
a.) 550 ⇨ _____	**e.)** 4,520 ⇨ _____
b.) 176 ⇨ _____	**f.)** 7,762 ⇨ _____
c.) 925 ⇨ _____	**g.)** 3,500 ⇨ _____
d.) 248 ⇨ _____	**h.)** 3,499 ⇨ _____

3. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 11:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

b.) *Multiples of 12:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

4. W*rite* the missing **fractions** and **mixed numbers** in the empty boxes that complete the number lines.



PART 2: *Application Practice*

5. The table below provides information on the frequency of each blood type of Americans.

Blood Types in the United States	
Blood Type	**Percent (%) of Americans**
A+ and A-	**40**
B+ and B-	**11**
AB+ and AB-	**4**
O+ and O-	**45**
Total	**100%**

a.) What are the least and most common blood types?

Least: _____ **Most:** _____

b.) What is the sum of the two most common blood percentage types in Americans? _____

c.) What is the sum of the two least common blood percentage types in Americans? _____

d.) If an American possess Type AB blood and they are seriously injured in a car accident, what *could* be a problem for hospital doctors treating them?

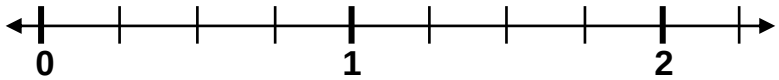
_____

PART 3: *Reflection and Conceptual Understanding*

How is **denominator** (e.g. the '2' in ½) in problem 4 above *determined* for the fractional number line?

_____

What is the **denominator** of the fractional number line shown below? _____ (*Hint: Equal Spaces!*)



FALL STAAR WALK - Learning Opportunity 28 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Find the *Factors*, *Products*, and *Quotients:*

a.) 96 x 0 = ☐

b.) 7 x ☐ = 280

c.) ☐ x 80 = 320

d.) 74 x 5 = ☐

e.) 42 ÷ 6 = ☐

f.) 56 ÷ 7 = ☐

g.) 36 ÷ 6 = ☐

h.) 49 ÷ 7 = ☐

2. *Round* each number as directed.

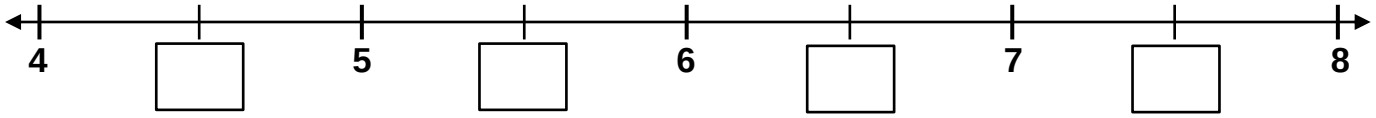
To nearest 1,000:	**To nearest 10,000:**
a.) 3,450 ⇨ _____	**e.)** 24,520 ⇨ ***20,000***
b.) 909 ⇨ _____	**f.)** 17,762 ⇨ _____
c.) 7,505 ⇨ _____	**g.)** 45,500 ⇨ _____
d.) 1,280 ⇨ _____	**h.)** 32,499 ⇨ _____

3. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 12:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

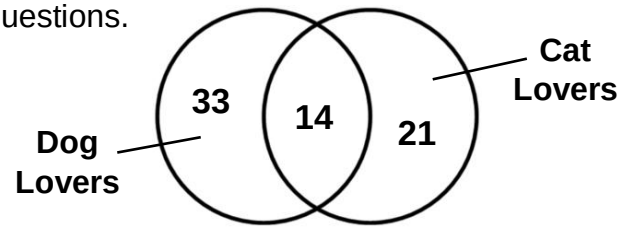
b.) *Multiples of 25:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

4. *Write* the missing **mixed numbers** in the empty boxes that complete the number lines.



PART 2: *Application Practice*

5. Use the *Venn Diagram* to answer the questions.



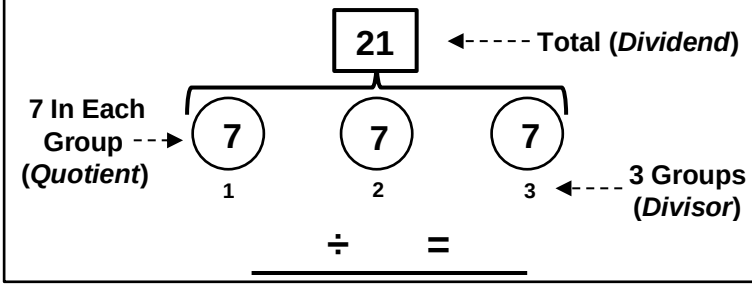
a.) How many people are *ONLY* Cat Lovers? _____

b.) How many people are *ONLY* Dog Lovers? _____

c.) What number are *BOTH* Dog and Cat Lovers? _____

d.) Compute the total people surveyed. _____

6. Write the *division equation* for the group model.



7. Alicia's teacher purchased 85 cupcakes for each of the 2nd, 3rd, 4th and 5th grade classes. How many cupcakes were purchased for all four classes?

_____ **cupcakes**

PART 3: *Reflection and Conceptual Understanding*

Given the following number: 165. ***Why is 165 odd?*** Explain on the lines below.

Hint: 165 = 100 + 60 + 5 – divide *each expanded digit* into two equal groups – ***if possible***.

FALL STAAR WALK - Learning Opportunity 29 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Factors*, *Products*, and *Quotients*:

a.) 33 x 3 = ☐

b.) 9 x ☐ = 450

c.) ☐ x 70 = 560

d.) 86 x 6 = ☐

e.) 72 ÷ 9 = ☐

f.) 63 ÷ 9 = ☐

g.) 36 ÷ 4 = ☐

h.) 54 ÷ 6 = ☐

2. *Round* each number as directed.

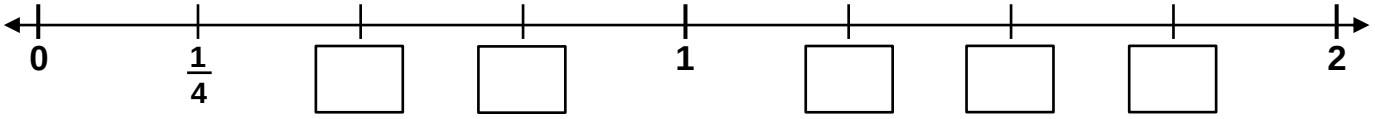
To nearest 1,000:	**To nearest 10,000:**
a.) 8,501 ⇨ _____	**e.)** 45,100 ⇨ _____
b.) 421 ⇨ _____	**f.)** 22,222 ⇨ _____
c.) 9,705 ⇨ _____	**g.)** 35,750 ⇨ _____
d.) 1,490 ⇨ _____	**h.)** 95,800 ⇨ _____

3. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 12:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

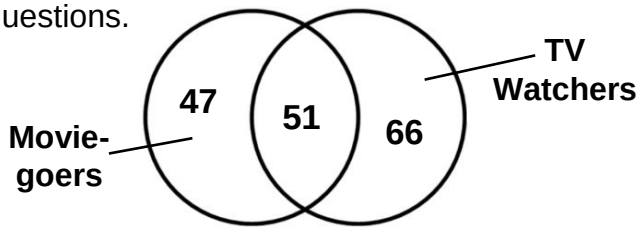
b.) *Multiples of 25:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

4. *Write* the missing **fractions** and **mixed numbers** in the empty boxes that complete the number lines.



PART 2: *Application Practice*

5. Use the *Venn Diagram* to answer the questions.



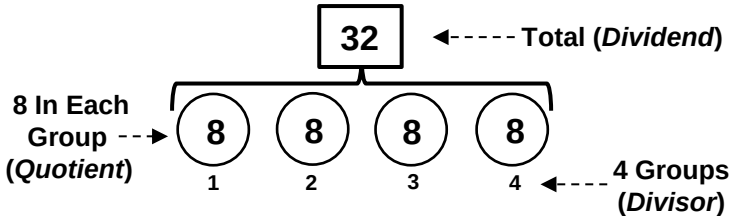
a.) How many people are *ONLY* Movie Goers? _____

b.) How many *more* people like watching TV than the Movies? _____

c.) How many people like both Movies and TV? _____

d.) Compute the total people surveyed. _____

6. Write the *division equation* for the group model.



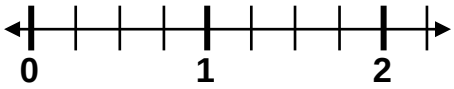
÷ = _____

7. Franklin bought 5 items at the store. He purchased two candy bars for 55 cents each and 3 packs of gum for 70 cents each. Not including tax, how much did Franklin spend at the store?

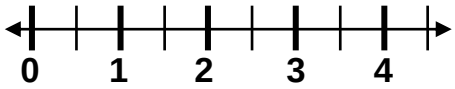
Ⓐ $ 3.00 Ⓑ $ 1.25 Ⓒ $ 3.20 Ⓓ $ 3.15

PART 3: *Reflection and Conceptual Understanding*

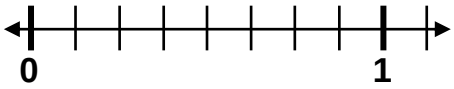
Determine the **denominator** for each fractional number line. Write the answers on the lines provided.



a.) _____



b.) _____



c.) _____

FALL STAAR WALK - Learning Opportunity 30 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Quotient* practice:

a.) 45 ÷ 9 = ☐ **e.)** 72 ÷ 8 = ☐

b.) 63 ÷ 7 = ☐ **f.)** 54 ÷ 9 = ☐

c.) 72 ÷ 9 = ☐ **g.)** 45 ÷ 5 = ☐

d.) 63 ÷ 9 = ☐ **h.)** 54 ÷ 6 = ☐

2. *Round* each number as directed.

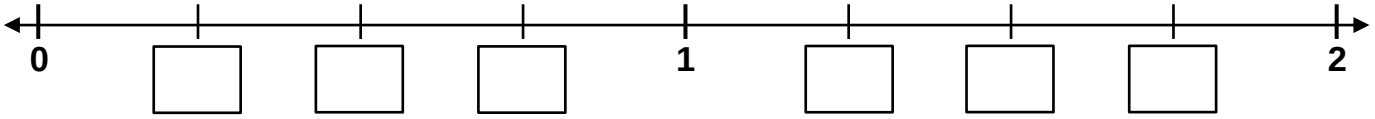
To nearest 1,000:		**To nearest 10,000:**	
a.) 3,406 ⇨ _____		**e.)** 5,100 ⇨ _____	
b.) 509 ⇨ _____		**f.)** 54,098 ⇨ _____	
c.) 9,900 ⇨ _____		**g.)** 4,350 ⇨ _____	
d.) 1,802 ⇨ _____		**h.)** 75,000 ⇨ _____	

3. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 15:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

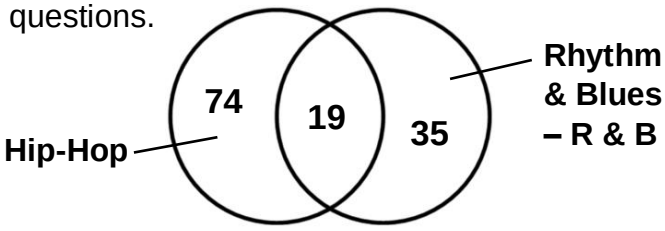
b.) *Multiples of 25:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

4. *Write* the missing **fractions** and **mixed numbers** in the empty boxes that complete the number lines.



PART 2: *Application Practice*

5. Use the *Venn Diagram* to answer the questions.



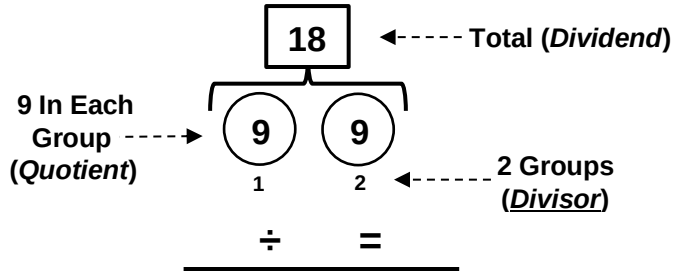
a.) How many kids only like Hip-Hop? _____

b.) How many *more* kids like Hip-Hop music than R & B? _____

c.) How many kids like both Hip-Hop and R & B? _____

d.) How many total kids were surveyed? _____

6. Write the *division equation* for the group model.



_____

7. Keontay was given 18 pennies to separate into 2 equal groups. How many pennies are in each group?

Ⓐ 9 Ⓑ 20 Ⓒ 16 Ⓓ 36

PART 3: *Reflection and Conceptual Understanding*

Prove that 264 is an **even number**. Divide each expanded digit into *two equal groups* – **if possible**. *Write* on the lines below why 264 is called an *even number*.

264 = 200 + 60 + 4

_____

FALL STAAR WALK - Learning Opportunity 31 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Quotient* practice:

a.) 54 ÷ 9 = ☐ **e.)** 24 ÷ 4 = ☐

b.) 63 ÷ 9 = ☐ **f.)** 24 ÷ 6 = ☐

c.) 72 ÷ 8 = ☐ **g.)** 12 ÷ 6 = ☐

d.) 49 ÷ 7 = ☐ **h.)** 12 ÷ 2 = ☐

2. Complete the **Fact Family** for the 3 numbers.

a.) 2 , 8 , 4

2 x 4 = 8

8 ÷ 4 = 2

b.) 12 , 6 , 2

6 x 2 = 12

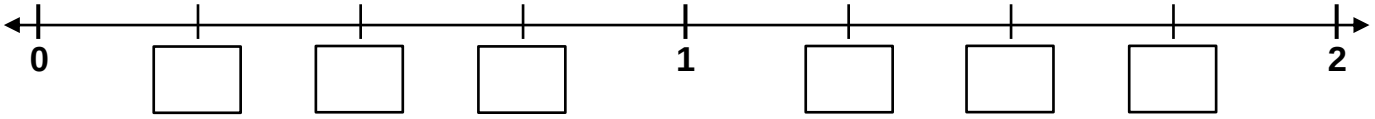
12 ÷ 2 = 6

3. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 15:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

b.) *Multiples of 25:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

4. W*rite* the missing **fractions** and **mixed numbers** in the empty boxes that complete the number lines.



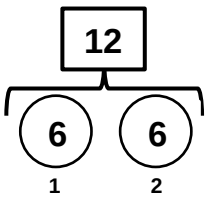
PART 2: *Application Practice*

5. Luz and her sister went shopping on Black Friday. Luz spent $15.00 at the store. Her sister spent twice as much as Luz. If they paid the clerk with a 50 dollar bill, how much change did they receive after their purchases?

Ⓐ $ 5 Ⓑ $ 65 Ⓒ $ 35 Ⓓ $ 10

6. Fill in the **dividend, divisor** and **quotient** below.

$2\overline{)12}$ = 6



☐ ÷ ☐ = ☐

7. Hank saved $20 each month for 7 months. What was the total amount of money Hank saved?

Ⓐ $ 27 Ⓑ $ 13 Ⓒ $ 140 Ⓓ $ 120

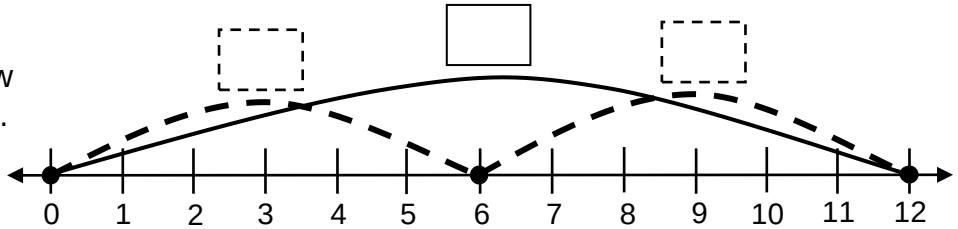
8. David is 12 years old. His sister's age is an even number and half as old as David. How old is David's sister?

Ⓐ 6 Ⓑ 12 Ⓒ 14 Ⓓ 24

PART 3: *Reflection and Conceptual Understanding*

Fill in the boxes on the number line.
Complete the **division** equation below that the number line model represents.

☐ ÷ **2** = ☐



FALL STAAR WALK - Learning Opportunity 32 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Quotient* practice*:*

a.) 72 ÷ 8 = ☐ **e.)** 24 ÷ 6 = ☐

b.) 56 ÷ 8 = ☐ **f.)** 24 ÷ 8 = ☐

c.) 32 ÷ 4 = ☐ **g.)** 15 ÷ 3 = ☐

d.) 20 ÷ 5 = ☐ **h.)** 54 ÷ 6 = ☐

2. ***Complete*** the **Fact Family** for the 3 numbers.

a.) **6 , 4 , 24**

6 x 4 = 24

b.) **32 , 4 , 8**

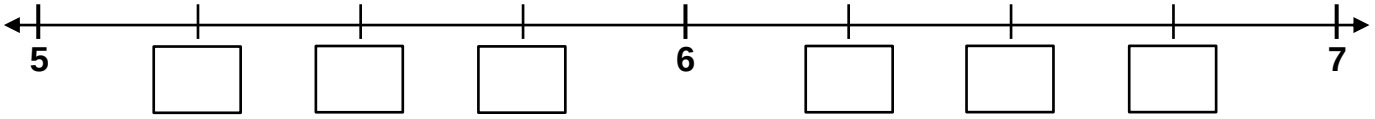
32 ÷ 8 = 4

3. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 15:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

b.) *Multiples of 50:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

4. *Write* the missing **mixed numbers** in the empty boxes that complete the number lines.

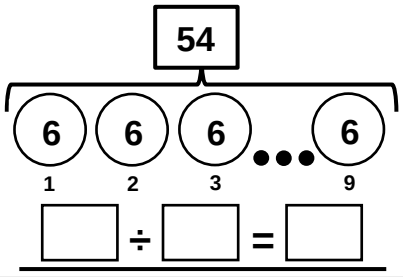


PART 2: *Application Practice*

5. Deb's family traveled by car from Miami to Chicago. The trip was one thousand thirty-nine miles long. Her friend, Alice, flew from Houston to New York City in 4 hours. The flight covered 1,628 miles. What is the difference in miles between the two trips?

Ⓐ 2,667 Ⓑ 699 Ⓒ 589 Ⓓ 611

6. Write the *division equation* for the group model.



Note: The *three dots* mean there are *more* groups between the last two equal groups of 3 and 9.

7. Jesus saved a total of 30 dollars over 6 months' time. He saved the exact same amount of money every month. How many dollars did Jesus save each month?

Ⓐ $ 24 Ⓑ $ 180 Ⓒ $ 36 Ⓓ $ 5

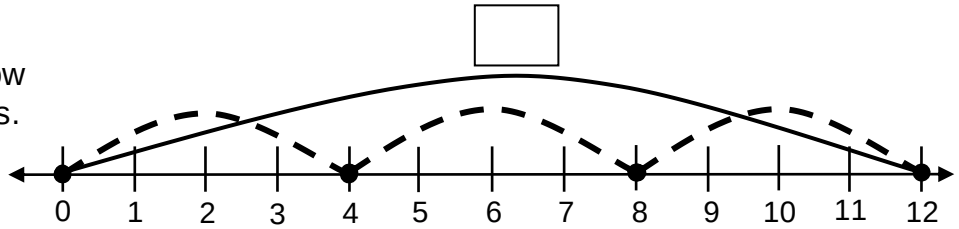
8. Bill wrote multiples of 4, and Julio wrote multiples of 3. What are the first – two numbers that are the same number in each boys' list of multiples (*not including zero)*?

Ⓐ 3; 4 Ⓑ 6; 8 Ⓒ 9; 12 Ⓓ 12; 24

PART 3: *Reflection and Conceptual Understanding*

Fill in the box on the number line.
Complete the **division** equation below that the number line model represents.

☐ ÷ ☐ = ☐



FALL STAAR WALK - Learning Opportunity 33 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Missing ***Quotient*** and ***Divisor*** practice*:*

a.) 16 ÷ ☐ = 8 **e.)** 24 ÷ ☐ = 6

b.) 54 ÷ 6 = ☐ **f.)** 64 ÷ 8 = ☐

c.) 18 ÷ ☐ = 6 **g.)** 15 ÷ ☐ = 5

d.) 20 ÷ 5 = ☐ **h.)** 45 ÷ 9 = ☐

2. Complete the **Fact Family** for the 3 numbers.

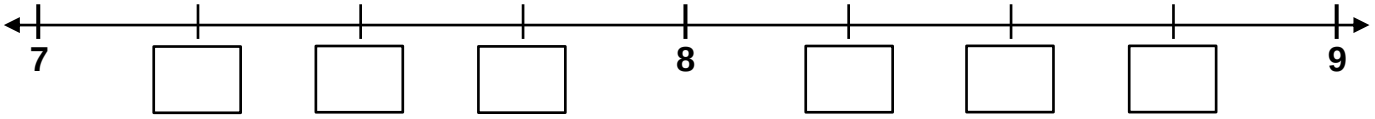
a.) **7 , 28 , 4** **b.)** **48 , 6 , 8**

3. Correctly complete the **multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 15:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

b.) *Multiples of 50:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

4. W*rite* the missing **mixed numbers** in the empty boxes that complete the number lines.

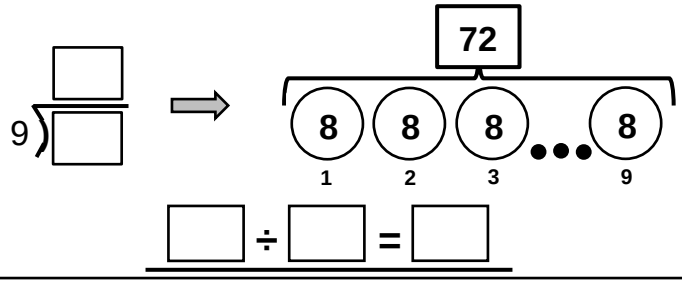


PART 2: *Application Practice*

5. John jogged 4 miles every day for 6 days. His track coach ran 7 miles each day for 10 days. How much further did his track coach run than John?

Ⓐ 24 Ⓑ 70 Ⓒ 94 Ⓓ 46

6. *Complete*: **Dividend**, **divisor** and **quotient**.



7. Jorge paid his sister 30 dollars each month for six months. How many total dollars did Jorge pay to his sister?

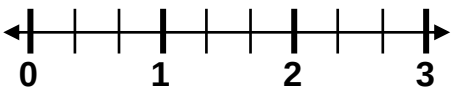
Ⓐ $ 24 Ⓑ $ 180 Ⓒ $ 36 Ⓓ $ 5

8. Luz wrote a list of multiples of 2. Jasmine wrote multiples of 5. What are the first two numbers that are the same number in each girls' list of multiples (*not including zero)*?

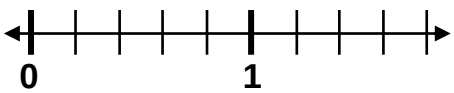
Ⓐ 10; 20 Ⓑ 2; 10 Ⓒ 5; 10 Ⓓ 2; 5

PART 3: *Reflection and Conceptual Understanding*

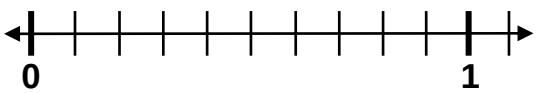
Determine the **denominator** for each fractional number line. Write the answers on the lines provided.



a.) _____



b.) _____



c.) _____

FALL STAAR WALK - Learning Opportunity 34 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Missing ***Quotient*** and ***Divisor*** practice:

a.) 36 ÷ ☐ = 9 **d.)** 24 ÷ ☐ = 8

b.) 56 ÷ 8 = ☐ **e.)** 80 ÷ 8 = ☐

c.) 15 ÷ ☐ = 3 **f.)** 12 ÷ ☐ = 2

2. ***Complete*** the **Fact Family** for the 3 numbers.

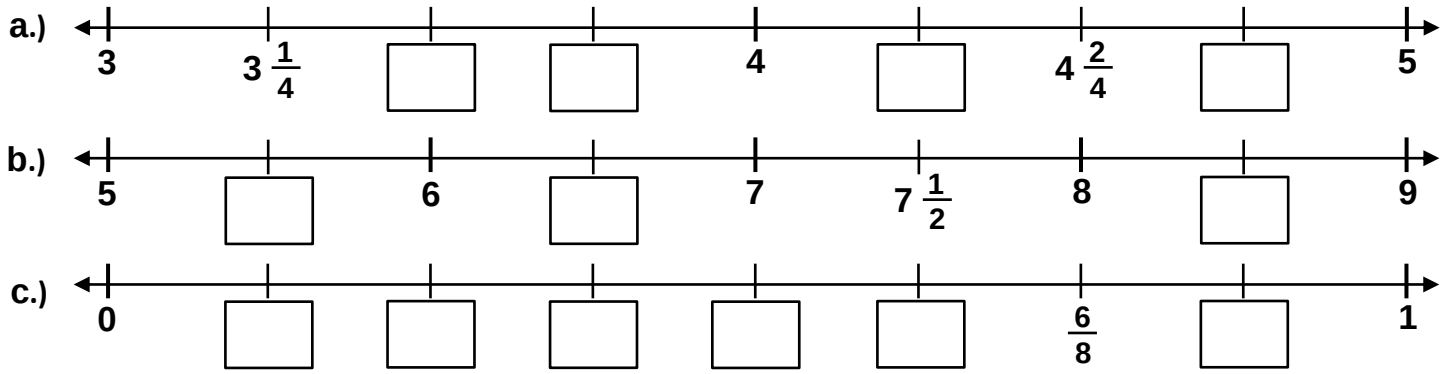
a.) **9 , 7 , 63**

_____
_____
_____
_____

b.) **5 , 30 , 6**

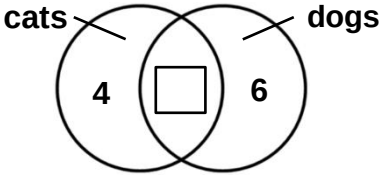
_____
_____
_____
_____

3. Complete the fractional number lines with the missing **fractions** and **mixed numbers** in the empty boxes.



PART 2: *Application Practice*

4. Use the Venn Diagram to answer the questions.



The Venn Diagram tells us the number of people that like cats and dogs.

a.) If 15 people were surveyed, how many people like **both** cats and dogs? _____
(Place that number in the box on the Venn Diagram.)

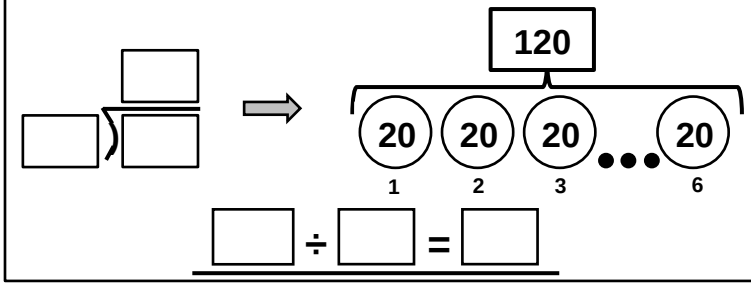
b.) How many people **only** like dogs? _____

c.) How many people like dogs? Careful. _____

d.) How many people **only** like cats? _____

e.) How many people like cats? Careful. _____

5. *Complete* **Divisor, Quotient** and **Dividend**.



6. Jake purchased 3 cabbages at 86 cents each. **About** how much money did Jake spend on the cabbages?

Ⓐ $ 0.91 Ⓑ $ 3.60 Ⓒ $ 2.70 Ⓓ $ 0.90

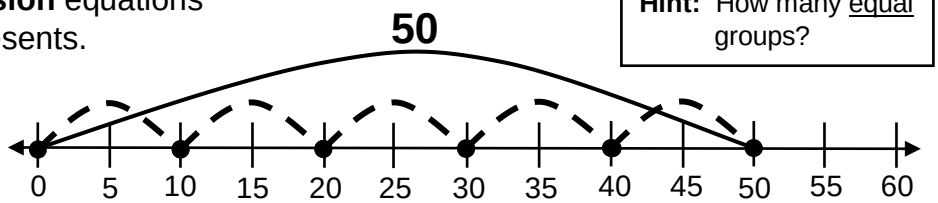
PART 3: *Reflection and Conceptual Understanding*

Complete the **multiplication** and **division** equations below that the number line model represents.

_____ x **= 50**

50 ÷ _____ **=**

Hint: How many equal groups?



FALL STAAR WALK - Learning Opportunity 35 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Missing ***Quotient*** and ***Divisor*** practice:

a.) 15 ÷ 5 = ☐ **d.)** 16 ÷ 8 = ☐

b.) 150 ÷ 5 = ☐ **e.)** 160 ÷ 8 = ☐

c.) 60 ÷ ☐ = 30 **f.)** 100 ÷ ☐ = 20

2. ***Complete*** the **Fact Family** for the 3 numbers.

a.) **20 , 3 , 60** **b.)** **5 , 30 , 150**

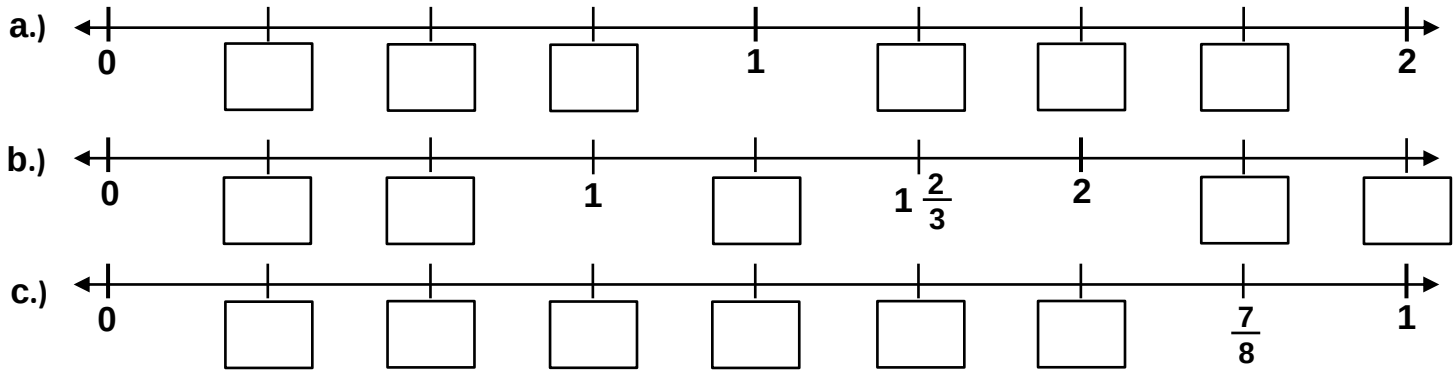
_____ _____

_____ _____

_____ _____

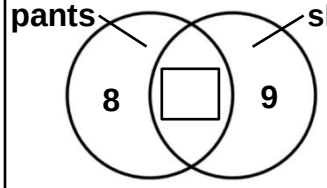
_____ _____

3. Complete the fractional number lines with the missing **fractions** and **mixed numbers** in the empty boxes.



PART 2: *Application Practice*

4. Use the Venn Diagram to answer the questions.



The Venn Diagram tells us the number of people that like pants and shorts.

a.) If 20 people were surveyed, how many people like **both** pants and shorts? _____
(Place that number in the box on the Venn Diagram.)

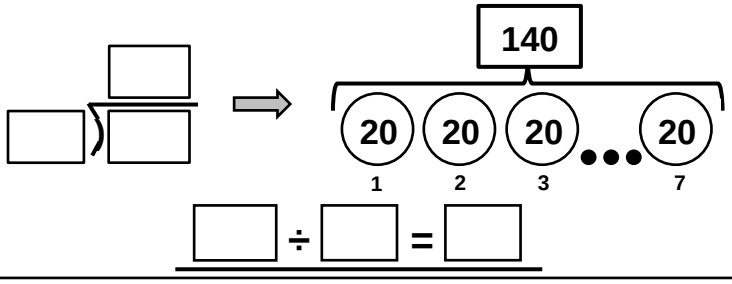
b.) How many people **only** like pants? _____

c.) How many people like pants? _____

d.) How many people **only** like shorts? _____

e.) How many people like shorts? _____

5. Complete: **Quotient**, **Divisor** and **Dividend**.

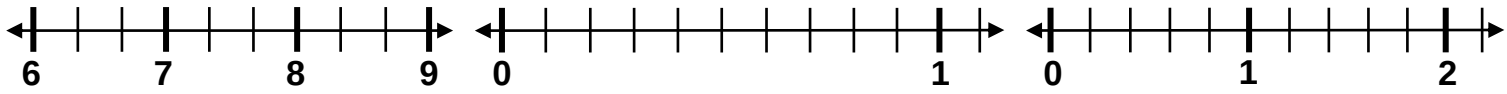


6. Gilbert's neighbor was selling fish. Gilbert purchased two fish for 80 cents each and 4 fish for 50 cents each. How much money did Gilbert spend?

Ⓐ $ 0.91 Ⓑ $ 3.60 Ⓒ $ 2.70 Ⓓ $ 0.90

PART 3: *Reflection and Conceptual Understanding*

Determine the **denominator** for each fractional number line. Write the answers on the lines provided.



a.) _____ **b.)** _____ **c.)** _____

FALL STAAR WALK - Learning Opportunity 36 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Missing ***Quotient*** and ***Divisor*** practice:

a.) 21 ÷ 7 = ☐ **d.)** 24 ÷ 8 = ☐

b.) 210 ÷ 7 = ☐ **e.)** 240 ÷ 8 = ☐

c.) 90 ÷ ☐ = 30 **f.)** 150 ÷ ☐ = 30

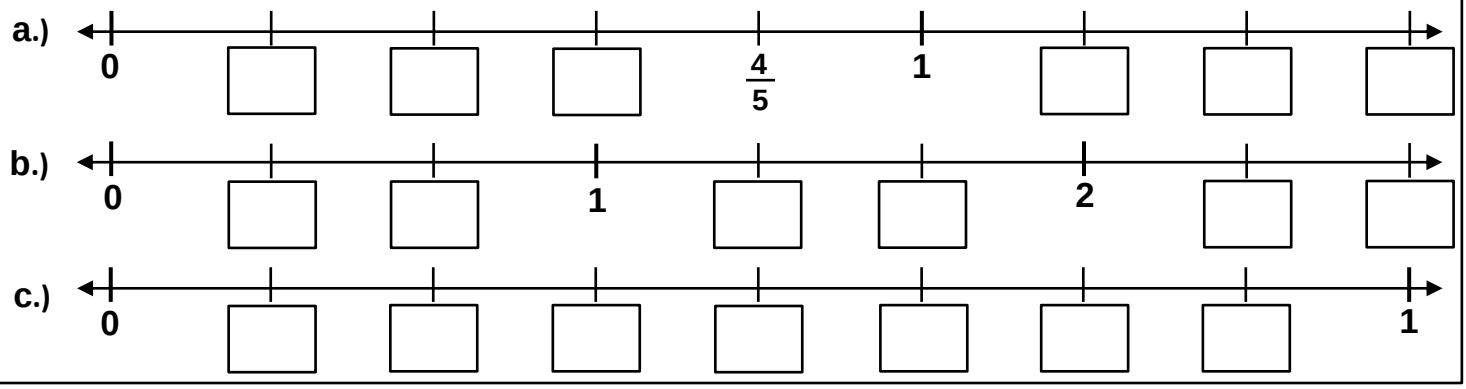
2. ***Make 60*** – Time – Compute the missing addend.

a.) 50 + ***10*** = 60 **d.)** 30 + ☐ = 60

b.) 20 + ☐ = 60 **e.)** 40 + ☐ = 60

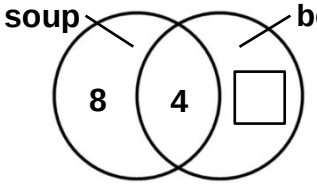
c.) 60 + ☐ = 60 **f.)** 10 + ☐ = 60

3. Complete the fractional number lines with the missing **fractions** and **mixed numbers** in the empty boxes.



PART 2: *Application Practice*

4. Use the Venn Diagram to answer the questions.



The Venn Diagram tells us the number of people that like beans and soup.

a.) If 15 people were surveyed, how many people like **only** beans? _____
(Place that number in the box on the Venn Diagram.)

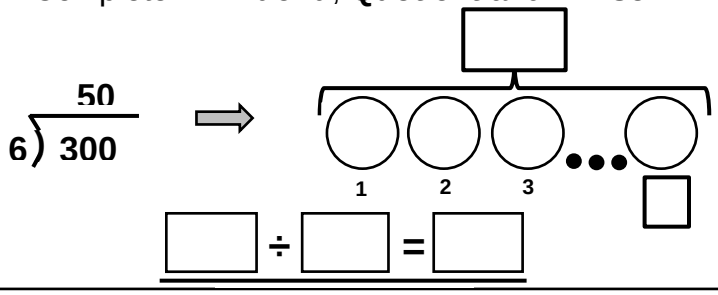
b.) How many people **only** like soup? _____

c.) How many people like soup? _____

d.) How many like **both** soup and beans? _____

e.) How many people like beans? _____

5. Complete: **Dividend**, **Quotient** and **Divisor**.



6. Dao chose 1,007. Billy selected 548. Ralph decided upon 2,803. What is the sum and difference of Billy's and Ralph's chosen numbers?

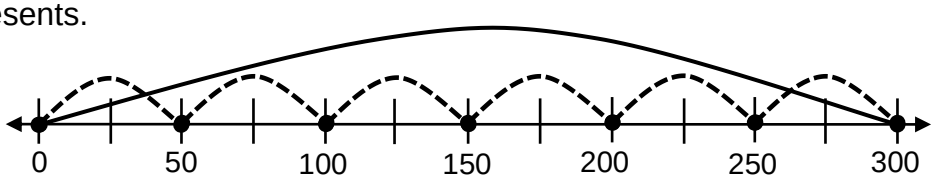
Sum = _____ Difference = _____

PART 3: *Reflection and Conceptual Understanding*

Complete the **multiplication** and **division** equations below that the number line model represents.

_____ X _____ = _____

_____ ÷ _____ = _____



FALL STAAR WALK - Learning Opportunity 37 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Missing ***Quotient*** and ***Divisor*** practice:

a.) 49 ÷ 7 = ☐ **d.)** 32 ÷ 4 = ☐

b.) 490 ÷ 7 = ☐ **e.)** 320 ÷ 4 = ☐

c.) 900 ÷ ☐ = 300 **f.)** 270 ÷ ☐ = 30

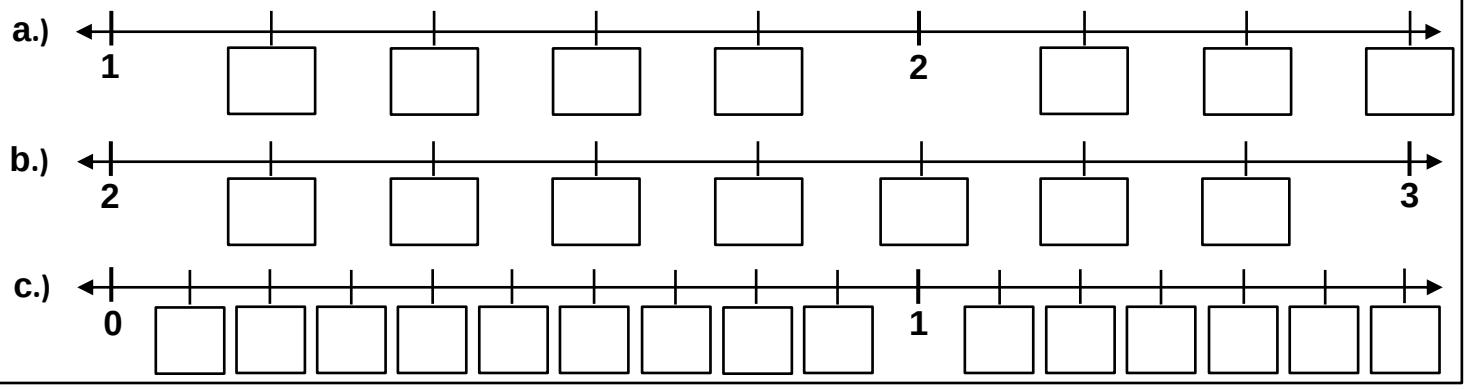
2. ***Make 60*** – Time – Compute the missing addend.

a.) 40 + ☐ = 60 **d.)** 20 + ☐ = 60

b.) 50 + ☐ = 60 **e.)** 30 + ☐ = 60

c.) 10 + ☐ = 60 **f.)** 60 + ☐ = 60

3. Complete the fractional number lines with the missing **fractions** and **mixed numbers** in the empty boxes.

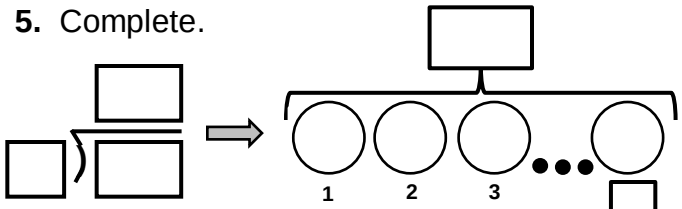


PART 2: *Application Practice*

4. Fourth and fifth grade students at Medary School are sitting in the cafeteria for lunch. There are 3 tables with 20 fourth graders sitting at each table, and four tables each seating 25 fifth graders. How many more fifth graders are there than fourth graders at Medary School?

Ⓐ 100 Ⓑ 60 Ⓒ 160 Ⓓ 40

5. Complete.

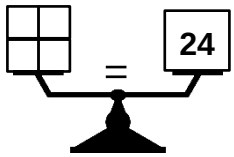


320 ÷ **8** = ☐

6. A scale is holding a 24-kilogram block. What is the mass of each block shown that must be placed on the left side of the scale so it is balanced?

Ⓐ 4 kg. Ⓒ 6 kg.

Ⓑ 5 kg. Ⓓ 8 kg.

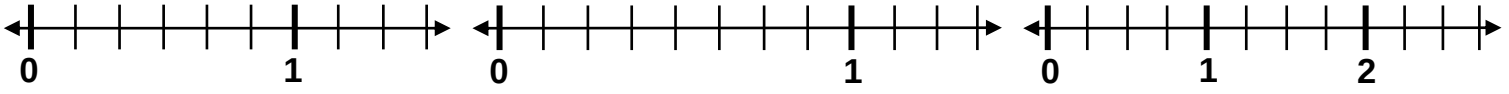


7. A <u>product</u> is an <u>odd number</u> and a <u>multiple of 3</u>. It is also a <u>two-digit number</u> between 24 and 32. Find the number.

☐

PART 3: *Reflection and Conceptual Understanding*

Determine the **<u>denominator</u>** for each fractional number line. Write the answers on the lines provided.



a.) _____ **b.)** _____ **c.)** _____

FALL STAAR WALK - Learning Opportunity 38 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Write the **remainder (R)** in the box.*

a.) $2\overline{)11}$ **R 1** **c.)** $3\overline{)7}$ ☐

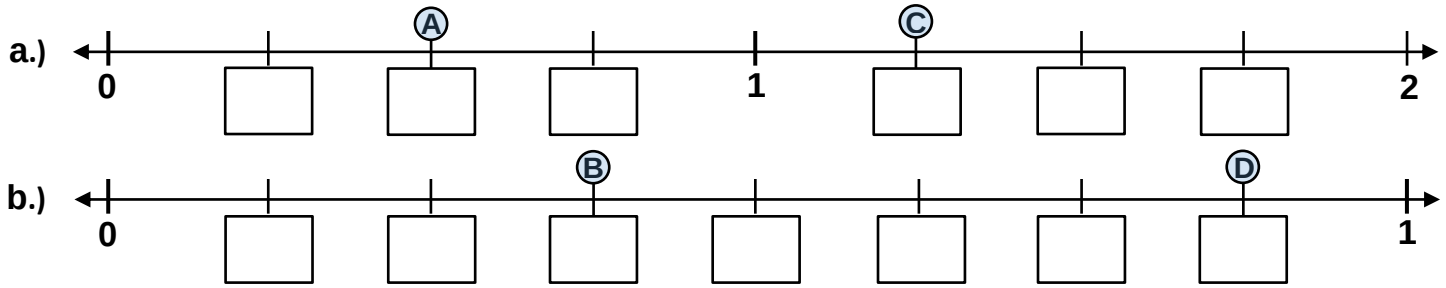
b.) $4\overline{)9}$ ☐ **d.)** $3\overline{)11}$ ☐

2. ***Make 60*** – Time – Compute the missing addend.

a.) 30 + ☐ = 60 **c.)** 10 + ☐ = 60

b.) 20 + ☐ = 60 **d.)** 40 + ☐ = 60

3. Complete the fractional number lines with the missing **fractions** and **mixed numbers** in the empty boxes.



4. Correctly shade the related **fractions** and **mixed numbers** below from A, B, C and D in problem 3 above.

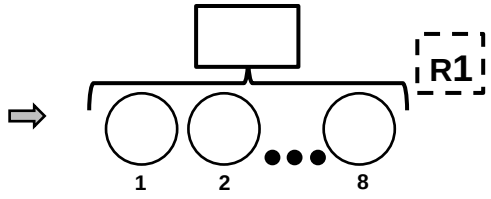
PART 2: *Application Practice*

5. Jose computed the kilometer distance to each of the next three towns on his car trip. He is 195 miles from New Orleans, and New Orleans is 511 kilometers from Houston. Houston to Dallas is another 362 kilometers. *About* how many kilometers (km) does Jose still need to travel to arrive in Dallas, Texas?

Ⓐ 1,100 km Ⓑ 1,000 km Ⓒ 1,200 km Ⓓ 1 km

6. Complete.

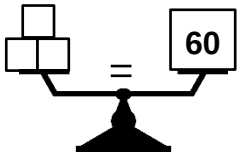
$8\overline{)17}$ = 2 R1



7. A scale is holding a 60-pound block. What is the weight of each block shown that must be placed on the left side of the scale so it is balanced?

Ⓐ 15 lbs. Ⓒ 180 lbs.

Ⓑ 20 lbs. Ⓓ 63 lbs.



8. Dan is 32 years old. He is 4 times older than his son, Lewis. Dan is half the age of his father, Frank. Find Lewis and Frank's ages.

Lewis' age = _____ Frank's age = _____

PART 3: *Reflection and Conceptual Understanding*

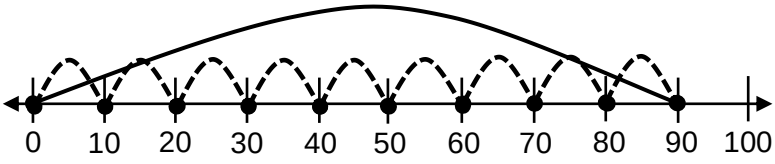
Write a simple **division** word problem using the number line diagram below.

_____

_____

_____

_____



FALL STAAR WALK - Learning Opportunity 39 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Write the **remainder (R)** in the box.*

a.) $7\overline{)22}$ ☐ **c.)** $5\overline{)9}$ ☐

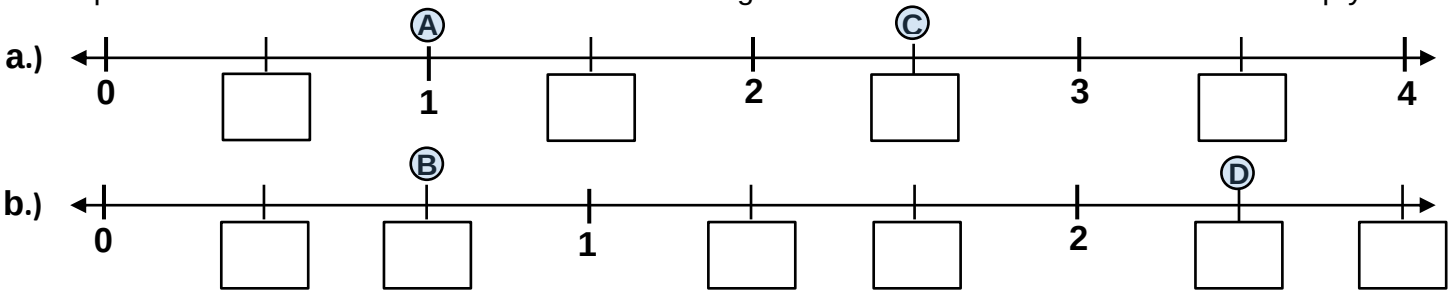
b.) $8\overline{)20}$ ☐ **d.)** $4\overline{)19}$ ☐

2. ***Make 60*** – Time – Compute the missing addend.

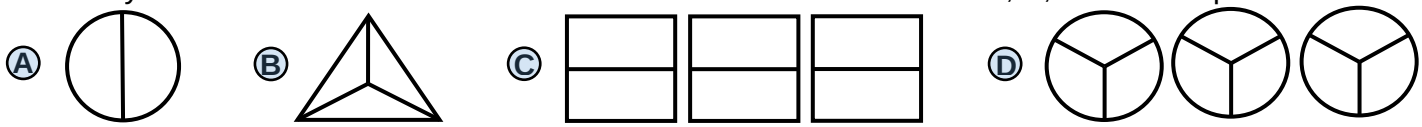
a.) 40 + ☐ = 60 **c.)** 50 + ☐ = 60

b.) 45 + ☐ = 60 **d.)** 55 + ☐ = 60

3. Complete the fractional number lines with the missing **fractions** and **mixed numbers** in the empty boxes.



4. Correctly shade the related **fractions** and **mixed numbers** below from A, B, C and D in problem 3 above.



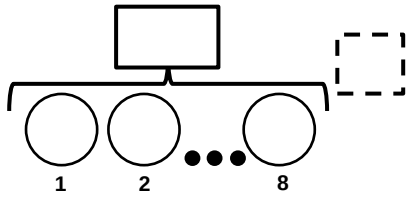
PART 2: *Application Practice*

5. Mateo is estimating the amount of time it takes him to travel to work each morning from Monday through Friday. If he drives his car 45 minutes each morning, about how many total minutes does Mateo spend driving his car for a five-day work week?

Ⓐ 50 min. Ⓑ 250 min. Ⓒ 200 min. Ⓓ 45 min.

6. Complete.

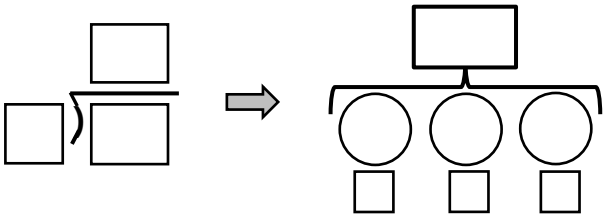
$8\overline{)26}$ = 3 R2 ⇨



7. Priscilla and her two girlfriends collected 270 seashells during their vacation on Madera Beach, Florida. If the three girls divide the shells equally between them, how many seashells will each girl receive?

Ⓐ 9 shells Ⓑ 900 shells Ⓒ 90 shells Ⓓ 80 shells

8. Using the information from problem 7, complete the diagrams below.



PART 3: *Reflection and Conceptual Understanding*

Decimal points can seem confusing at first. But, decimal points are always present in any whole number. Decimal points are always located **directly behind** the whole number when **NOT** shown. **Correctly place** the *decimal point* in each whole number below.

a.) **3** ⇨ ***3.0*** **b.)** **17** ⇨ ☐ **c.)** **436** ⇨ ☐ **d.)** **2,836** ⇨ ☐

FALL STAAR WALK - Learning Opportunity 40
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. *Write the **remainder (R)** in the box.*

a.) $8\overline{)43}$ ☐ **c.)** $6\overline{)19}$ ☐

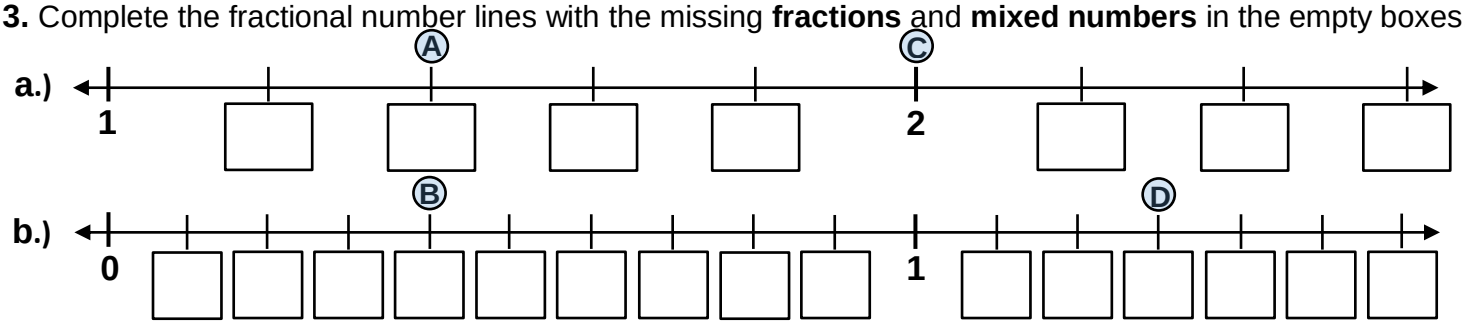
b.) $9\overline{)45}$ ☐ **d.)** $7\overline{)54}$ ☐

2. ***Make 60*** – Time – Compute the missing addend.

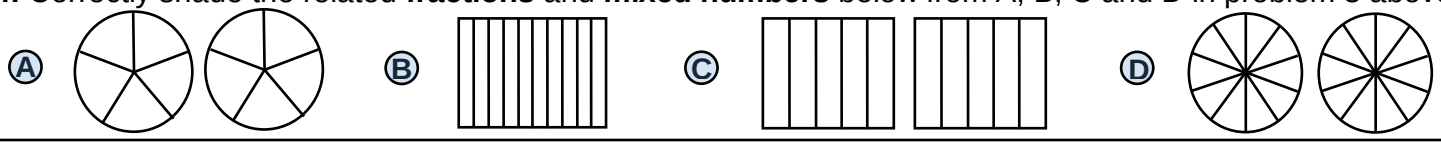
a.) 25 + ☐ = 60 **c.)** 35 + ☐ = 60

b.) 15 + ☐ = 60 **d.)** 5 + ☐ = 60

3. Complete the fractional number lines with the missing **fractions** and **mixed numbers** in the empty boxes.



4. Correctly shade the related **fractions** and **mixed numbers** below from A, B, C and D in problem 3 above.

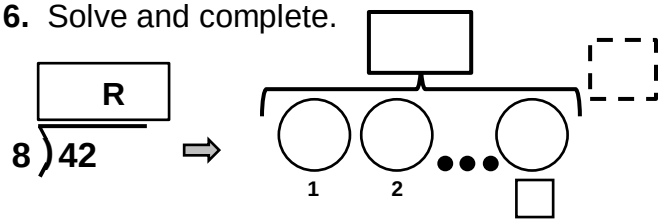


PART 2: *Application Practice*

5. Joshua, a marathon runner, recorded the number of miles he ran each week for a month. He ran 57 miles in week 1, and 83 miles in the second week. The last two weeks he ran 45 and 74 miles. About how many total miles did he run during the month?

Ⓐ 240 miles Ⓑ 200 miles Ⓒ 260 miles Ⓓ 26 miles

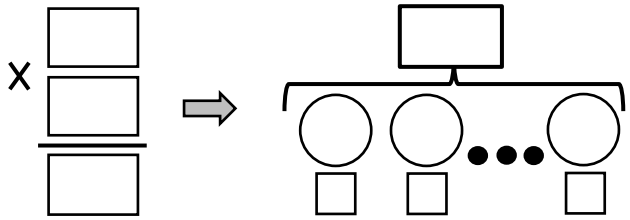
6. Solve and complete.



7. Jim opened up a savings account at AmCo Bank. He deposited exactly 72 dollars each month for 7 months in a row. How much money was in Jim's savings account after all his monthly deposits?

Ⓐ $ 504 Ⓑ $ 484 Ⓒ $ 494 Ⓓ $ 564

8. Using the information from problem 7, complete the diagrams below.



PART 3: *Reflection and Conceptual Understanding*

Write a simple **division** problem using the following equation with a remainder: ***13 ÷ 2 = 6 Remainder 1***.

_____

_____

_____

FALL STAAR WALK - Learning Opportunity 41 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *the* ***remainder*** ***(R)*** *in the box.*

a.) $8\overline{)55}$ = ☐ **c.)** $3\overline{)29}$ = ☐

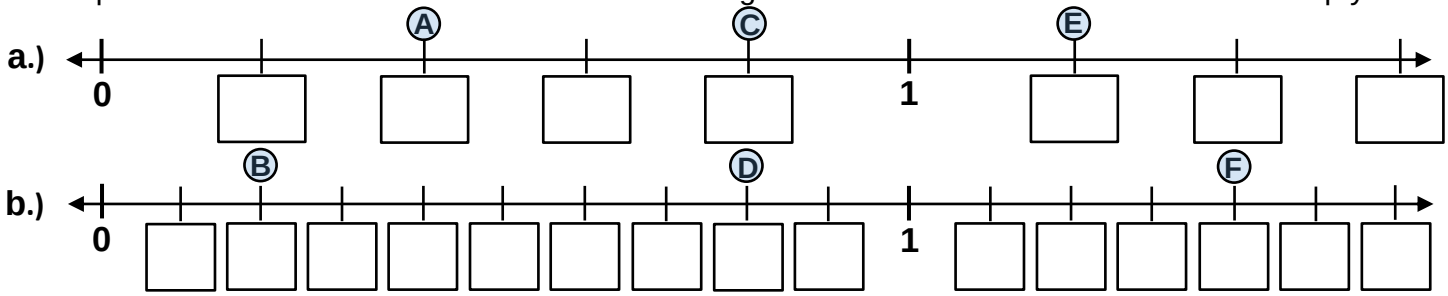
b.) $7\overline{)39}$ = ☐ **d.)** $8\overline{)58}$ = ☐

2. ***Make 60*** – Time – Compute the missing addend.

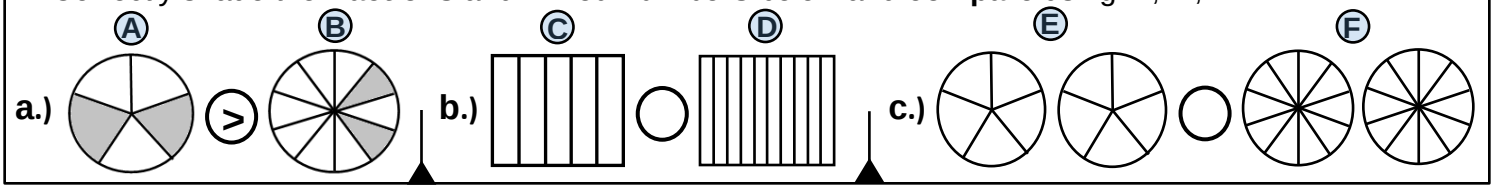
a.) 15 + ☐ = 60 **c.)** 55 + ☐ = 60

b.) 25 + ☐ = 60 **d.)** 35 + ☐ = 60

3. Complete the fractional number lines with the missing **fractions** and **mixed numbers** in the empty boxes.

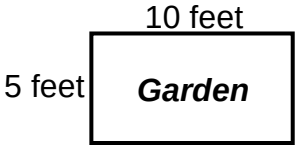


4. Correctly shade the **fractions** and **mixed numbers** below and **compare** using < , > , =.



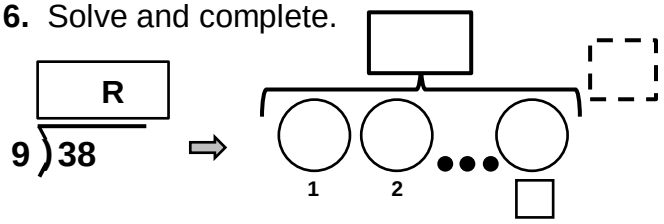
PART 2: *Application Practice*

5. Ms. Taylor drew a rectangle on the white board at the front of the classroom. She told her students that this rectangle represented the flower garden in her backyard. If the rectangle was 5 feet in width and 10 feet in length, what is the perimeter of Ms. Taylor's garden?



Ⓐ 15 feet Ⓑ 50 feet Ⓒ 30 feet Ⓓ 20 feet

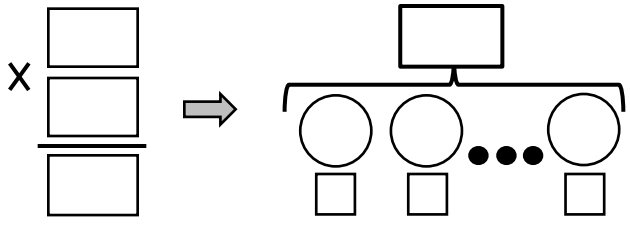
6. Solve and complete.



7. Find the product of 34 and 6.

Ⓐ 184 Ⓑ 194 Ⓒ 204 Ⓓ 214

8. Using the information from problem 7, complete the diagrams below.



PART 3: *Reflection and Conceptual Understanding*

Write a simple **division** problem using the following equation with a remainder: ***23 ÷ 5 = 4 Remainder 3***.

_____

_____

_____

FALL STAAR WALK - Learning Opportunity 42
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *the* ***remainder*** ***(R)*** *in the box.*

a.) $8\overline{)75}$ = 9 ☐ **c.)** $8\overline{)29}$ = 3 ☐

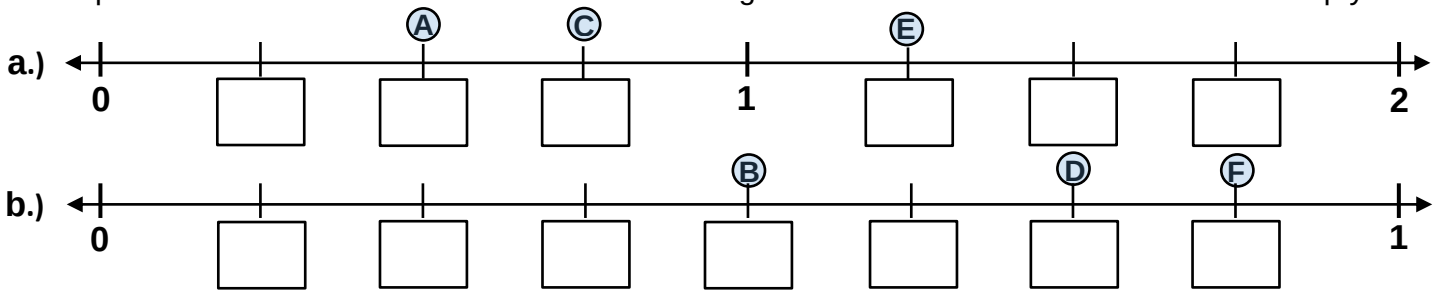
b.) $6\overline{)39}$ = 6 ☐ **d.)** $7\overline{)68}$ = 9 ☐

2. ***Make 60*** – Time – Compute the missing addend.

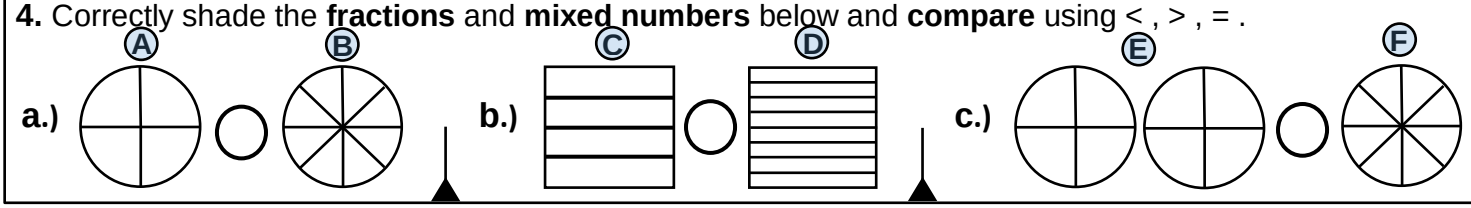
a.) 45 + ☐ = 60 **c.)** 35 + ☐ = 60

b.) 5 + ☐ = 60 **d.)** 25 + ☐ = 60

3. Complete the fractional number lines with the missing **fractions** and **mixed numbers** in the empty boxes.



4. Correctly shade the **fractions** and **mixed numbers** below and **compare** using < , > , = .



PART 2: *Application Practice*

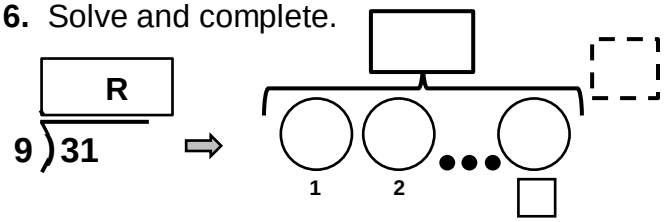
5. Ms. Taylor drew a rectangle on the white board at the front of the classroom. She told her students that this rectangle represented the flower garden in her backyard. If the rectangle was 5 feet in width and 10 feet in length, what is the area of Ms. Taylor's garden?

10 feet

5 feet ***Garden***

Ⓐ 15 sq. ft. Ⓑ 50 sq. ft. Ⓒ 30 sq. ft. Ⓓ 5 sq. ft.

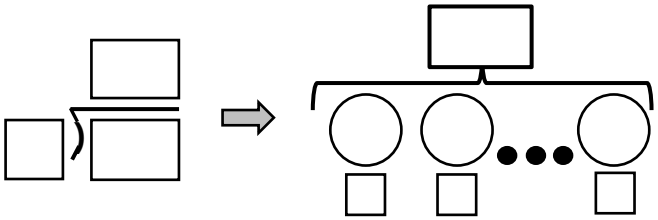
6. Solve and complete.



7. Find the quotient of 240 and 6.

Ⓐ 40 Ⓑ 50 Ⓒ 60 Ⓓ 70

8. Using the information from problem 7, complete the diagrams below.



PART 3: *Reflection and Conceptual Understanding*

Decimals are easily thought in terms of MONEY – dollars and cents. **Correctly place** the decimal point by converting the whole number to an *equivalent* dollars and cents.

a.) **$ 6 = *$ 6.00*** **b.)** **$ 19 =** _____ **c.)** **$ 140 =** _____ **d.)** **$ 3,091 =** _____

FALL STAAR WALK - Learning Opportunity 43 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *the* ***remainder*** ***(R)*** *in the box.*

a.) $9\overline{)85}$ = ☐ **c.)** $8\overline{)50}$ = ☐

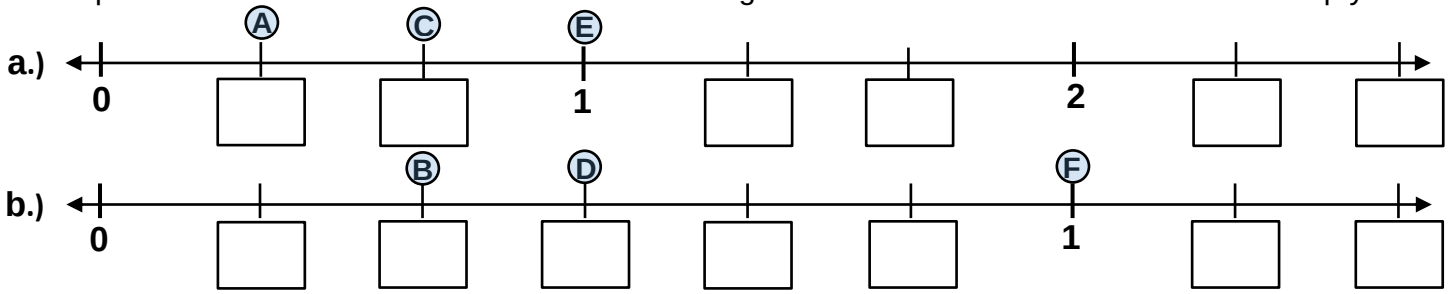
b.) $7\overline{)64}$ = ☐ **d.)** $5\overline{)28}$ = ☐

2. ***Make 1 Whole*** – Compute the missing addend.

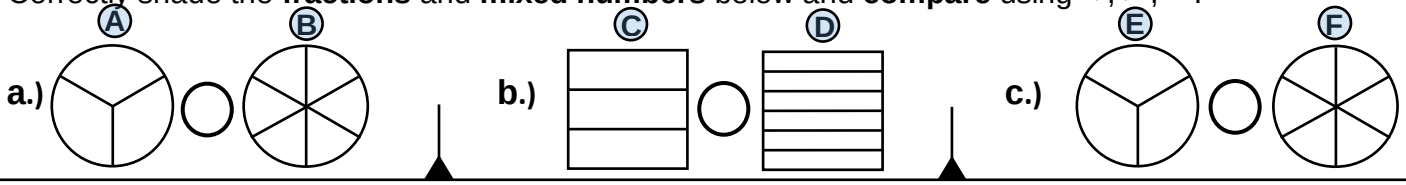
a.) 0.3 + ***0.7*** = 1.0 **c.)** 0.9 + ☐ = 1.0

b.) 0.7 + ☐ = 1.0 **d.)** 0.8 + ☐ = 1.0

3. Complete the fractional number lines with the missing **fractions** and **mixed numbers** in the empty boxes.



4. Correctly shade the **fractions** and **mixed numbers** below and **compare** using < , > , = .



PART 2: *Application Practice*

5. Bradley calculated he needed an area of 30 square feet for his new closet. If the closet's width is 5 feet, what is the length of the closet in feet?

Ⓐ 12 feet Ⓑ 35 feet Ⓒ 5 feet Ⓓ 6 feet

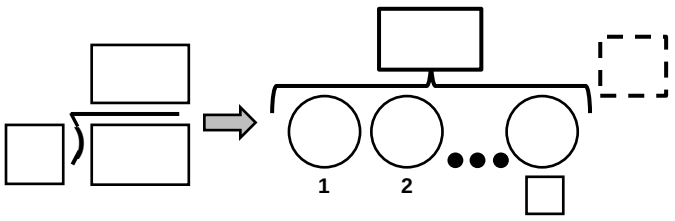
6. Joseph placed 15 watermelons in his shopping cart basket. If each watermelon costs $ 3.15 on sale, <u>about</u> how much money will Joseph spend on watermelons?

Ⓐ $ 18 Ⓑ $ 12 Ⓒ $ 45 Ⓓ $ 6

7. Roberta was given 58 dollars from her favorite uncle for her birthday. Roberta decided she would give the money equally to 7 different charities. If any money was left over, she would give it to her brother. How much money did her brother receive from Roberta?

Ⓐ $ 0 Ⓑ $ 2 Ⓒ $ 4 Ⓓ $ 7

8. Using the information from problem 7, complete the diagrams below.



PART 3: *Reflection and Conceptual Understanding*

Using an *'<u>imaginary</u> **1**'* under the decimal point and *<u>adding zeros under each digit</u>* is an easy way to change <u>decimals to equivalent fractions</u>. Use this method to find **<u>equivalent fractions</u>** for the decimals below.

a.) **0.05** ⇨ $\frac{0.05}{1.00} = \frac{5}{100}$ **b.)** **0.302** ⇨ $\frac{0.302}{1.000} = \frac{\square}{\square}$ **c.)** **0.7** ⇨ $\frac{0.7}{\square} = \frac{\square}{\square}$

FALL STAAR WALK - Learning Opportunity 44 for TEKS/STAAR "Journey of Knowledge"

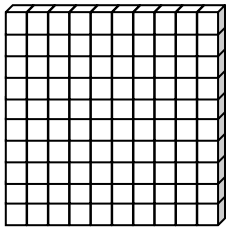
Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *and* ***shade*** *the equivalent fraction.*

1 penny = 1 cent = 1¢ = 0.01

0.01 = $\frac{\square}{\square}$ ⇨



2. ***Make 1 Whole*** – Compute the missing addend.

a.) 0.4 + ☐ = 1.0

b.) 0.7 + ☐ = 1.0

c.) 0.2 + ☐ = 1.0

d.) 0.9 + ☐ = 1.0

e.) 0.5 + ☐ = 1.0

f.) 0.3 + ☐ = 1.0

3. Correctly complete the **Decimal multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 1¢:* ***0*** , ***0.01*** , ***0.02*** , ***0.03*** , ___ , ___ , ___ , ___ , ___ , ___ , ***0.10***

b.) *Multiples of 5¢:* ***0*** , ***0.05*** , ***0.10*** , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***0.50***

c.) *Multiples of 10¢:* ***0*** , ***0.10*** , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***1.00***

4. Expand each number to show each digit's *value* in ***Base 10 Place Value Form***.

a.) 54 = ***(5 x 10) + (4 x 1)***

b.) 67 = _____

c.) 70 = _____

d.) 98 = _____

PART 2: *Application Practice*

5. A carpenter measured the perimeter of a rectangular window to be exactly 22 feet. If the window's width is 5 feet, what is the measurement of the window's length? Draw a picture of the window with measurements.

Ⓐ 12 feet Ⓑ 35 feet Ⓒ 5 feet Ⓓ 6 feet

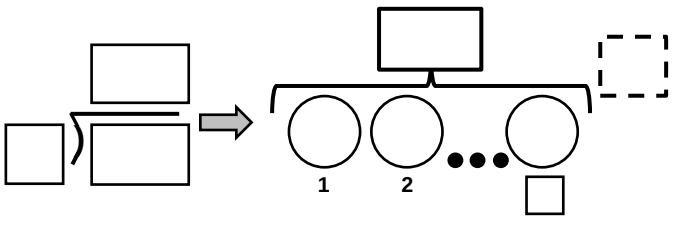
6. There are 6 sections in Johnson Stadium. If each section can hold 92 people, what is the maximum number of people that can attend a football game at the stadium?

Ⓐ 552 Ⓑ 562 Ⓒ 542 Ⓓ 98

7. If each car can hold a maximum of 6 people and there is a group of 27 people going to the county fair, how many cars are needed to transport the group?

Ⓐ 4 cars Ⓑ 5 cars Ⓒ 6 cars Ⓓ 7 cars

8. Using the information from problem 7, complete the diagrams below.



PART 3: *Reflection and Conceptual Understanding*

Using an *'imaginary* ***1****'* under the decimal point and *adding zeros under each digit* is an easy way to change decimals to equivalent fractions. Use this method to find **equivalent fractions** for the decimals below.

a.) 6.09 ⇨ $\frac{6.09}{1\,00} = 6\,\frac{9}{100}$

b.) 4.007 ⇨ $\frac{4.007}{1\,000} = 4\,\frac{\square}{\square}$

c.) 0.3 ⇨ $\frac{0.3}{\square} = \frac{\square}{\square}$

FALL STAAR WALK - Learning Opportunity 45 for TEKS/STAAR "Journey of Knowledge"

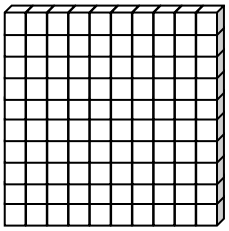
Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *and* ***shade*** *the equivalent fraction to the decimal.*

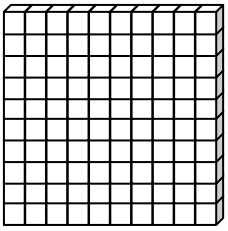
a.) 1 nickel = 5 cents = 5¢ = 0.05

0.05 = $\frac{\square}{\square}$ ⇨



b.) 7 pennies = 7 cents = 7¢ = 0.07

0.07 = $\frac{\square}{\square}$ ⇨



2. Correctly complete the **Decimal multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 1¢:* ***0*** , ***0.01*** , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***0.10***

b.) *Multiples of 5¢:* ***0*** , ***0.05*** , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***0.50***

c.) *Multiples of 10¢:* ***0*** , ***0.10*** , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***1.00***

3. Expand each number *in* ***Base 10 Place Value Form***.

a.) 89 = ***(8 x 10) + ( )***

b.) 76 = _____

c.) 40 = _____

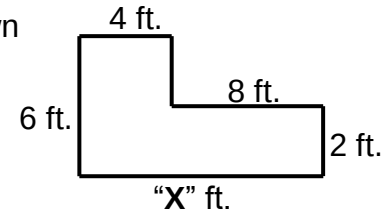
4. ***Make 1 Whole*** – Complete to sum to 1.0

a.) 0.4 + ☐ = 1.0 **c.)** 0.1 + ☐ = 1.0

b.) 0.6 + ☐ = 1.0 **d.)** 0.3 + ☐ = 1.0

PART 2: *Application Practice*

5. An "L-shaped" polygon has the dimensions shown in the diagram. What is the length of side "**X**" in feet?



Ⓐ 12 feet Ⓑ 35 feet Ⓒ 5 feet Ⓓ 6 feet

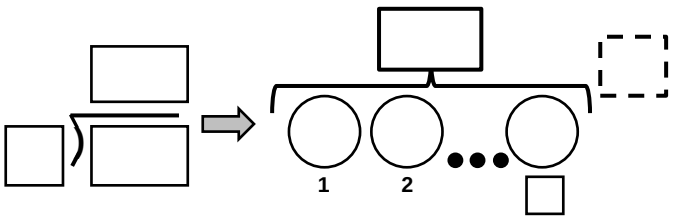
6. A baby Great White Shark has 50 teeth. An adult Great White Shark has 300 teeth. How many teeth do 4 baby and 3 adult Great White Sharks have?

Ⓐ 350 Ⓑ 1,100 Ⓒ 900 Ⓓ 200

7. Diane has 75 spiral notebooks for the fourth grade field trip. If she can place a maximum of 8 spiral notebooks in one cardboard box, how many boxes are required to pack all 75 notebooks?

Ⓐ 7 boxes Ⓑ 8 boxes Ⓒ 9 boxes Ⓓ 10 boxes

8. Using the information from problem 7, complete the diagrams below.



PART 3: *Reflection and Conceptual Understanding*

Using an *'imaginary* ***1****'* under the decimal point and *adding zeros under each digit* is an easy way to change decimals to equivalent fractions. Use this method to find **equivalent fractions** for the decimals below.

a.) 7.34 ⇨ $7.\underline{34} = \frac{\square}{\square}$ **b.) 9.502** ⇨ $\frac{\square}{\square} = \frac{\square}{\square}$ **c.) 0.9** ⇨ $\frac{\square}{\square} = \frac{\square}{\square}$

FALL STAAR WALK - Learning Opportunity 46 for TEKS/STAAR "Journey of Knowledge"

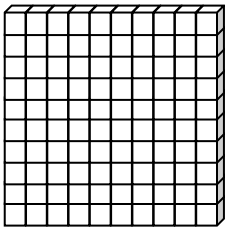
Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *and* ***shade*** *the equivalent fraction to the decimal.*

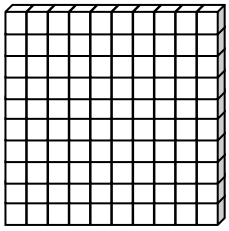
a.) 10 pennies = 10 cents = = 1 dime = 10¢ = 0.10

0.10 = $\frac{\square}{\square}$ ⇨



b.) 18 pennies = 18 cents = = 18¢ = 0.18

0.18 = $\frac{\square}{\square}$ ⇨



2. Correctly complete the **Decimal multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 1¢:* ***0*** , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***0.10***

b.) *Multiples of 5¢:* ***0*** , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***0.50***

c.) *Multiples of 10¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***1.00***

3. Expand each number *in* ***Base 10 Place Value Form***.

a.) 189 = ***(1 x 100) + (8 x 10) + ( )***

b.) 306 = _____

c.) 450 = _____

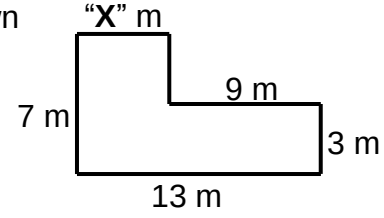
4. ***Make 1 Whole*** – Sum to 1.00

a.) 0.85 + ***0.15*** = 1.00

b.) 0.75 + ☐ = 1.00

PART 2: *Application Practice*

5. An "L-shaped" polygon has the dimensions shown in the diagram. What is the length of side "**X**" in meters?



Ⓐ 17 m Ⓑ 4 m Ⓒ 5 m Ⓓ 6 m

6. Compute the quotient with a dividend of 77 and a divisor of 8.

Ⓐ 8 R 3 Ⓑ 8 R 5 Ⓒ 9 R 5 Ⓓ 9 R 6

7. Jeff can place 6 baseballs in each box. If he needs to place 45 baseballs in boxes, how many boxes will Jeff need?

Ⓐ 7 boxes Ⓑ 8 boxes Ⓒ 9 boxes Ⓓ 10 boxes

8. Hal left home at the time shown on the clock below. If he was gone for 30 minutes, what time did he return home?

Ⓐ 1:15 Ⓑ 12:15 Ⓒ 12:20 Ⓓ 1:20

PART 3: *Reflection and Conceptual Understanding*

Compute equivalent fractions to the decimal. Use the '*imaginary 1'* under the decimal point and *add zeros*.

a.) 0.85 = $\frac{\square}{\square}$ **b.) 0.156 =** $\frac{\square}{\square}$ **c.) 0.7 =** $\frac{\square}{\square}$ **d.) 2.7 =** $\square\frac{\square}{\square}$

FALL STAAR WALK - Learning Opportunity 47 for TEKS/STAAR "Journey of Knowledge"

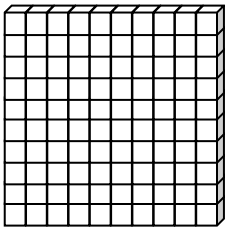
Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *and* ***shade*** *the equivalent fraction to the decimal.*

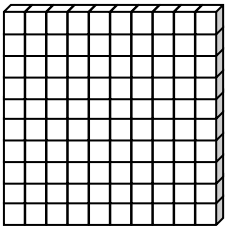
a.) 25 pennies = 25 cents = = 1 quarter = 25¢ = 0.25

0.25 = $\frac{\square}{\square}$ ⇨



b.) 37 pennies = 37 cents = = 37¢ = 0.37

0.37 = $\frac{\square}{\square}$ ⇨



2. Correctly complete the **Decimal multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 1¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***0.10***

b.) *Multiples of 5¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***0.50***

c.) *Multiples of 10¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***1.00***

3. Expand each number *in* ***Base 10 Place Value Form***.

a.) 264 = _____

b.) 980 = _____

c.) 500 = _____

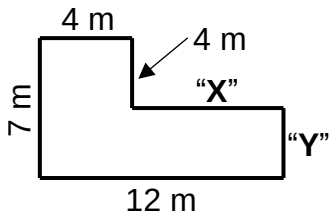
4. ***Make 1 Whole*** – Sum to 1.00

a.) 0.65 + ☐ = 1.00

b.) 0.85 + ☐ = 1.00

PART 2: *Application Practice*

5. An "L-shaped" polygon has the dimensions shown in the diagram. What is the length of side "**X**" and in "**Y**" meters?



Ⓐ 8; 3 Ⓑ 7; 3 Ⓒ 8; 4 Ⓓ 7; 4

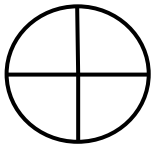
6. Compute the addend given a sum of 407 and an addend of 186.

Ⓐ 211 Ⓑ 221 Ⓒ 693 Ⓓ 593

7. Mi started her homework at 3:45 and finished at 4:40. How much time in minutes did her homework take to complete?

Ⓐ 40 min. Ⓑ 45 min. Ⓒ 50 min. Ⓓ 55 min.

8. Kim and Rob each ate ¼ section of a cherry pie. How much cherry pie is left?



cherry pie

Ⓐ $\frac{1}{4}$ Ⓑ $\frac{2}{4}$ Ⓒ $\frac{3}{4}$ Ⓓ $\frac{4}{4}$

PART 3: *Reflection and Conceptual Understanding*

Compute equivalent fractions to the decimal. Use the '*imaginary 1'* under the decimal point and *add zeros*.

a.) 0.051 = $\frac{\square}{\square}$ **b.) 0.67 =** $\frac{\square}{\square}$ **c.) 0.5 =** $\frac{\square}{\square}$ **d.) 7.1 =** $\square\frac{\square}{\square}$

FALL STAAR WALK - Learning Opportunity 48 for TEKS/STAAR "Journey of Knowledge"

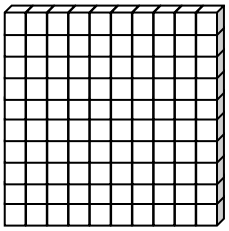
Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *and* ***shade*** *the equivalent fraction to the decimal.*

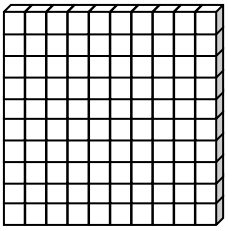
a.) 50 pennies = 50 cents = = 2 quarters = 50¢ = 0.50

0.50 = $\frac{\square}{\square}$ ⇨



b.) 77 pennies = 77 cents = = 77¢ = 0.77

0.77 = $\frac{\square}{\square}$ ⇨



2. Correctly complete the **Decimal multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 2¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***0.20***

b.) *Multiples of 25¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***2.50***

c.) *Multiples of 50¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***5.00***

3. Expand each number *in* ***Base 10 Place Value Form***.

a.) 630 = _____

b.) 891 = _____

c.) 905 = _____

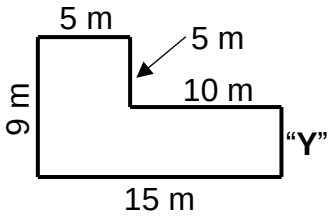
4. ***Make 1 Whole*** – Sum to 1.00

a.) 0.55 + ☐ = 1.00

b.) 0.25 + ☐ = 1.00

PART 2: *Application Practice*

5. An "L-shaped" polygon has the dimensions shown in the diagram. What is the length of side "**Y**" and the perimeter in meters?



Ⓐ 4; 48 Ⓑ 4; 47 Ⓒ 4; 44 Ⓓ 5; 48

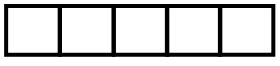
6. Compute the product given factors of 56 and 7.

Ⓐ 392 Ⓑ 372 Ⓒ 382 Ⓓ 402

7. Chung started mowing the lawn at the time shown on the clock. If he worked for 1 hour and 15 minutes, what time did he finish mowing the yard?

Ⓐ 10:45 Ⓑ 10:55 Ⓒ 11:00 Ⓓ 12:00

8. Mitch's father told him to weed the garden. If he completed two-fifths of the garden, how much of the garden is left to weed?



Garden

Ⓐ $\frac{1}{5}$ Ⓑ $\frac{2}{5}$ Ⓒ $\frac{3}{5}$ Ⓓ $\frac{4}{5}$

PART 3: *Reflection and Conceptual Understanding*

Compute equivalent fractions to the decimal. Use the '*imaginary 1'* under the decimal point and *add zeros*.

a.) 0.006 = $\frac{\square}{\square}$ **b.) 0.6 =** $\frac{\square}{\square}$ **c.) 4.03 =** $\square\frac{\square}{\square}$ **d.) 4.3 =** $\square\frac{\square}{\square}$

FALL STAAR WALK - Learning Opportunity 49 for TEKS/STAAR "Journey of Knowledge"

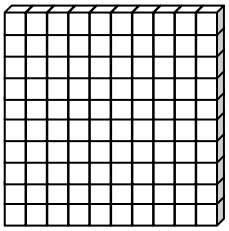
Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *and* ***shade*** *the equivalent fraction to the decimal.*

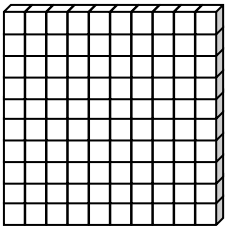
a.) 3 pennies = 3 cents = = 3¢ = 0.03

0.03 = $\frac{\square}{\square}$ ⇨



b.) 96 pennies = 96 cents = = 96¢ = 0.96

0.96 = $\frac{\square}{\square}$ ⇨



2. Correctly complete the **Decimal multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 3¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***0.30***

b.) *Multiples of 25¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***2.50***

c.) *Multiples of 50¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***5.00***

3. Expand each number *in* ***Base 10 Place Value Form***.

a.) 1,230 = ***(1 x 1,000) + (2 x 100) + (3 x 10) + (0 x 1)***

b.) 2,091 = _____

c.) 3,702 = _____

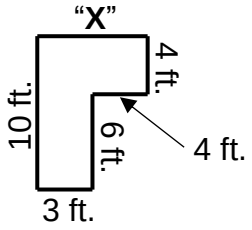
4. ***Make 1 Whole*** – Sum to 1.00

a.) 0.15 + ☐ = 1.00

b.) 0.45 + ☐ = 1.00

PART 2: *Application Practice*

5. An "L-shaped" polygon has the dimensions shown in the diagram. What is the length of side "**X**" and its perimeter in feet?



Ⓐ 7; 36 Ⓑ 8; 36 Ⓒ 7; 34 Ⓓ 7; 35

6. Compute the difference of 808 and 487.

Ⓐ 1,395 Ⓑ 1,295 Ⓒ 321 Ⓓ 421

7. Ms. Jones' math class finished at the time shown on the clock on the right. If math class lasted 1 hour and 30 minutes, what time did math class start?

Ⓐ 10:45 Ⓑ 10:55 Ⓒ 11:00 Ⓓ 12:00

8. Jorge painted $^1/_5$ of a wall. Luz painted $^3/_5$ of the same wall. What fraction of the wall did Jorge and Luz paint?

Wall

Ⓐ $\frac{1}{5}$ Ⓑ $\frac{2}{5}$ Ⓒ $\frac{3}{5}$ Ⓓ $\frac{4}{5}$

PART 3: *Reflection and Conceptual Understanding*

Compute equivalent fractions to the decimal. Use the '*imaginary 1'* under the decimal point and *add zeros*.

a.) 0.008 = $\frac{\square}{\square}$ **b.) 0.8 =** $\frac{\square}{\square}$ **c.) 1.01 =** $\square\frac{\square}{\square}$ **d.) 1.1 =** $\square\frac{\square}{\square}$

FALL STAAR WALK - Learning Opportunity 50 for TEKS/STAAR "Journey of Knowledge"

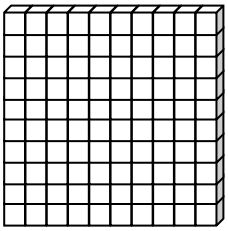
Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *and* ***shade*** *the equivalent fraction to the decimal.*

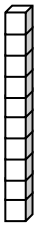
a.) 40 pennies = 40 cents = = 40¢ = **0.40**

0.40 = $\frac{\square}{\square}$ ⇨



b.) 4 **dimes** = 40 cents = = 40¢ = **0.4**

0.4 = $\frac{\square}{\square}$ ⇨



2. Correctly complete the **Decimal multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 4¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***0.40***

b.) *Multiples of 25¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***2.50***

c.) *Multiples of 50¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***5.00***

3. Expand each number *in* ***Base 10 Place Value Form***.

a.) 4,111 = _____

b.) 5,043 = _____

c.) 6,804 = _____

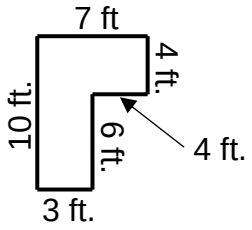
4. ***Make 1 Whole – 1.00***

a.) 0.05 + ☐ = 1.00

b.) 0.95 + ☐ = 1.00

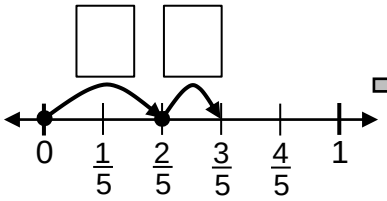
PART 2: *Application Practice*

5. An "L-shaped" polygon has the dimensions shown in the diagram. What is the polygon's area in square feet (ft^2)?



Ⓐ 16 ft^2 Ⓑ 28 ft^2 Ⓒ 30 ft^2 Ⓓ 46 ft^2

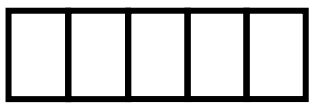
6. Write the *fractional addition equation*.



7. Dao is meeting his friend at 6:15 PM, but he must complete his homework *before* meeting his friend. If Dao has exactly 2 hours to complete his homework, what time does Dao begin his homework?

Ⓐ 8:15 Ⓑ 4:15 Ⓒ 8:10 Ⓓ 4:20

8. Craig painted $^2/_5$ and Joe painted $^1/_5$ of the same wall. What *fraction* of the wall is painted?



Wall

Ⓐ $\frac{1}{5}$ Ⓑ $\frac{2}{5}$ Ⓒ $\frac{3}{5}$ Ⓓ $\frac{4}{5}$

PART 3: *Reflection and Conceptual Understanding*

Based on the decimals and their shaded equivalent fractions in *problem 1 above*, are the following *decimals equivalent*? **0.40 = 0.4** *Why or why not?* Explain your thinking on the lines provided.

_____

_____

FALL STAAR WALK - Learning Opportunity 51 for TEKS/STAAR "Journey of Knowledge"

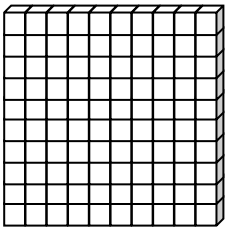
Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *and* ***shade*** *the equivalent fraction to the decimal.*

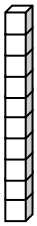
a.) 60 pennies = 60 cents = = 60¢ = **0.60**

0.60 = $\frac{\square}{\square}$ ⇨



b.) 6 **dimes** = 60 cents = = 60¢ = **0.6**

0.6 = $\frac{\square}{\square}$ ⇨



2. Correctly complete the **Decimal multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 6¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***0.60***

b.) *Multiples of 25¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***2.50***

c.) *Multiples of 50¢:* ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ***5.00***

3. Expand each number *in* ***Base 10 Place Value Form***.

a.) 6,009 = _____

b.) 8,071 = _____

c.) 2,318 = _____

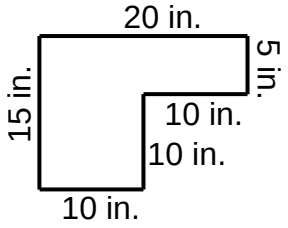
4. ***Make 1 Whole – 1.00***

a.) 0.55 + ☐ = 1.00

b.) 0.35 + ☐ = 1.00

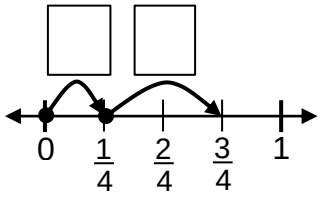
PART 2: *Application Practice*

5. An "L-shaped" polygon has the dimensions shown in the diagram. What is the polygon's area in square inches (in^2)?



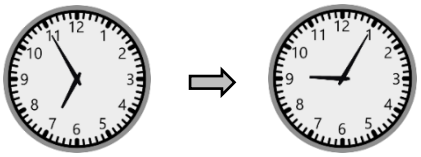
Ⓐ 250 in^2 Ⓑ 150 in^2 Ⓒ 200 in^2 Ⓓ 300 in^2

6. Write the *fractional addition equation*.



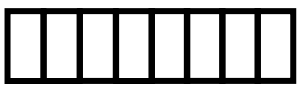
⇨ ☐ + ☐ = ☐

7. What is the elapsed time between the two clocks shown? *Write the time on each clock*.



Ⓐ 3:10 Ⓑ 1:10 Ⓒ 2:10 Ⓓ 2:05

8. Jo used chalk to color $\frac{5}{8}$ a sidewalk. What *fraction* of the sidewalk is **not** colored?



Sidewalk

⇨ $\frac{8}{8}$ - ☐ = ☐

Ⓐ $\frac{1}{8}$ Ⓑ $\frac{2}{8}$ Ⓒ $\frac{3}{8}$ Ⓓ $\frac{4}{8}$

PART 3: *Reflection and Conceptual Understanding*

Based on the decimals and their shaded equivalent fractions in *problem 1 above*, are the following *decimals equivalent*? **0.60 = 0.6** *Why or why not?* Explain your thinking on the lines provided.

_____

_____

FALL STAAR WALK - Learning Opportunity 52
for TEKS/STAAR *"Journey of Knowledge"*

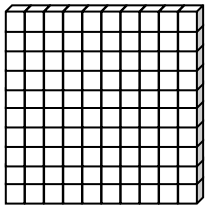
Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *and* ***shade*** *the equivalent fraction to the decimal.*

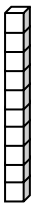
a.) 90 pennies = 90 cents =
= 90¢ = **0.90**

0.90 = $\frac{\square}{\square}$ ⇨

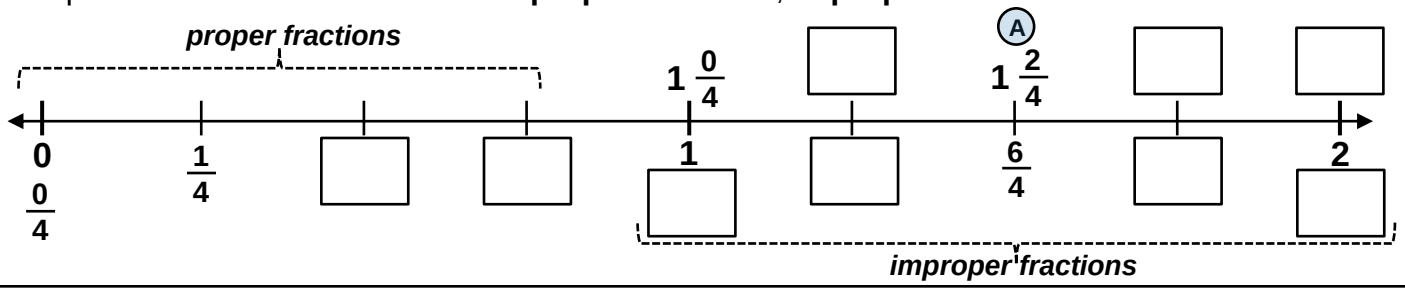


b.) 9 **dimes** = 90 cents =
= 90¢ = **0.9**

0.9 = $\frac{\square}{\square}$ ⇨



2. Complete the fractional number line: **proper fractions**, **improper fractions** and **mixed numbers**.



3. Expand each number *in* ***Base 10 Place Value Form***.

a.) 61,209 = ***(6 x 10,000) + (1 x 1,000) + (2 x 100) + (0 x 10) + (9 x 1)***

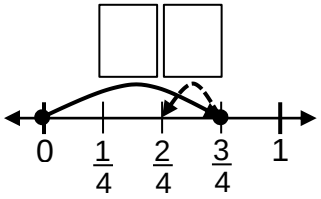
b.) 18,041 = _____

PART 2: *Application Practice*

4. What is the rectangle's perimeter (cm) and area in square cm (cm^2)?

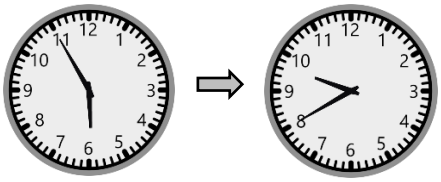
Perimeter = _____ cm Area = _____ cm^2

5. Write the *fractional subtraction equation*.



⇨ $\square - \square = \square$

6. What is the elapsed time between the two clocks shown?



Ⓐ 3:45 Ⓑ 2:45 Ⓒ 2:50 Ⓓ 3:50

7. Problem 2, Pt. Ⓐ - shade and compare (<, >, =) the **improper fraction** and **mixed number**.

$1\frac{2}{4} =$ $\square\square$ $\square\square$

$\frac{6}{4} =$ $\square\square$ $\square\square$

⇨ $1\frac{2}{4}$ ◯ $\frac{6}{4}$

PART 3: *Reflection and Conceptual Understanding*

Is it possible to *add* one or more zeros behind a decimal point and the original decimal remain equivalent? For example, can a zero be added to 0.9, and then, **0.9** still equal **0.90**? *Why or why not?*

_____

_____

FALL STAAR WALK - Learning Opportunity 53 | Name: _____

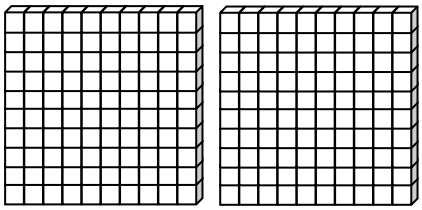
for TEKS/STAAR | *"Journey of Knowledge"*

PART 1: *Numeracy Development*

1. ***Write*** *and* ***shade*** *the equivalent* ***mixed number*** *to the decimal.*

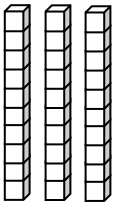
a.) $1.05 = 1 dollar and nickel = **1.05**

1.05 = ☐ $\frac{\square}{\square}$ ⇨

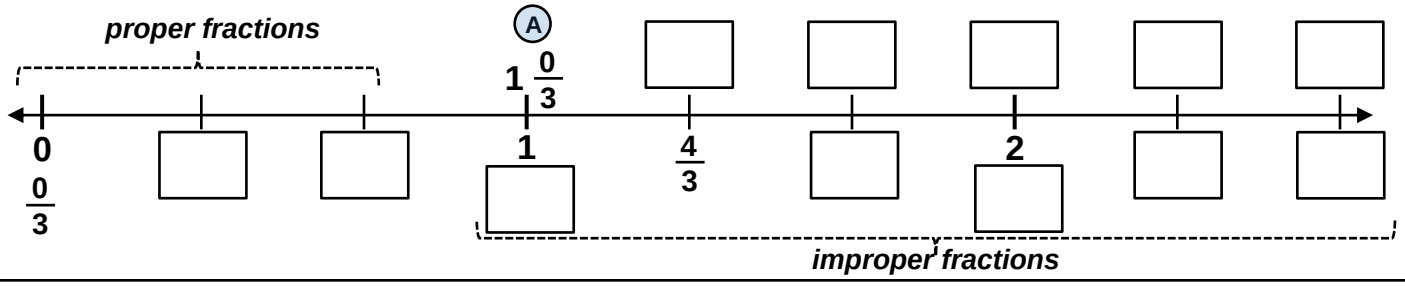


b.) $2.30 = 2 dollars and 3 dimes = **2.3**

2.3 = ☐ $\frac{\square}{\square}$ ⇨



2. Complete the fractional number line: **proper fractions**, **improper fractions** and **mixed numbers**.



3. Expand each number *in* ***Base 10 Place Value Form***.

a.) 40,357 = _____

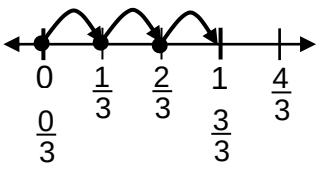
b.) 78,601 = _____

PART 2: *Application Practice*

4. What is the rectangle's perimeter (in) and area in square inches (in^2)?

Perimeter = _____ in Area = _____ in^2

5. Write the *fractional addition equation*.



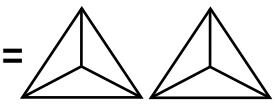
⇨ ☐ + ☐ + ☐ = ☐

6. Sean walked an 9 mile route each afternoon for 11 days. He decided to increase his daily mileage to 14 miles for 6 more days. What is the total mileage that Sean walked over the 17 days?

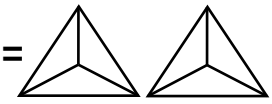
Ⓐ 183 mi. Ⓑ 173 mi. Ⓒ 99 mi. Ⓓ 84 mi.

7. Problem 2, Pt. Ⓐ - shade and compare (<, >, =) the **improper fraction** and **mixed number**.

$1\frac{0}{3}$ =



$\frac{3}{3}$ =



⇨ **$1\frac{0}{3}$ ◯ $\frac{3}{3}$**

PART 3: *Reflection and Conceptual Understanding*

A math teacher wrote the following mathematical sentence on the white board: Is it true*? Why or why not?*

$1 = \frac{1}{1} = \frac{2}{2} = \frac{3}{3} = \frac{4}{4} = \frac{5}{5}$

_____

_____

FALL STAAR WALK - Learning Opportunity 54 for TEKS/STAAR "Journey of Knowledge"

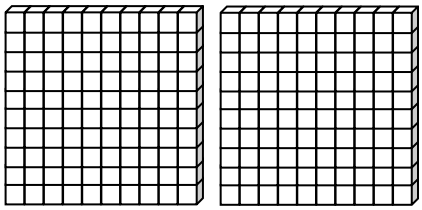
Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *and* ***shade*** *the* equivalent **mixed number** *to the decimal.*

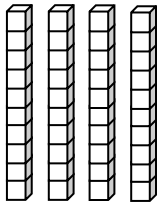
a.) $1.53 = 1 dollar and 53 cents = **1.53**

1.53 = ☐ ☐/☐ ⇨

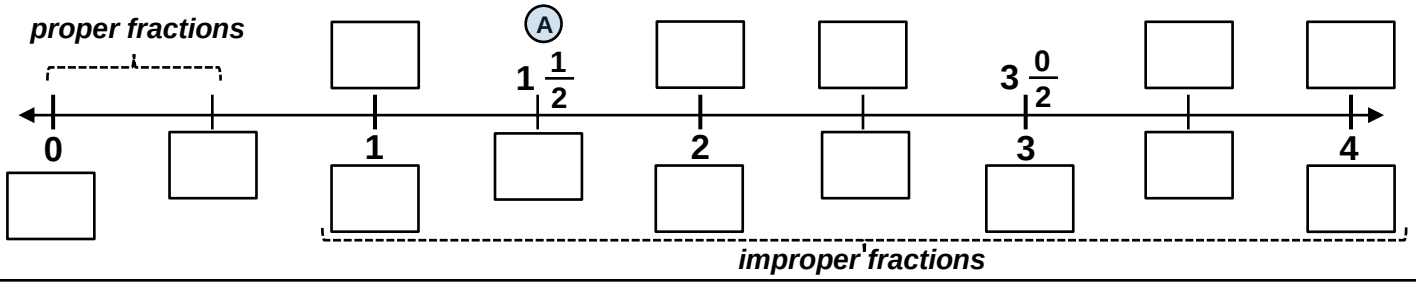


b.) $3.70 = 3 dollars and 7 dimes = **3.7**

3.7 = ☐ ☐/☐ ⇨



2. Complete the fractional number line: **proper fractions**, **improper fractions** and **mixed numbers**.



3. Expand each number *in* ***Base 10 Place Value Form***.

a.) 52,094 = _____

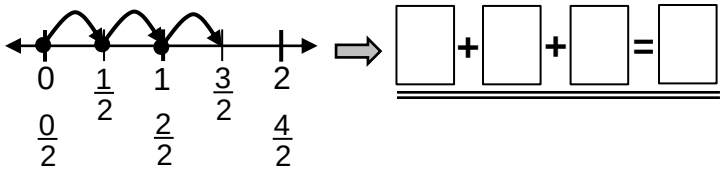
b.) 99,302 = _____

PART 2: *Application Practice*

4. What is the rectangle's side "Y" if its perimeter is 120 inches?

"**Y**" = _____ inches

5. Write the *fractional addition equation*.



6. John rode his bike for a kilometer. His brother rode his bike $^1/_3$ of a kilometer and walked the rest of the way. What fraction of a kilometer did John's brother walk?

Ⓐ $\frac{1}{2}$ Ⓑ $\frac{1}{3}$ Ⓒ $\frac{1}{4}$ Ⓓ $\frac{2}{3}$

7. Problem 2, Pt. Ⓐ - shade and compare (<, >, =) the **improper fraction** and **mixed number**.

1 1/2 = ☐ ☐

3/2 = ☐ ☐

⇨ **1 1/2** ◯ **3/2**

PART 3: *Reflection and Conceptual Understanding*

Fill in the boxes of the equality below so it is mathematically correct.

$$1 = \frac{1}{1} = \frac{\square}{2} = \frac{3}{\square} = \frac{4}{4} = \frac{\square}{5} = \frac{\square}{8} = \frac{12}{\square} = \frac{19}{19} = \frac{45}{\square} = \frac{\square}{100}$$

FALL STAAR WALK - Learning Opportunity 55 for TEKS/STAAR "Journey of Knowledge"

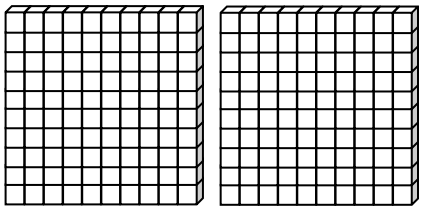
Name: _____

PART 1: *Numeracy Development*

1. ***Write*** *and* ***shade*** *the* equivalent **mixed number** *to the decimal.*

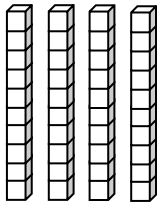
a.) $1.80 = 1 dollar and 80 cents = **1.80**

1.80 = ☐ ☐/☐ ⇨

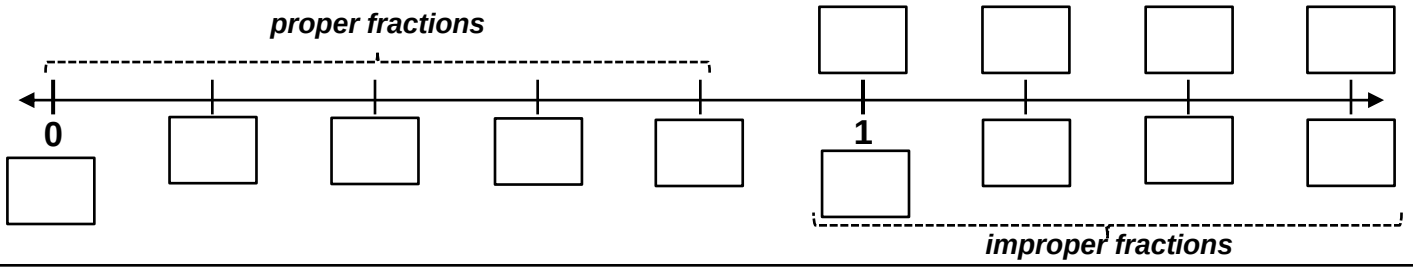


b.) $2.60 = 2 dollars and 6 dimes = **2.6**

2.6 = ☐ ☐/☐ ⇨



2. Complete the fractional number line: **proper fractions**, **improper fractions** and **mixed numbers**.



3. Expand each number *in* ***Base 10 Place Value Form***.

a.) 210,357 = ***(2 x 100,000) + (1 x 10,000) + (0 x 1,000) + (3 x 100) + (5 x 10) + (7 x 1)***

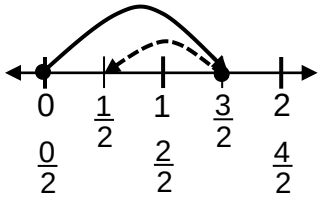
b.) 438,601 = _____

PART 2: *Application Practice*

4. What is the rectangle's side "**X**" if its perimeter is 150 inches?

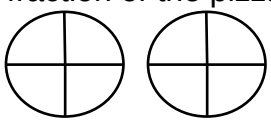
"**X**" = _____ inches

5. Write the *fractional subtraction equation*.



⇨ ☐ - ☐ = ☐

6. May's mother made 2 pizzas. Both pizzas were divided into fourths. On Saturday, $^5/_4$ of the pizzas were eaten. On Sunday, $^2/_4$ of the pizzas were consumed. What fraction of the pizzas were NOT eaten?

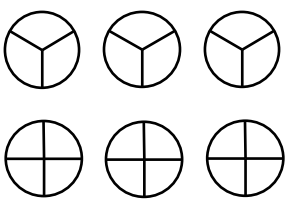


Ⓐ $\frac{7}{4}$ Ⓑ $\frac{2}{4}$ Ⓒ $\frac{1}{4}$ Ⓓ $\frac{3}{4}$

7. Shade and compare using <, >, = for the **improper fraction** and **mixed number** below.

$2\frac{1}{3}$ =

$\frac{10}{4}$ =



⇨ **$2\frac{1}{3}$ ◯ $\frac{10}{4}$**

PART 3: *Reflection and Conceptual Understanding*

One-half ($^1/_2$) is a ***proper fraction*** of importance in mathematics. The ***numerator*** is always HALF of the ***denominator***. Fill in the boxes of the equality below so it is mathematically correct.

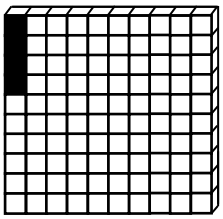
$$\frac{1}{2} = \frac{1}{2} = \frac{\square}{4} = \frac{3}{\square} = \frac{4}{8} = \frac{5}{\square} = \frac{\square}{12} = \frac{8}{\square} = \frac{\square}{20} = \frac{30}{\square} = \frac{\square}{100} = \frac{\square}{1{,}000}$$

FALL STAAR WALK - Learning Opportunity 56 for TEKS/STAAR "Journey of Knowledge"

Name: _____

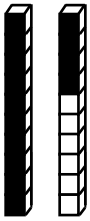
PART 1: *Numeracy Development*

1. Complete the boxes for each **fraction**, **decimal** or **mixed number** that represents the shaded grid.

a.) 

⇨ ☐/☐ = ☐

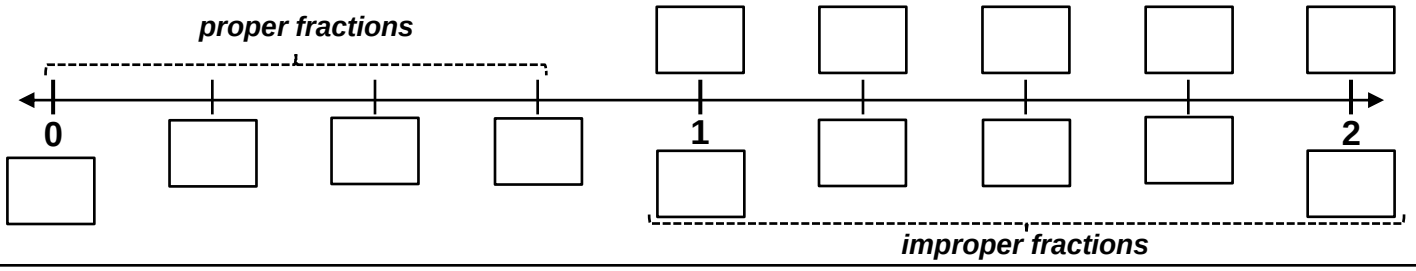
proper fraction ***decimal***

b.) 

⇨ ☐ ☐/☐ = ☐/☐ = ☐

mixed number ***improper fraction*** ***decimal***

2. Complete the fractional number line: **proper fractions**, **improper fractions** and **mixed numbers**.



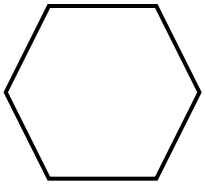
3. Expand each number *in* ***Base 10 Place Value Form***.

a.) 837,009 = _____

b.) 500,781 = _____

PART 2: *Application Practice*

4. What is the *regular hexagon's* perimeter if a side equals 8 cm?



Perimeter = _____ cm

5. Jo went to Amy's Dessert Store and noticed a sign above the cashier:

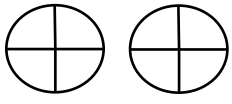
3 cupcakes for $ 2

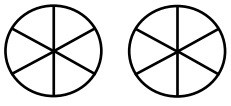
If Jo purchases 12 cupcakes, how much money must she pay? $_____

6. Arnold wants to save 85 dollars. If Arnold saves 9 dollars every week, how many weeks will it take Arnold to save 85 dollars?

Ⓐ 8 weeks Ⓑ 9 weeks Ⓒ 10 weeks Ⓓ 11 weeks

7. Shade and compare using <, >, = for the **improper fraction** and **mixed number** below.

$1\frac{3}{4}$ = 

$\frac{11}{6}$ = 

⇨ $1\frac{3}{4}$ ◯ $\frac{11}{6}$

PART 3: *Reflection and Conceptual Understanding*

One-half ($^1/_2$) is a ***proper fraction*** of importance in mathematics. The ***numerator*** is always HALF of the ***denominator***. Fill in the boxes of the equality below so it is mathematically correct.

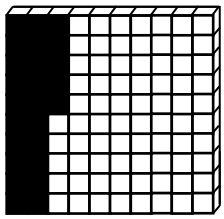
$$\frac{1}{2} = \frac{\square}{6} = \frac{4}{8} = \frac{7}{\square} = \frac{\square}{16} = \frac{15}{\square} = \frac{\square}{12} = \frac{25}{\square} = \frac{\square}{20} = \frac{100}{\square} = \frac{\square}{400} = \frac{\square}{1{,}000}$$

FALL STAAR WALK - Learning Opportunity 57 for TEKS/STAAR "Journey of Knowledge"

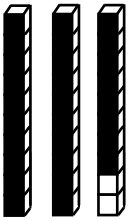
Name: _____

PART 1: *Numeracy Development*

1. Complete the boxes for each **fraction**, **decimal** or **mixed number** that represents the shaded grid.

a.)  ⇨ ☐/☐ = ☐

proper fraction *decimal*

b.)  ⇨ ☐ ☐/☐ = ☐/☐ = ☐

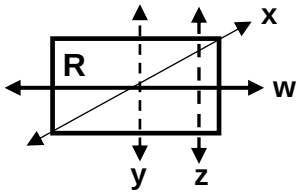
mixed number *improper fraction* *decimal*

2. Compute: the **sum** and **difference**.

a.)
$$+\begin{array}{r} 2.4 \\ 5.3 \end{array}$$

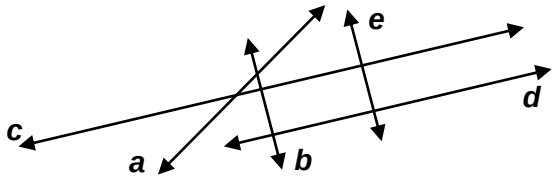
b.)
$$-\begin{array}{r} 9.4 \\ 6.3 \end{array}$$

3. Identify the ***lines of symmetry*** on rectangle **R**.



Ⓐ *w , x* Ⓑ *x , y* Ⓒ *y , z* Ⓓ *w , y*

4. Identify **parallel lines** on the diagram.



Ⓐ *a, b* Ⓑ *b, e* Ⓒ *c, d* Ⓓ *b, e & c, d*

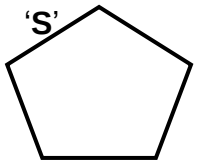
5. Write the number in **word form**.

a.) 47 = ***forty-seven*** **c.) 149 =** _____

b.) 32 = _____ **d.) 217 =** _____

PART 2: *Application Practice*

6. What is the *regular pentagon's* side '**S**' if the perimeter is 45 meters?



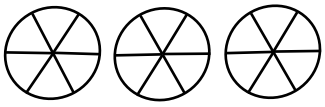
Ⓐ 8 m Ⓑ 9 m Ⓒ 10 m Ⓓ 11 m

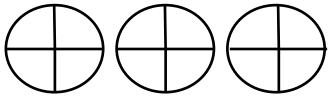
7. Nicolas climbed the rock face of El Capitan in California's Yosemite Park. After the first day, Nicolas completed $^3/_8$ of the ascent to the top. If he completes another $^2/_8$ of the climb on the second day, what is the fraction that remains to reach the top? _____

8. Henry purchases 58 yo-yo's to sell to his classmates. If each yo-yo cost $4, how much money did Henry spend?

Ⓐ $ 222 Ⓑ $ 232 Ⓒ $ 56 Ⓓ $ 48

9. Shade and compare using <, >, = for the **improper fraction** and **mixed number** below.

$\frac{15}{6}$ =  ⇨ $\frac{15}{6}$ ◯ $2\frac{2}{4}$

$2\frac{2}{4}$ = 

PART 3: *Reflection and Conceptual Understanding*

Fill in the boxes of the equality below so it is mathematically correct.

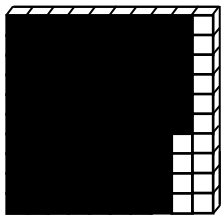
$$1 = \frac{1}{1} = \frac{\square}{5} = \frac{7}{\square} = \frac{9}{9} = \frac{\square}{10} = \frac{\square}{13} = \frac{2}{\square} = \frac{25}{25} = \frac{50}{\square} = \frac{\square}{100}$$

FALL STAAR WALK - Learning Opportunity 58 for TEKS/STAAR "Journey of Knowledge"

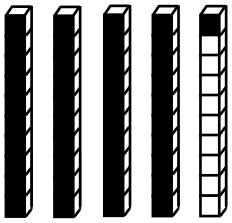
Name: _____

PART 1: *Numeracy Development*

1. Complete the boxes for each **fraction**, **decimal** or **mixed number** that represents the shaded grid.

a.)  ⇨ ☐/☐ = ☐

proper fraction *decimal*

b.)  ⇨ ☐ ☐/☐ = ☐/☐ = ☐

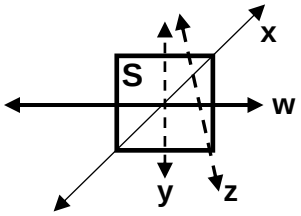
mixed number *improper fraction* *decimal*

2. Compute: the **sum** and **difference**.

a.) 3.7 + 2.3

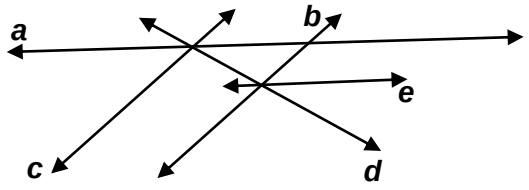
b.) 7.2 - 4.6

3. Identify the ***lines of symmetry*** on ***square*** **S**.



Ⓐ *w* Ⓑ *x , y* Ⓒ *z* Ⓓ *w , x, y*

4. Identify **parallel lines** on the diagram.



Ⓐ *b, c* Ⓑ *b, e* Ⓒ *a, e* Ⓓ *a, e & b, c*

5. Write the number in **word form**.

a.) 319 = _____ **c.) 749 =** _____

b.) 45 = _____ **d.) 2,011 =** _____

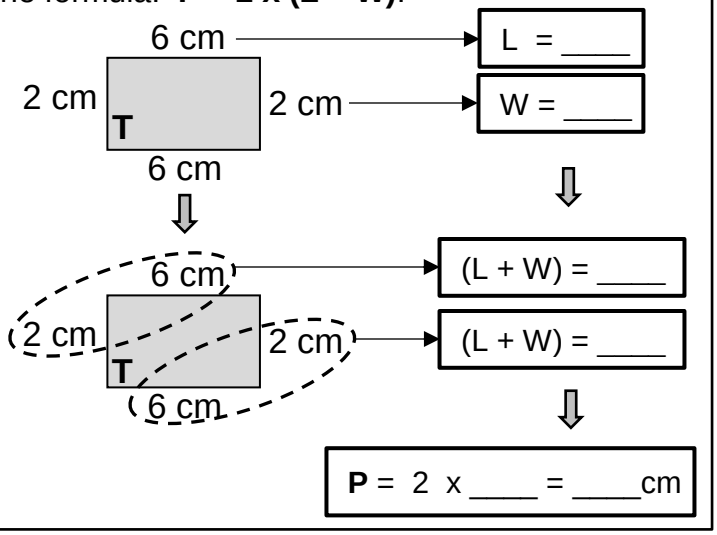
PART 2: *Application Practice*

6. Compare the five decimals by ordering them as indicated on the line below. *(Think Money – add zeros as needed)*

3.01 **0.09** **0.9** **3.1** **2.98**

_____ **>** **>** **>** **>**

7. Calculating the **perimeter** of rectangle '**T**' using the formula: **P = 2 x (L + W)**.



8. Factor Strings: List each number's factors.

a.) 1: { 1 }

b.) 2: {1 , 2}

c.) 3: { , }

d.) 4: { , , }

e.) 5: { , }

f.) 6: { , , , }

g.) 7: { , }

h.) 8: { , , , }

PART 3: *Reflection and Conceptual Understanding*

Listing **Factor Strings** in an organized way takes a small amount of practice. The *'compression method'* of factor strings starts from the outsides and proceeds inward. Find the *factor string* of **12** by filling in the boxes.

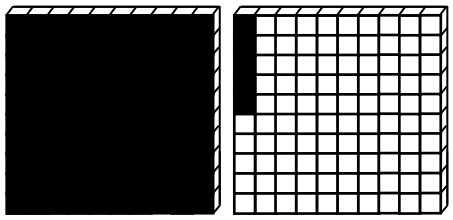
12: { 1 , 2 , , , ☐ , 12 } ⇨ **12:** { 1 , 2 , ☐ , ☐ , 6 , 12 } ⇨ **12:** { 1 , 2 , 3 , 4 , 6 , 12 }

FALL STAAR WALK - Learning Opportunity 59 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Complete the boxes for each **fraction**, **decimal** or **mixed number**.

a.) 

mixed number | *improper fraction* | *decimal*

2. Compute the **product**.

a.) 14 x 20 = _____

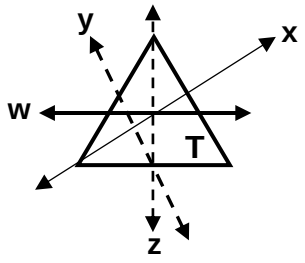
b.) 23 x 32 = _____

3. Compute: the **sum** and **difference**.

a.) 9.6 + 4.7 = _____

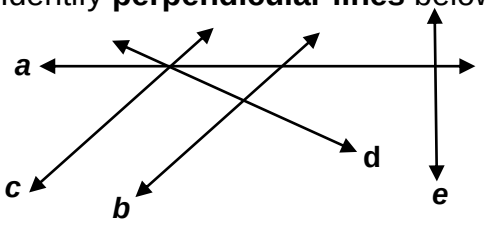
b.) 14.2 - 3.6 = _____

4. Identify the ***lines of symmetry*** on ***Triangle*** **T**.



Ⓐ *w* Ⓑ *x , y* Ⓒ *z* Ⓓ *w , x, y*

5. Identify **perpendicular lines** below.



Ⓐ *b, c* Ⓑ *b,* d Ⓒ *a, e* Ⓓ *a, e* & *b,* d

6. Write the number in **word form**.

a.) 3,241 = _____

b.) 7,910 = _____

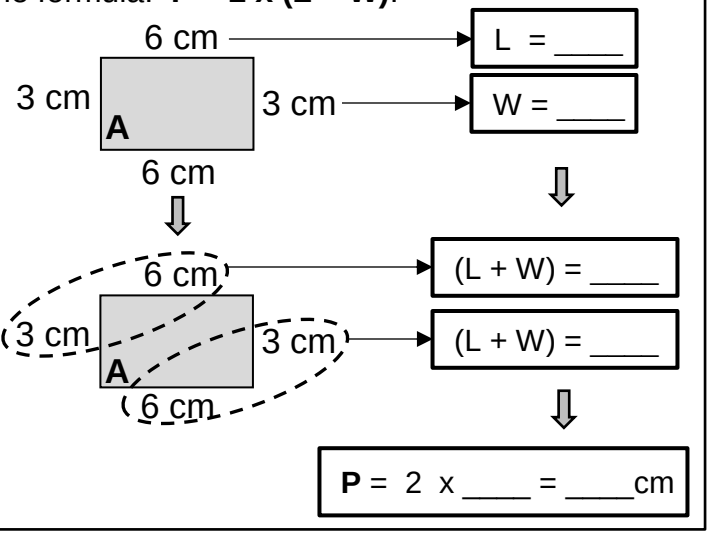
PART 2: *Application Practice*

7. Compare the five decimals by ordering them as indicated on the line below. *(Think Money – add zeros as needed)*

2.05 **0.05** **0.5** **1.5** **1.05**

_____ **<** **<** **<** **<** _____

8. Calculating the **perimeter** of rectangle '**A**' using the formula: **P = 2 x (L + W)**.



9. Factor Strings: List each number's factors.

a.) 1: { ___ }

b.) 2: { ___ , ___ }

c.) 3: { ___ , ___ }

d.) 4: { ___ , ___ , ___ }

e.) 5: { ___ , ___ }

f.) 6: { ___ , ___ , ___ , ___ }

g.) 7: { ___ , ___ }

h.) 8: { ___ , ___ , ___ , ___ }

PART 3: *Reflection and Conceptual Understanding*

List a **Factor String** in an organized way by using the *'compression method'* – in which factor strings start from the outsides and proceed inward. Find the ***factor string*** of **20** by filling in the boxes.

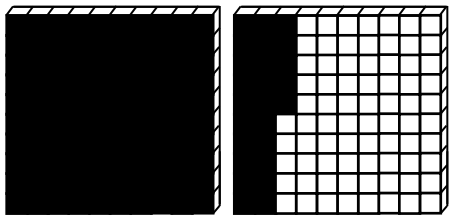
20: { 1 , 2 , ___ , ___ , ___ , 20 } ⇨ **20:** { 1 , 2 , ___ , ___ , 10 , 20 } ⇨ **20:** { 1 , 2 , 4 , 5 , 10 , 20 }

FALL STAAR WALK - Learning Opportunity 60 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Complete the boxes for each **fraction**, **decimal** or **mixed number**.

a.) 

⇨ ☐ ☐/☐ = ☐/☐ = ☐

mixed number ***improper fraction*** ***decimal***

2. Compute the **product**.

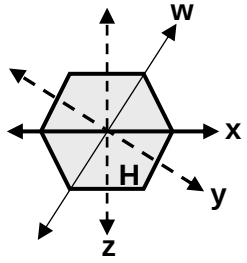
a.) x 42 / 42 **b.)** x 30 / 61

3. Compute: the **sum** and **difference**.

a.) 10.7 + 8.8 = ☐

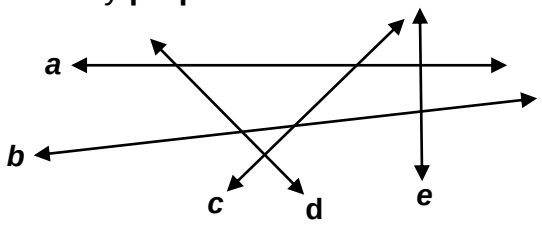
b.) 17.3 - 3.6 = ☐

4. *Write* the ***lines of symmetry*** on *regular Hexagon* **H**.



Lines of symmetry: _____

5. Identify **perpendicular lines** below.



Ⓐ *b, c* Ⓑ *c,* d Ⓒ *a, e* Ⓓ *a, e* & *c,* d

6. Write the number in **word form**.

a.) 24,056 = _____

b.) 97,640 = _____

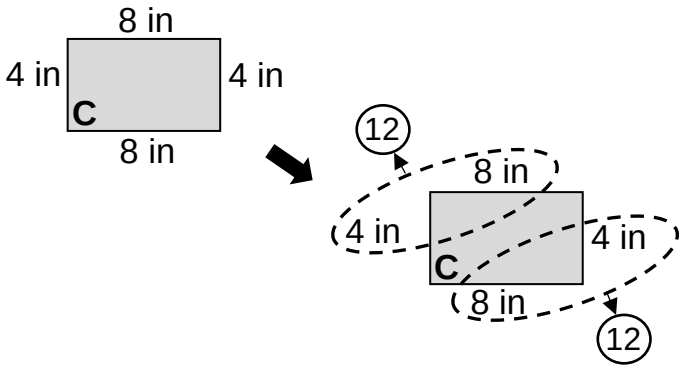
PART 2: *Application Practice*

7. Compare the five decimals by ordering them as indicated on the line below. *(Think Money – add zeros as needed)*

0.51 **0.70** **0.07** **0.7** **0.5**

= **>** **>** **>**

8. Calculating the **perimeter** of rectangle '**C**' using the formula: **P = 2 x (L + W)**.



P = 2 x ____ in = ____in

9. Factor Strings: List each number's factors.

a.) 5: { , }

b.) 6: { , , , }

c.) 7: { , }

d.) 8: { , , , }

e.) 9: { , , }

f.) 10: { , , , }

g.) 11: { , }

h.) 12: { , , , , , }

PART 3: *Reflection and Conceptual Understanding*

List a **Factor String** in an organized way by using the *'compression method'* – in which factor strings start from the outsides and proceed inward. Find the ***factor string*** of **18** by filling in the boxes.

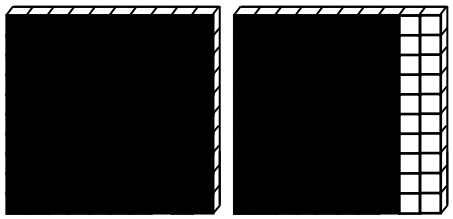
18: {1 , ☐ , , , ☐ , 18 } ⇨ **18:** { 1 , 2 , ☐ , ☐ , 9 , 18 } ⇨ **18:** { ☐ , ☐ , ☐ , ☐ , ☐ , ☐ }

FALL STAAR WALK - Learning Opportunity 61 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Complete the boxes for each **fraction**, **decimal** or **mixed number**.

a.) 

mixed number = *improper fraction* = *decimal*

2. Compute the **product**.

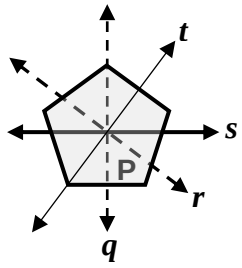
a.) 47 x 51 **b.)** 16 x 72

3. Compute: the **sum** and **difference**.

a.) 10.7 + 18.8 = ☐

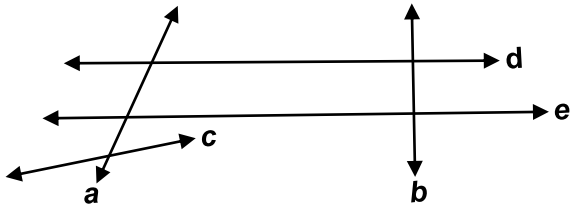
b.) 17.3 - 10.6 = ☐

4. *Write* the ***lines of symmetry*** on *regular Pentagon* **P**.



Lines of symmetry: _____

5. List **perpendicular** and **parallel lines.**



Perpendicular: _____ Parallel: _____

6. Write the number in **word form**.

a.) 70,707 = _____

b.) 217,730 = _____

PART 2: *Application Practice*

7. Compare the five decimals by ordering them as indicated on the line below. *(Think Money – add zeros as needed)*

1.09 **1.40** **1.90** **1.4** **0.9**

< **<** **=** **<**

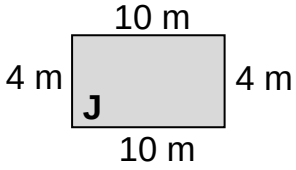
_____

8. Calculating the **perimeter** of rectangle '**J**' using the formula: **P = 2 x (L + W)**.

First, **circle** each group of *Length* and *Width*.

Second, **sum** each group of *Length* and *Width*.

Third, **use** the '**P**' formula to compute *perimeter*.



P = 2 x ____ m = ____m

9. Factor Strings: List each number's factors.

a.) 5: { , }

b.) 6: { , , , }

c.) 7: { , }

d.) 8: { , , , }

e.) 9: { , , }

f.) 10: { , , , }

g.) 11: { , }

h.) 12: { , , , , , }

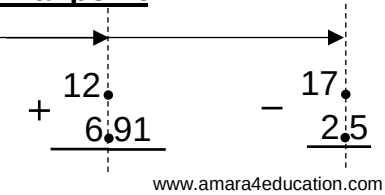
PART 3: *Reflection and Conceptual Understanding*

When we add or subtract decimals, ***why*** are numbers **lined-up** on their **decimal point**?

*Line-up numbers at the decimal point – **add zeros**, as needed.*

_____

_____

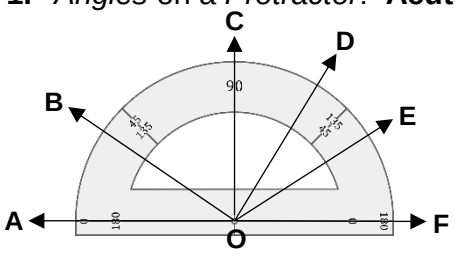


FALL STAAR WALK - Learning Opportunity 62
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. *Angles* on a *Protractor*: **Acute**, **Right**, and **Obtuse**.



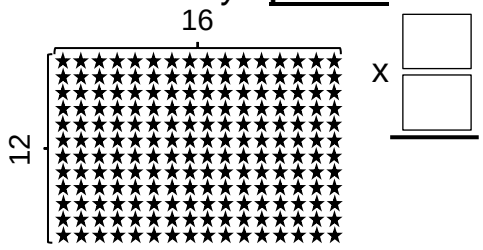
Write *<u>two</u> angles for each type:*

a.) Acute: ∠ ***AOB*** **and** ∠ _____

b.) Right: ∠ ***AOC*** **and** ∠ _____

c.) Obtuse: ∠ **and** ∠ _____

2. Find the *array's* **<u>product</u>**.



3. Compute: the **sum** and **difference**.

a.) 6 + 3.8 = ☐

b.) 7 - 4.2 = ☐

4. How many *<u>pairs</u>* of **parallel sides** are on each polygon below. **Note:** A "pair" means two (2). Write the name of the polygon on the second line provided.

a.) ☐

2 pair – parallel sides

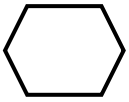
rectangle - parallelogram

b.)

_____

_____

c.)



_____

_____

5. Write the number in **<u>word form</u>**.

a.) 390,516 = _____

b.) 607,087 = _____

PART 2: *Application Practice*

6. Robert has 9 dimes. Jasper checked his pockets and discovered he has 9 pennies. <u>Write</u> each money amount as a <u>decimal</u> and correctly <u>compare</u> the two decimals in the boxes below.

☐ > ☐

8. Factor Strings: List each number's <u>factors</u>.

a.) 5: { , }

b.) 6: { , , , }

c.) 7: { , }

d.) 8: { , , , }

e.) 9: { , , }

f.) 10: { , , , }

g.) 11: { , }

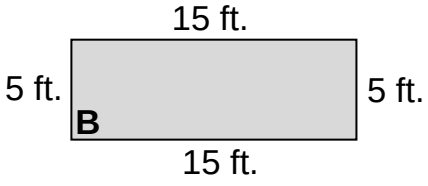
h.) 12: { , , , , , }

7. Calculating the **perimeter** of <u>rectangle '**B**'</u> using the formula: **P = 2 x (L + W)**.

First, **<u>circle</u>** each group of *<u>Length</u>* and *<u>Width</u>*.

Second, **<u>sum</u>** each group of *<u>Length</u>* and *<u>Width</u>*.

Third, **<u>use</u>** the '**P**' formula to compute *<u>perimeter</u>*.

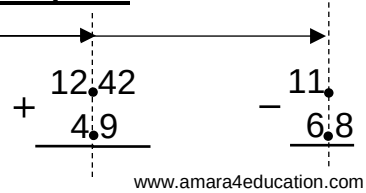


P = 2 x _____ ft. = _____ft.

PART 3: *Reflection and Conceptual Understanding*

When we add or subtract decimals, ***why*** are numbers **lined-up** on their **<u>decimal point</u>**?

Line-up decimal points.

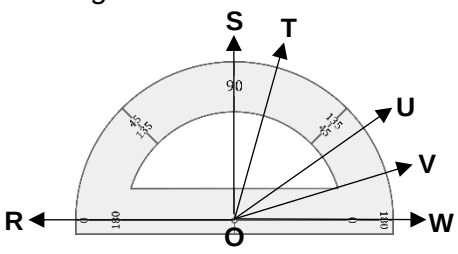


FALL STAAR WALK - Learning Opportunity 63 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Angles* on a *Protractor*: **Acute**, **Right**, and **Obtuse**.



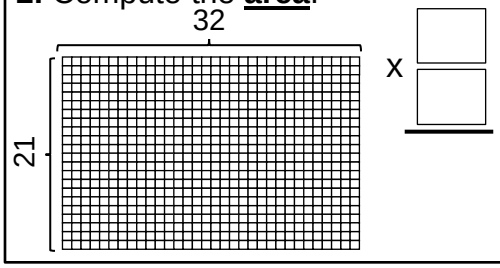
Write *<u>two</u> angles for each type:*

a.) Acute: ∠ _____ **and** ∠ _____

b.) Right: ∠ _____ **and** ∠ _____

c.) Obtuse: ∠ _____ **and** ∠ _____

2. Compute the **<u>area</u>**.



3. Compute: the **sum** and **difference**.

a.) 11 + 9.4 = ☐

b.) 1 - 0.6 = ☐

4. How many *<u>pairs</u>* of **parallel sides** are on each polygon below. **Note:** A "pair" means two (2). Write the name of the polygon on the second line provided.

a.) 

2 pair – parallel sides

square - parallelogram

b.) 

_____

_____

c.) 

_____

_____

5. Write the decimals in **<u>word form</u>**.

a.) 1.9 = ***one and nine-tenths***

b.) 0.5 = _____

c.) 2.4 = _____

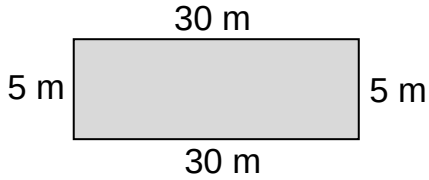
d.) 0.8 = _____

PART 2: *Application Practice*

6. Janna is counting her coins from her piggy bank. She has 1 quarter, 5 dimes and 3 pennies. Janna's sister, Susan has 3 quarters and a nickel. Correctly compare their money as decimals.

☐ < ☐

7. Calculate the **perimeter** of <u>rectangle</u> using two different methods.



a.) Find the *<u>perimeter</u>* by adding all four sides.

_____

b.) Find the *<u>perimeter</u>* by using the formula:

P = 2 x (L + W)

_____

8. Factor Strings: List each number's <u>factors</u>.

a.) 9: { , , }

b.) 10: { , , , }

c.) 11: { , }

d.) 12: { , , , , , }

e.) 13: { , }

f.) 14: { , , , }

g.) 15: { , , , }

h.) 16: { , , , , }

PART 3: *Reflection and Conceptual Understanding*

In **<u>place value word form</u>**, *<u>explain</u>* when the word '**<u>and</u>**' is used when writing numbers in word form?

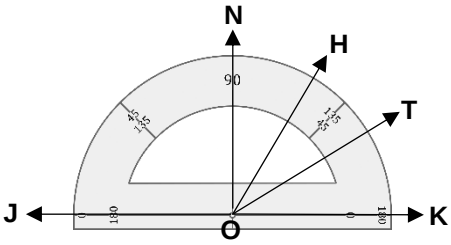
Hint: Review Problem 5 a.) above.

FALL STAAR WALK - Learning Opportunity 64 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Angles* on a *Protractor*: **Acute**, **Right**, and **Obtuse**.



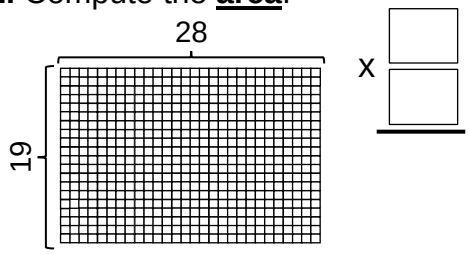
Write *two angles for each type:*

a.) Acute: ∠ _____ **and** ∠ _____

b.) Right: ∠ _____ **and** ∠ _____

c.) Obtuse: ∠ _____ **and** ∠ _____

2. Compute the **area**.

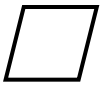


3. Compute: the **sum** and **difference**.

a.) 2 + 3.48 = ☐

b.) 1 - 0.66 = ☐

4. How many *pairs* of **parallel sides** are on each polygon below. **Note:** A "pair" means two (2). Write the name of the polygon on the second line provided.

a.) 

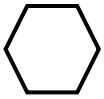
_____

_____

b.) 

_____

_____

c.) 

_____

_____

5. Write the decimals in **word form**.

a.) 0.09 = ***nine-hundredths*** **c.) 3.2 =** _____

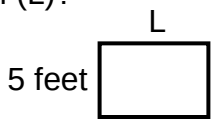
b.) 0.51 = _____ **d.) 1.51 =** _____

PART 2: *Application Practice*

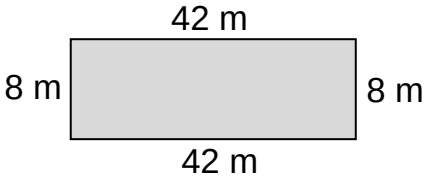
6. Marcus desires to have a living room window with an area of 35 square feet. If the width is 5 feet, what is the window's length (L)?

Ⓐ 4 ft. Ⓒ 6 ft.

Ⓑ 5 ft. Ⓓ 7 ft.



7. Calculate the **perimeter** of rectangle using two different methods.



a.) Find the *perimeter* by adding all four sides.

_____

b.) Find the *perimeter* by using the formula:

P = 2 x (L + W)

_____

8. Factor Strings: List each number's factors.

a.) 13: { , }

b.) 14: { , , , }

c.) 15: { , , , }

d.) 16: { , , , , }

e.) 17: { , }

f.) 18: { , , , , , }

g.) 19: { , }

h.) 20: { , , , , , }

PART 3: *Reflection and Conceptual Understanding*

In **place value word form**, *explain* when the word '**and**' is used when writing numbers in word form?

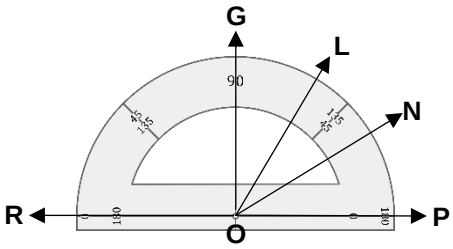
_____

FALL STAAR WALK - Learning Opportunity 65 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Write* on the line if the angle is an **Acute**, **Right**, **Obtuse**, or **Straight**.



a.) ∠NOP ➡ *acute*
b.) ∠RON ➡ _____
c.) ∠LOP ➡ _____
d.) ∠GOP ➡ _____
e.) ∠ROL ➡ _____
f.) ∠GON ➡ _____
g.) ∠GOR ➡ _____
h.) ∠ROP ➡ _____

2. Find the **products**.

a.) 43 x 75 = _____

b.) 60 x 50 = _____

3. Compute: the **sum** and **difference**.

a.) 6.1 + 5.08 = ☐

b.) 1 - 0.62 = ☐

4. ***Estimate*** the **products**. *Round* numbers and use *math fact* knowledge.

a.) 34 ⇨ 30 x 7 ⇨ x 7 = 210

b.) 61 ⇨ ☐ x 6 ⇨ x ☐ = ☐

c.) 46 ⇨ ☐ x 8 ⇨ x ☐ = ☐

5. Write the decimals in **word form**.

a.) 0.07 = _____

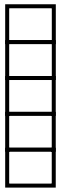
b.) 5.07 = _____

c.) 6.8 = _____

d.) 0.8 = _____

PART 2: *Application Practice*

6. Umberto vertically climbed two-fifths of the rock wall at the gym and rested. Then, he continued and scaled another $^1/_5$ of the wall. How much of the rock wall does Umberto still need to climb to reach the top?



Ⓐ $^1/_5$ Ⓑ $^5/_5$ Ⓒ $^2/_5$ Ⓓ $^3/_5$

8. Factor Strings: List each number's factors.

a.) 13: { , }

b.) 14: { , , , }

c.) 15: { , , , }

d.) 16: { , , , , }

e.) 17: { , }

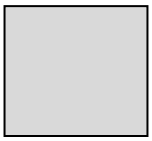
f.) 18: { , , , , , }

g.) 19: { , }

h.) 20: { , , , , , }

7. Calculate the **perimeter** of square with a **side (s)** of 25 inches using two different methods.

25 in.



a.) Find the *perimeter* by adding all four sides.

_____

b.) Find the *perimeter* by using the formula.

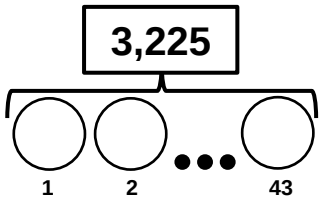
P = 4 x (s)

_____

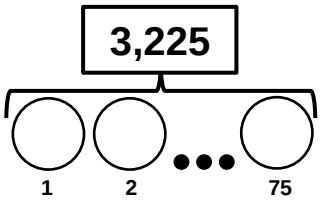
PART 3: *Reflection and Conceptual Understanding*

Understanding two-digit multiplication – Complete the *group model* diagrams below.

x 43
75
3,225



or

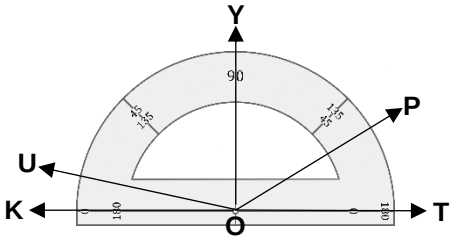


FALL STAAR WALK - Learning Opportunity 66
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. *Write* on the line if the angle is an **Acute**, **Right**, **Obtuse**, or **Straight**.



a.) ∠KOP ➡ _____ e.) ∠TOY ➡ _____

b.) ∠KOU ➡ _____ f.) ∠UOT ➡ _____

c.) ∠KOY ➡ _____ g.) ∠YOP ➡ _____

d.) ∠KOT ➡ _____ h.) ∠POT ➡ _____

2. Find the **products**.

a.) 80 x 30 = _____ b.) 62 x 87 = _____

3. Compute: the **sum** and **difference**.

a.) 6.09 + 3.1 = ☐

b.) 3.7 - 0.06 = ☐

4. ***Estimate*** the **products**. *Round* numbers and use *math fact* knowledge.

a.) 65 ⇨ x 8 ⇨ x ☐☐☐

b.) 82 ⇨ x 3 ⇨ x ☐☐☐

c.) 76 ⇨ x 4 ⇨ x ☐☐☐

5. Write the decimals in **word form**.

a.) 0.34 = _____ **c.) 9.2 =** _____

b.) 4.08 = _____ **d.) 0.6 =** _____

PART 2: *Application Practice*

6. Andreas can save 89 dollars each month. If he saves $ 89 each month for 7 months, *about* how much money will Andreas be able to save?

Ⓐ $ 630 Ⓑ $ 720 Ⓒ $ 810 Ⓓ $ 540

7. Calculate the **perimeter** of square with a **s**ide **(s)** of 10 inches using two different methods.

a.) Find the *perimeter* by adding all four equal sides.

_____

b.) Find the *perimeter* by using the formula.

P = 4 x (s)

_____

8. Factor Strings: List each number's factors.

a.) 17: { , }

b.) 18: { , , , , , }

c.) 19: { , }

d.) 20: { , , , , , }

e.) 21: { , , , }

f.) 24: { , , , , , , , }

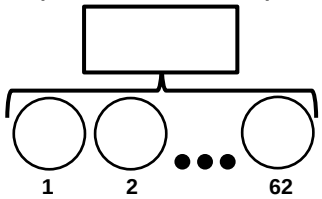
g.) 25: { , , }

h.) 27: { , , , }

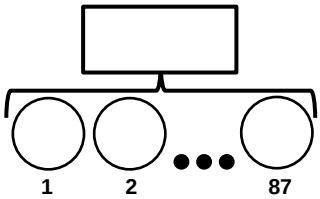
PART 3: *Reflection and Conceptual Understanding*

Understanding two-digit multiplication – Complete the *group model* diagrams below.

x 62
87
5,394 ➡



or

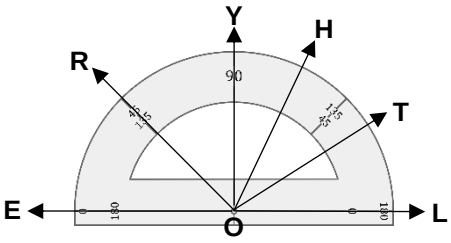


FALL STAAR WALK - Learning Opportunity 67 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Write* on the line if the angle is an **Acute**, **Right**, **Obtuse**, or **Straight**.



a.) ∠EOY ➡ _____ e.) ∠TOL ➡ _____

b.) ∠ROE ➡ _____ f.) ∠LOR ➡ _____

c.) ∠LOE ➡ _____ g.) ∠HOE ➡ _____

d.) ∠YOL ➡ _____ h.) ∠TOE ➡ _____

2. Find the **products**.

a.) 45 x 8 = _____ b.) 19 x 19 = _____

3. ***Estimate*** the **products**. *Round* numbers and use *math fact* knowledge.

a.) 65 ⇨ x 8 ⇨ = _____

b.) 82 ⇨ x 3 ⇨ = _____

c.) 59 ⇨ x 44 ⇨ = *60 x 40* = *2,400*

d. 17 ⇨ x 32 ⇨ = _____

4. Expand the decimals below to show the value of each digit.

a.) **0.34 =** $\frac{3}{10} + \frac{4}{100}$

b.) **0.18 =** _____

c.) **0.23 =** _____

d.) **0.08 =** _____

PART 2: *Application Practice*

5. Jonathon read the sign above the bus driver's head.

Maximum Number of Students = 72

About how many students can 6 buses transport?

Ⓐ 280 Ⓑ 350 Ⓒ 420 Ⓓ 490

6. The North Elm Elementary Carnival had a jellybean contest. The highest estimate was 936 and the lowest guess was 550. What is the approximate difference in the two jellybean estimates? ☐

7. Factor Strings: List each number's factors.

a.) **21:** { , , , }

b.) **24:** { , , , , , , , }

c.) **25:** { , , }

d.) **27:** { , , , }

e.) **28:** { , , , , , }

f.) **30:** { , , , , , , , }

g.) **32:** { , , , , , }

h.) **33:** { , , , }

8. Al drew a rectangle with an area of 21 in^2, and Sue drew a rectangle with an area of 28 in^2. What is the *common factor* that equals each rectangle's length?

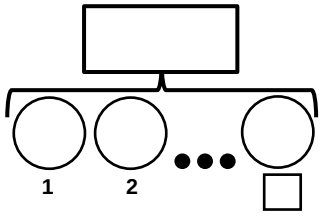
Ⓐ 3 inches Ⓒ 5 inches

Ⓑ 4 inches Ⓓ 7 inches

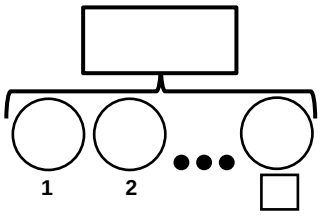
PART 3: *Reflection and Conceptual Understanding*

Understanding two-digit multiplication – Complete the *group model* diagram below.

x 22
41 ⇨



or

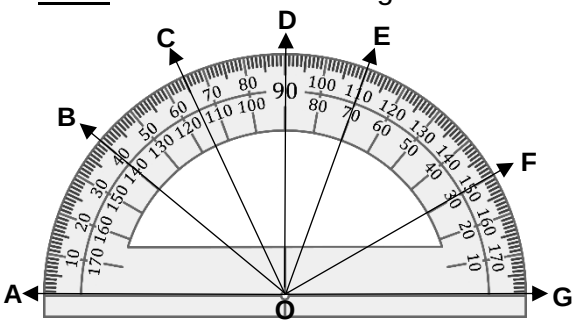


FALL STAAR WALK - Learning Opportunity 68 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Write* on the line if the angle is an **Acute**, **Right**, **Obtuse**, or **Straight** and its **angle measurement**.



a.) ∠AOB ➡ *acute; 30°*
b.) ∠AOD ➡ _____
c.) ∠FOG ➡ _____
d.) ∠DOG ➡ _____
e.) ∠AOG ➡ _____
f.) ∠BOG ➡ _____
g.) ∠COA ➡ _____
h.) ∠GOE ➡ _____
i.) ∠COG ➡ _____
j.) ∠DOE ➡ _____

2. ***Estimate*** the **products**. *Round* numbers and use *math fact* knowledge.

a.) 23 ⇨ × 4 ⇨ = ____ × ____ = ____

b.) 19 ⇨ × 35 ⇨ = ____ × ____ = ____

c.) 27 ⇨ × 61 ⇨ = ____ × ____ = ____

d.) 3 ⇨ × 65 ⇨ = ____ × ____ = ____

3. Expand the decimals below to show the value of each digit.

a.) 0.56 = _____ **b.) 0.87 =** _____

PART 2: *Application Practice*

4. The zookeeper plans to place 6 snakes in a cage. If the zookeeper has 27 snakes, how many cages will he need to hold all the snakes?

Ⓐ 4 cages Ⓒ 6 cages
Ⓑ 5 cages Ⓓ 7 cages

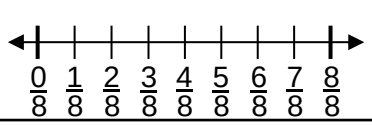
5. A zookeeper has 27 snakes, but he can only place 6 snakes in each cage. If he places 6 snakes in as many cages as he can, how many snakes are in the last cage?

Ⓐ 1 snake Ⓒ 3 snakes
Ⓑ 2 snakes Ⓓ 4 snakes

6. Factor Strings: List each number's factors.

a.) 21: { , , , }
b.) 24: { , , , , , , , }
c.) 25: { , , }
d.) 27: { , , , }
e.) 28: { , , , , , }
f.) 30: { , , , , , , , }
g.) 32: { , , , , , }
h.) 33: { , , , }

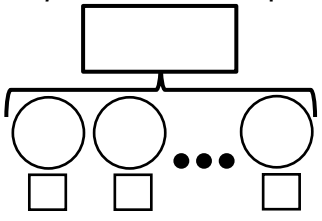
7. Jorge has 8 animals. Two-eighths of the animals are cats. $^{3}/_{8}$ of the animals are hamsters. If the remainder of the animals are dogs, what is the fraction of dogs?



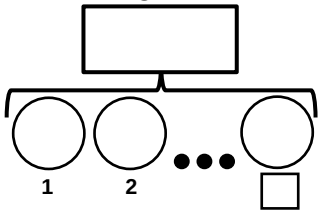
PART 3: *Reflection and Conceptual Understanding*

Understanding two-digit multiplication – Complete the *group model* diagram below.

$$\begin{array}{r} 25 \\ \times\ 31 \\ \hline \end{array}$$ ➡



or

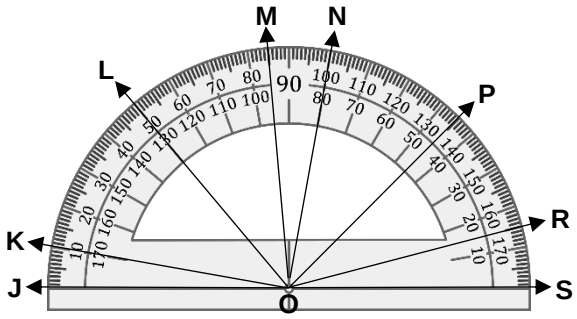


FALL STAAR WALK - Learning Opportunity 69
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. *Write* on the line if the angle is an **Acute**, **Right**, **Obtuse**, or **Straight** and its **angle measurement**.



a.) ∠JON ➡ *obtuse; 100°*
b.) ∠JOK ➡ _____
c.) ∠ROS ➡ _____
d.) ∠SOR ➡ _____
e.) ∠JOP ➡ _____
f.) ∠SON ➡ _____
g.) ∠SOL ➡ _____
h.) ∠JOM ➡ _____
i.) ∠KOL ➡ _____
j.) ∠LON ➡ _____

2. ***Estimate*** the **products**. *Round* numbers and use *math fact* knowledge.

a.) 94 ⇨ × 7 ⇨ = ____ × ____

b.) 25 ⇨ × 45 ⇨ = ____ × ____

c.) 39 ⇨ × 88 ⇨ = ____ × ____

d. 58 ⇨ × 15 ⇨ = ____ × ____

3. Expand the decimals below to show the value of each digit.

g.) 0.09 = _____ **b.) 2.58 =** **2 + ( ) + ( )**

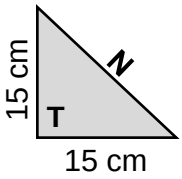
PART 2: *Application Practice*

4. Mr. Sanderson is a tree farmer in South Dakota. He planted 45 rows of trees with 62 trees in each row. What is a reasonable estimate of the total number of trees in his field?

Ⓐ 2,000 trees Ⓒ 3,000 trees
Ⓑ 200 trees Ⓓ 300 trees

5. Triangle **T**'s perimeter is 52 centimeters. Calculate the length of side, **N**.

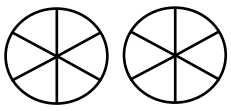
Ⓐ 82 cm Ⓒ 30 cm
Ⓑ 20 cm Ⓓ 22 cm

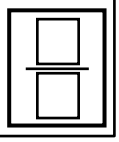


6. Factor Strings: List each number's factors.

a.) 28: { , , , , , }
b.) 30: { , , , , , , , }
c.) 32: { , , , , , }
d.) 33: { , , , }
e.) 36: { , , , , , , , , }
f.) 40: { , , , , , , , }
g.) 45: { , , , , , }
h.) 49: { , , }

7. Ms. Smith bought two pizzas. She divided the pizzas into sixths. She ate 2 slices. If her husband ate three slices, what fraction of the pizzas remain uneaten?

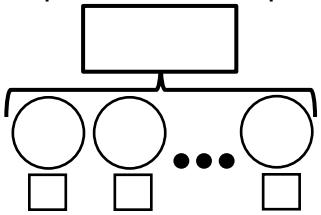




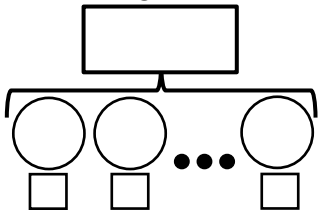
PART 3: *Reflection and Conceptual Understanding*

Understanding two-digit multiplication – Complete the *group model* diagram below.

× 49
50 ➡



or

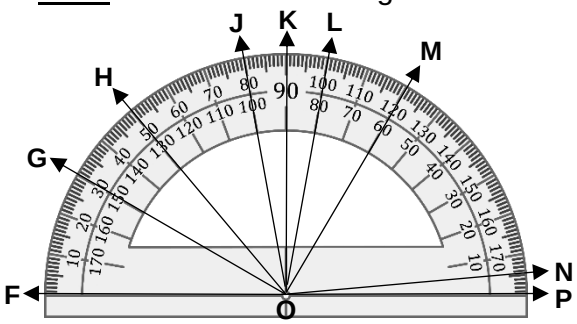


FALL STAAR WALK - Learning Opportunity 70 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Write* on the line if the angle is an **Acute**, **Right**, **Obtuse**, or **Straight** and its **angle measurement**.



a.) ∠FOG ➡ _____ f.) ∠FOH ➡ _____

b.) ∠FOL ➡ _____ g.) ∠HOJ ➡ _____

c.) ∠KOP ➡ _____ h.) ∠LOM ➡ _____

d.) ∠POF ➡ _____ i.) ∠MOG ➡ _____

e.) ∠NOP ➡ _____ j.) ∠GOL ➡ _____

2. ***Estimate*** the **products**. *Round* numbers and use *math fact* knowledge.

a.) 12 ⇨ × 3 ⇨ = ____ **b.)** 67 ⇨ × 31 ⇨ = ____ **c.)** 74 ⇨ × 92 ⇨ = ____ **d.** 66 ⇨ × 19 ⇨ = ____

3. Expand the decimals to show the value of each digit. *Example: 15.39 = 10 + 5 + $^{3}/_{10}$ + $^{9}/_{100}$*

a.) 1.29 = _____ **b.) 3.04 =** _____

PART 2: *Application Practice*

4. The soldiers of Company C are arranged in a large rectangular array. There are 65 rows of soldiers with 25 soldiers in each row. How many soldiers are in Company C?

Ⓐ 1,000 soldiers Ⓒ 1,525 soldiers

Ⓑ 1,625 soldiers Ⓓ 1,325 soldiers

5. Using the data in the table, compute the number of Panda bears.

Bear Type	Number
Polar	2,654
Panda	?
Grizzly	7,438
Total	11,556

6. Factor Strings: List each number's factors.

a.) 36: { , , , , , , , , }

b.) 40: { , , , , , , , }

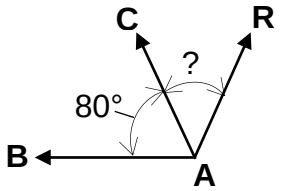
c.) 45: { , , , , , }

d.) 49: { , , }

7. Isabella's father was calculating angle measures for the family's new swing set. He drew the diagram below. If angle (∠) **BAR** is 120°, then what is the measure of angle (∠) **CAR**?

Ⓐ 10° Ⓒ 30°

Ⓑ 20° Ⓓ 40°



PART 3: *Reflection and Conceptual Understanding*

Check if the angles below are right angles. Place the paper's corner 'edges' inside each angle. If the paper corner fits *perfectly* inside, then it is a right angle. **Circle** 'yes' or 'no' - whether the angle is a right angle or not.

a.) **Right angle?** **Yes** **No**

b.) **Right angle?** **Yes** **No**

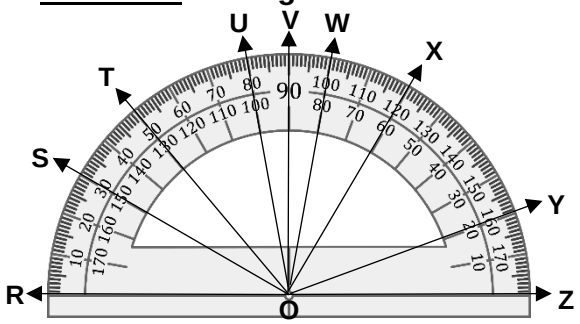
c.) **Right angle?** **Yes** **No**

FALL STAAR WALK - Learning Opportunity 71 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Determine* the **angle measurement** and **ADD** the two angles on d.), e.), i.) and j.)



a.) ∠ROS ➡ _____

b.) ∠SOT ➡ _____

c.) ∠SOU ➡ _____

d.) ∠ROS + ∠SOT ➡ *50°*

e.) ∠ROS + ∠SOU ➡ _____

f.) ∠VOZ ➡ _____

g.) ∠UOV ➡ _____

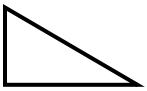
h.) ∠TOZ ➡ _____

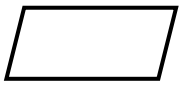
i.) ∠VOZ + ∠UOV ➡ _____

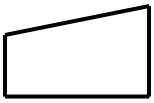
j.) ∠TOZ + ∠SOT ➡ _____

2. On each polygon below, how many vertices have *intersecting* **perpendicular sides**?

a.)  *4 Vertices*

b.)  _____

c.)  _____

d.)  _____

3. Expand the decimals to show the value of each digit. *Example: 15.39 = 10 + 5 + $^{3}/_{10}$ + $^{9}/_{100}$*

a.) 7.06 = _____ **b.) 16.04 =** _____

PART 2: *Application Practice*

4. In problem 1 above, what *angle* is the sum of angle ∠**ROS** and angle ∠**SOT**?

Ⓐ ∠**TOU** Ⓒ ∠**ROV**

Ⓑ ∠**ROT** Ⓓ ∠**ROW**

5. The table shows the number of steps 4 students took in 3 minutes. Which student took 115 less steps than Annie?

_____

Student	Step Count
Mia	615
Jill	605
Luz	675
Annie	730

6. Factor Strings: List each number's factors.

a.) 36: { , , , , , , , , }

b.) 40: { , , , , , , , }

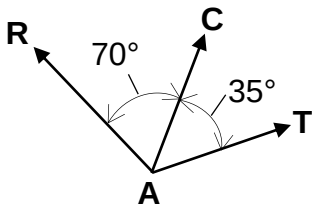
c.) 45: { , , , , , }

d.) 49: { , , }

7. The diagram below shows a series of angles. Using the diagram, what is the measure of ∠ **RAT**?

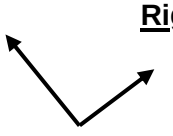
Ⓐ 70° Ⓒ 105°

Ⓑ 35° Ⓓ 110°

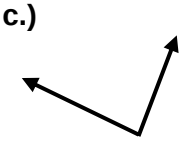


PART 3: *Reflection and Conceptual Understanding*

Check if the angles below are right angles. Place the paper's corner 'edges' inside each angle. If the paper corner fits *perfectly* inside, then it is a right angle. **Circle** 'yes' or 'no' - whether the angle is a right angle or not.

a.)  **Right angle?** **Yes** **No**

b.)  **Right angle?** **Yes** **No**

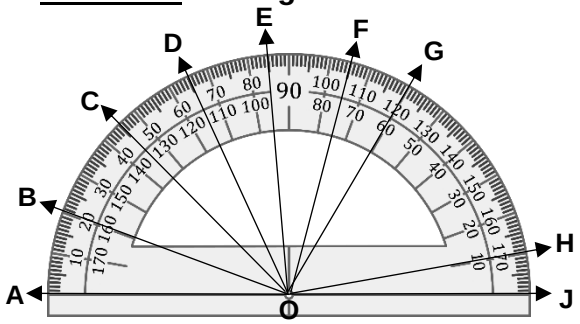
c.)  **Right angle?** **Yes** **No**

FALL STAAR WALK - Learning Opportunity 72 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Determine* the **angle measurement** and **ADD** the two angles on d.), e.), i.) and j.)



a.) ∠**AOC** ➡ _____ f.) ∠**HOJ** ➡ _____

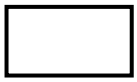
b.) ∠**COD** ➡ _____ g.) ∠**HOG** ➡ _____

c.) ∠**DOG** ➡ _____ h.) ∠**FOG** ➡ _____

d.) ∠**AOC** + ∠**COD** ➡ _____ i.) ∠**HOJ** + ∠**HOG** ➡ _____

e.) ∠**COD** + ∠**DOG** ➡ _____ j.) ∠**FOG** + ∠**HOG** ➡ _____

2. On each polygon below, how many vertices have *intersecting* **perpendicular sides**?

a.)  **b.)**  **c.)**  **d.)** 

_____ _____ _____ _____

3. Expand the decimals to show the value of each digit. *Example: 15.39 = 10 + 5 + $^{3}/_{10}$ + $^{9}/_{100}$*

a.) 213.54 = _____ **b.) 56.7 =** _____

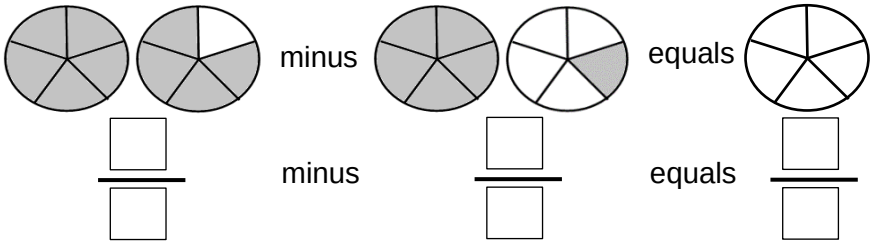
PART 2: *Application Practice*

4. In problem 1 above, what *angle* is the sum of angle ∠ **JOG** and angle ∠ **DOG**?

Ⓐ ∠**JOF** Ⓒ ∠**JOD**

Ⓑ ∠**JOC** Ⓓ ∠**JOB**

5. Shade and **write** the difference in the fractions below.



6. Factor Strings: List each number's factors.

a.) 36: { , , , , , , , , }

b.) 40: { , , , , , , , }

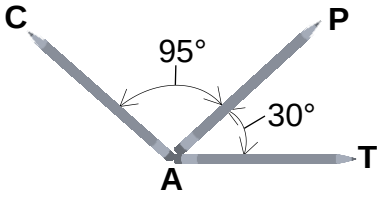
c.) 45: { , , , , , }

d.) 49: { , , }

7. Diego made an acute and an obtuse angle with 3 pencils. What is the measure of ∠ **CAT**?

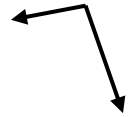
Ⓐ 105° Ⓒ 125°

Ⓑ 115° Ⓓ 135°



PART 3: *Reflection and Conceptual Understanding*

Is the angle a right, obtuse or acute? Place the paper's corner 'edges' inside each angle. If the paper corner fits *perfectly* inside, then it is a right angle. If the paper covers one ray completely, it is acute. If the ray of the angle is showing, it is an obtuse angle. **Circle** your choice.

a.)  **Right angle** **Acute** **Obtuse**

b.)  **Right angle** **Acute** **Obtuse**

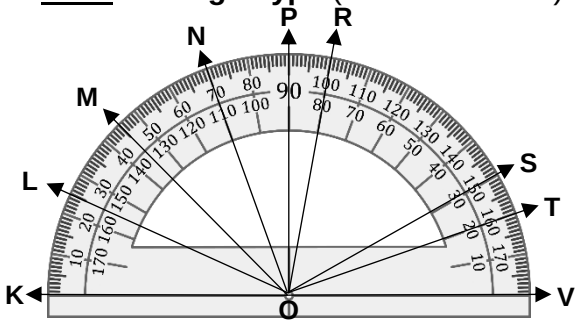
c.)  **Right angle** **Acute** **Obtuse**

FALL STAAR WALK - Learning Opportunity 73 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Write* the **angle type** (acute or obtuse) and **angle name.** **ADD** the two angles in parts e.) and j.).



a.) 70° ➡ *acute; ∠KON*

b.) 45° ➡ _____

c.) 25° ➡ _____

d.) 100° ➡ _____

e.) ∠KOL + ∠LOM ➡ _____

f.) 30° ➡ _____

g.) 20° ➡ _____

h.) 110° ➡ _____

i.) 80° ➡ _____

j.) ∠VOT + ∠SOT ➡ _____

2. Circle and identify as ***either*** a mixed number (**MN**), Proper Fraction (**PF**) or Improper Fraction (**IF**).

a.)	b.)	c.)	d.)	e.)	f.)
$\frac{3}{4}$	$\frac{3}{8}$	$\frac{6}{5}$	$1\frac{1}{5}$	$4\frac{8}{9}$	$\frac{1}{2}$
MN	MN	MN	MN	MN	MN
(PF)	PF	PF	PF	PF	PF
IF	IF	IF	IF	IF	IF

3. Is the **proper fraction** closer to 0, ½ or 1 whole? **Circle** your answer!

a.)	b.)	c.)	d.)	e.)	f.)
$\frac{1}{6}$	$\frac{7}{8}$	$\frac{15}{100}$	$\frac{6}{10}$	$\frac{4}{9}$	$\frac{5}{5}$
(0)	0	0	0	0	0
½	½	½	½	½	½
1	1	1	1	1	1

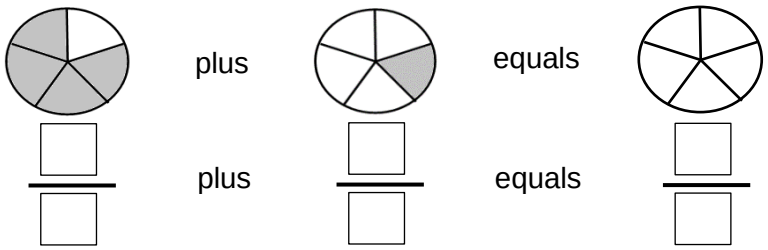
PART 2: *Application Practice*

4. In problem 1 above, what is the *angle sum* of angle ∠ **NOK** and angle ∠ **PON**?

Ⓐ 100° Ⓒ 90°

Ⓑ 70° Ⓓ 150°

5. Shade and **write** the sum of the fractions below.



6. Compare the **decimals** below using <, > , =.

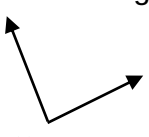
a.)	0.9 (>) 0.09	d.)	0.7 ( ) 0.08
b.)	0.8 ( ) 0.80	e.)	0.71 ( ) 0.89
c.)	0.51 ( ) 0.5	f.)	0.01 ( ) 0.1

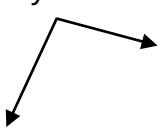
7. Jose planted flowers with his mother. They planted 29 rows of tulips with 15 tulips in each row. They also planted 41 rows of roses with 35 roses in each row. What is a good estimate of the total number of flowers that were planted?

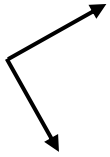
Ⓐ 1,500 Ⓑ 1,600 Ⓒ 1,700 Ⓓ 2,200

PART 3: *Reflection and Conceptual Understanding*

Is the angle a right, obtuse or acute? Place the paper's corner 'edges' inside each angle. If the paper corner fits *perfectly* inside, then it is a right angle. If the paper covers one ray completely, it is acute. If the ray of the angle is showing, it is an obtuse angle. **Circle** your choice.

a.) 
Right angle **Acute** **Obtuse**

b.) 
Right angle **Acute** **Obtuse**

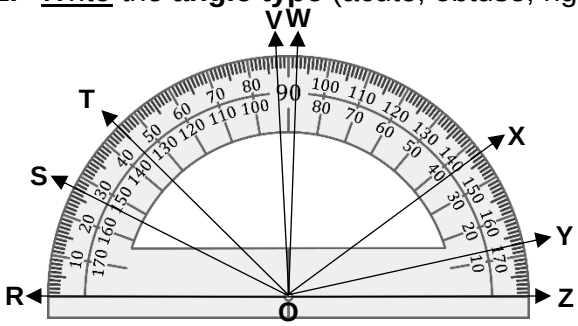
c.) 
Right angle **Acute** **Obtuse**

FALL STAAR WALK - Learning Opportunity 74 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Write* the **angle type** (acute, obtuse, right, or straight) and **angle name** with the angle measures.



a.) 27° ➡ *acute; ∠ROS*

b.) 92° ➡ _____

c.) 45° ➡ _____

d.) 143° ➡ _____

e.) 87° ➡ _____

f.) 37° ➡ _____

g.) 13° ➡ _____

h.) 88° ➡ _____

i.) 153° ➡ _____

j.) 180° ➡ _____

2. Circle and identify as ***either*** a mixed number (**MN**), Proper Fraction (**PF**) or Improper Fraction (**IF**).

a.) $\frac{4}{4}$ MN PF IF **b.)** $\frac{9}{1}$ MN PF IF **c.)** $6\frac{1}{3}$ MN PF IF **d.)** $5\frac{0}{3}$ MN PF IF **e.)** $\frac{3}{9}$ MN PF IF **f.)** $\frac{3}{2}$ MN PF IF

3. Is the **proper fraction** closer to 0, ½ or 1 whole? **Circle** your answer!

a.) $\frac{2}{10}$ 0 ½ 1 **b.)** $\frac{11}{13}$ 0 ½ 1 **c.)** $\frac{43}{100}$ 0 ½ 1 **d.)** $\frac{8}{10}$ 0 ½ 1 **e.)** $\frac{21}{44}$ 0 ½ 1 **f.)** $\frac{56}{1,000}$ 0 ½ 1

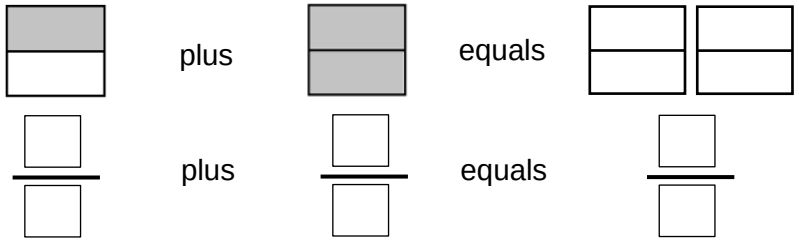
PART 2: *Application Practice*

4. In problem 1 above, what is the *angle* sum of angle ∠ **YOZ** and angle ∠ **XOY**?

Ⓐ 37° Ⓒ 47°

Ⓑ 32° Ⓓ 143°

5. Shade and **write** the sum of the fractions below.



6. Compare the **decimals** below using <, > , =.

a.) 1.2 ◯ 1.02 **d.)** 2.7 ◯ 2.70

b.) 0.30 ◯ 0.3 **e.)** 0.66 ◯ 0.6

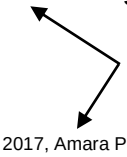
c.) 0.07 ◯ 0.67 **f.)** 1.03 ◯ 1.3

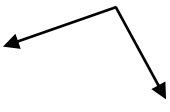
7. Kim and Paul raked the yard for 2 hours and 10 minutes. If they started at 4:30 PM, what time did they finish raking?

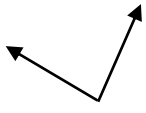
Ⓐ 5:20 PM Ⓑ 2:20 PM Ⓒ 6:40 PM Ⓓ 6:20 PM

PART 3: *Reflection and Conceptual Understanding*

Is the angle a right, obtuse or acute? Place the paper's corner 'edges' inside each angle. If the paper corner fits *perfectly* inside, then it is a right angle. If the paper covers one ray completely, it is acute. If the ray of the angle is showing, it is an obtuse angle. **Circle** your choice.

a.)  **Right angle** **Acute** **Obtuse**

b.)  **Right angle** **Acute** **Obtuse**

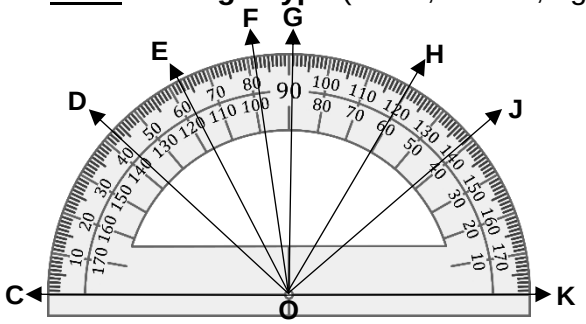
c.)  **Right angle** **Acute** **Obtuse**

FALL STAAR WALK - Learning Opportunity 75 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Write* the **angle type** (acute, obtuse, right, or straight) and **angle name** with the angle measures.



a.) 63° ➡ *acute; ∠COE*

b.) 91° ➡ _____

c.) 120° ➡ _____

d.) 60° ➡ _____

e.) 41° ➡ _____

f.) 82° ➡ _____

g.) 98° ➡ _____

h.) 89° ➡ _____

i.) 139° ➡ _____

j.) 117° ➡ _____

2. Circle and identify as ***either*** a mixed number (**MN**), Proper Fraction (**PF**) or Improper Fraction (**IF**).

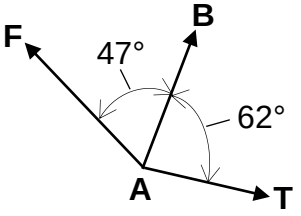
a.)	b.)	c.)	d.)	e.)	f.)
$\frac{3}{7}$	$\frac{8}{8}$	$2\frac{0}{3}$	$4\frac{8}{9}$	$\frac{3}{1}$	$\frac{5}{6}$
MN PF IF	MN PF IF	MN PF IF	MN PF IF	MN PF IF	MN PF IF

3. Is the **proper fraction** closer to 0, ½ or 1 whole? **Circle** your answer!

a.)	b.)	c.)	d.)	e.)	f.)
$\frac{8}{10}$	$\frac{8}{18}$	$\frac{89}{100}$	$\frac{3}{50}$	$\frac{67}{70}$	$\frac{490}{1,000}$
0 ½ 1	0 ½ 1	0 ½ 1	0 ½ 1	0 ½ 1	0 ½ 1

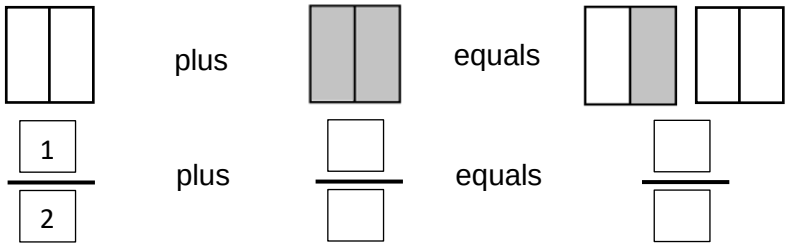
PART 2: *Application Practice*

4. Look at the angle diagram. What is the angle measure of ∠**FAT**?



∠FAT =

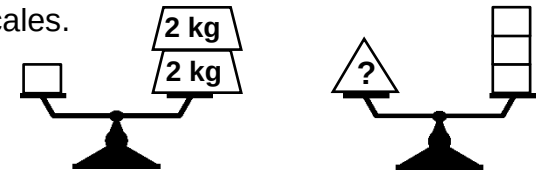
5. Shade and **write** the sum of the fractions below.



6. Compare the **decimals** below using <, > , =.

a.)	0.2 ◯ 0.02	d.)	0.7 ◯ 0.70
b.)	0.88 ◯ 1.02	e.)	0.44 ◯ 0.5
c.)	0.07 ◯ 0.07	f.)	2.6 ◯ 2.60

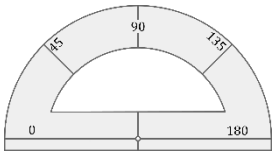
7. Determine the mass of the triangle "**?**" using the two scales.

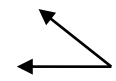


Ⓐ 8 kg. Ⓑ 10 kg. Ⓒ 12 kg. Ⓓ 14 kg.

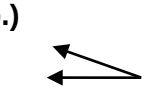
PART 3: *Reflection and Conceptual Understanding*

Estimating angle measures is easy if a protractor is **mentally** divided into degrees of 0, 45, 90. If the corner of a piece of paper is 90°, then **half** of that corner is 45°. **Estimate** the angles' measure below using this method.

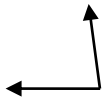


a.) 

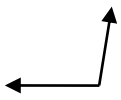
about 45°

b.) 

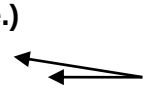
_____

c.) 

_____

d.) 

_____

e.) 

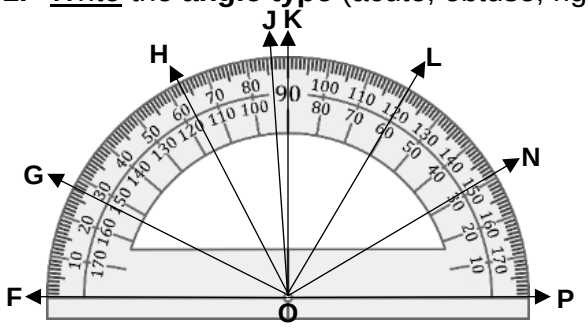
_____

FALL STAAR WALK - Learning Opportunity 76 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. *Write* the **angle type** (acute, obtuse, right, or straight) and **angle name** with the angle measures.



a.) 31° ➡ *acute; ∠NOP*

b.) 149° ➡ _____

c.) 120° ➡ _____

d.) 90° ➡ _____

e.) 180° ➡ _____

f.) 86° ➡ _____

g.) 94° ➡ _____

h.) 63° ➡ _____

i.) 27° ➡ _____

j.) 153° ➡ _____

2. Circle and identify as ***either*** a mixed number (**MN**), Proper Fraction (**PF**) or Improper Fraction (**IF**).

a.) $\frac{9}{9}$ MN PF IF

b.) $2\frac{4}{8}$ MN PF IF

c.) $\frac{6}{7}$ MN PF IF

d.) $\frac{6}{1}$ MN PF IF

e.) $8\frac{3}{6}$ MN PF IF

f.) $\frac{2}{2}$ MN PF IF

3. Is the **proper fraction** closer to 0, ½ or 1 whole? **Circle** your answer!

a.) $\frac{85}{100}$ 0 ½ 1

b.) $\frac{14}{30}$ 0 ½ 1

c.) $\frac{85}{1,000}$ 0 ½ 1

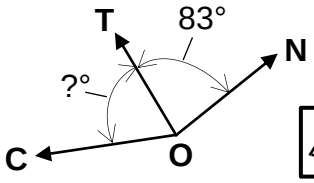
d.) $\frac{3}{7}$ 0 ½ 1

e.) $\frac{41}{45}$ 0 ½ 1

f.) $\frac{531}{1,000}$ 0 ½ 1

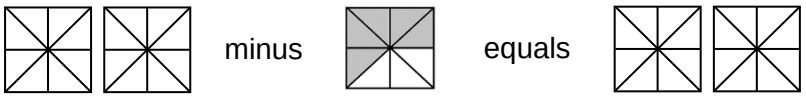
PART 2: *Application Practice*

4. Look at the angle diagram. ∠**CON** is 152°. Find the measure of ∠**COT**?



∠**COT** = _____

5. Shade and **write** the difference of the fractions below.



$\frac{14}{8}$ minus $\frac{\square}{\square}$ equals $\frac{\square}{\square}$

6. Compare the **decimals** below using <, > , =.

a.) 0.32 ◯ 0.3

b.) 0.95 ◯ 3.09

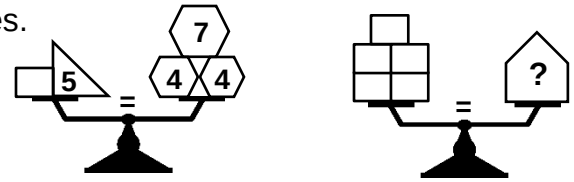
c.) 0.4 ◯ 0.04

d.) 0.6 ◯ 0.60

e.) 0.49 ◯ 0.05

f.) 6.7 ◯ 6.60

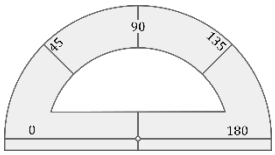
7. Determine the mass of the pentagon "**?**" using the two scales.

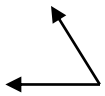


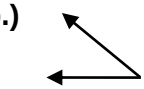
Ⓐ 35 kg. Ⓑ 40 kg. Ⓒ 50 kg. Ⓓ 60 kg.

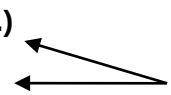
PART 3: *Reflection and Conceptual Understanding*

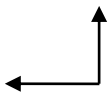
Estimating angle measures is easy if a protractor is **mentally** divided into degrees of 0, 45, 90. If the corner of a piece of paper is 90°, then **half** of that corner is 45°. **Estimate** the angles' measure below using this method.

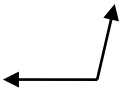


a.)  *about 60°*

b.)  _____

c.)  _____

d.)  _____

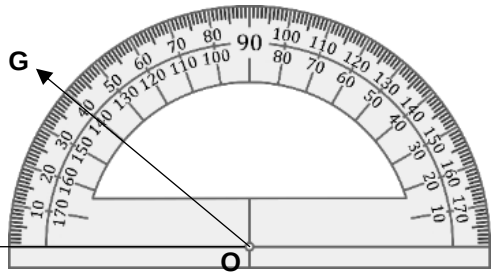
e.)  _____

FALL STAAR WALK - Learning Opportunity 77 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Using the **Ray OF** and a ruler, draw the other ray to the create the angle measurement.



a.) 40° ➡ **Draw Ray OG** to create an ***acute*** **angle ∠FOG**

b.) 60° ➡ **Draw Ray OH** to create an ***acute*** **angle ∠FOH**

c.) 90° ➡ **Draw Ray OJ** to create a ***right*** **angle ∠FOJ**

d.) 95° ➡ **Draw Ray OK** to create an ***obtuse*** **angle ∠FOK**

e.) 135° ➡ **Draw Ray OL** to create an ***obtuse*** **angle ∠FOL**

2. Is the **decimal** closer to 0, ½ or 1 whole? **Circle** your answer! *Hint: Always think Money – first two digits!*

a.)	b.)	c.)	d.)	e.)	f.)
0.07	0.92	0.4	0.031	0.62	0.9
0 ½ 1	0 ½ 1	0 ½ 1	0 ½ 1	0 ½ 1	0 ½ 1

3. Is the **proper fraction** closer to 0, ½ or 1 whole? **Circle** your answer!

a.)	b.)	c.)	d.)	e.)	f.)
$\frac{11}{100}$	$\frac{10}{60}$	$\frac{899}{1,000}$	$\frac{3}{18}$	$\frac{3}{6}$	$\frac{7}{1,000}$
0 ½ 1	0 ½ 1	0 ½ 1	0 ½ 1	0 ½ 1	0 ½ 1

PART 2: *Application Practice*

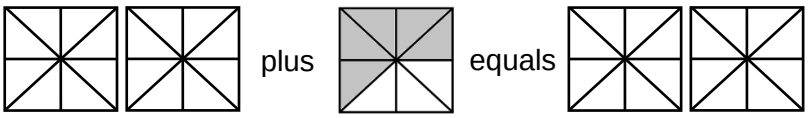
4. Determine the times below based on the time shown on the clock.

a.) 10 minutes before: _____

b.) 45 minutes later: _____

c.) 2 hours before: _____

5. Shade and **write** the sum of the fractions.



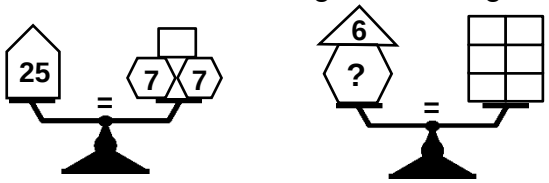
$\frac{11}{8}$ plus $\frac{\square}{\square}$ equals $\frac{16}{8}$

6. Betty saved 65 Euros each month for 31 months. Compute an estimate and an exact amount of the total number of Euros Betty saved.

Ⓐ 1,800; 2,100 Ⓒ 100; 96

Ⓑ 2,100; 2,015 Ⓓ 40; 34

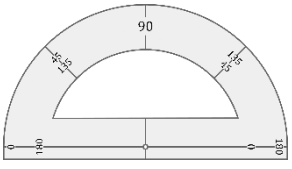
7. Determine the mass of the hexagon "**?**" using the two scales.

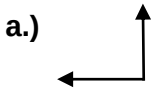


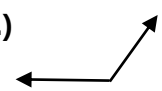
Ⓐ 35 kg. Ⓑ 40 kg. Ⓒ 50 kg. Ⓓ 60 kg.

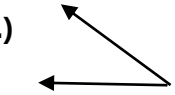
PART 3: *Reflection and Conceptual Understanding*

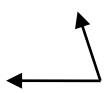
Estimating angle measures is easy if a protractor is **mentally** divided into degrees of 0, 45, 90. If the corner of a piece of paper is 90°, then **half** of that corner is 45°. **Estimate** the angles' measure below using this method.



a.)  *about 90°*

b.)  _____

c.)  _____

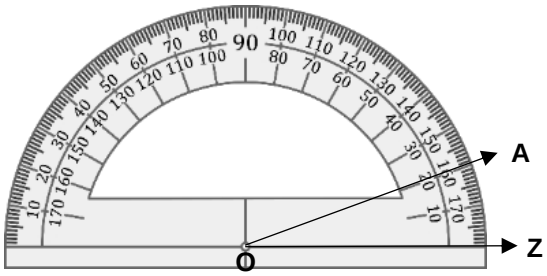
d.)  _____

e.)  _____

FALL STAAR WALK - Learning Opportunity 78 | for TEKS/STAAR | *"Journey of Knowledge"* | Name: _____

PART 1: *Numeracy Development*

1. Using the **Ray OZ** and a ruler, draw the other ray to the create the angle measurement.



a.) 20° ➡ **Draw Ray OA** to create an ***acute*** **angle ∠ZOA**

b.) 40° ➡ **Draw Ray OB** to create an ***acute*** **angle ∠ZOB**

c.) 90° ➡ **Draw Ray OC** to create a ***right*** **angle ∠ZOC**

d.) 105° ➡ **Draw Ray OD** to create an ***obtuse*** **angle ∠ZOD**

e.) 150° ➡ **Draw Ray OE** to create an ***obtuse*** **angle ∠ZOE**

2. Is the **decimal** closer to 0, ½ or 1 whole? **Circle** your answer! *Hint: Always think Money – first two digits!*

a.)	**b.)**	**c.)**	**d.)**	**e.)**	**f.)**
0	0	0	0	0	0
0.9	0.941	0.55	0.059	0.96	0.2
½	½	½	½	½	½
1	1	1	1	1	1

3. Is the **proper fraction** closer to 0, ½ or 1 whole? **Circle** your answer!

a.)	**b.)**	**c.)**	**d.)**	**e.)**	**f.)**
0	0	0	0	0	0
$\frac{100}{1,000}$	$\frac{45}{80}$	$\frac{997}{1,000}$	$\frac{3}{40}$	$\frac{4}{9}$	$\frac{13}{1,000}$
½	½	½	½	½	½
1	1	1	1	1	1

PART 2: *Application Practice*

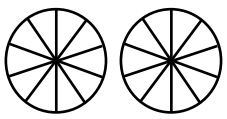
4. Determine the times below based on the time shown on the clock.

a.) 45 minutes later: _____

b.) 70 minutes before: _____

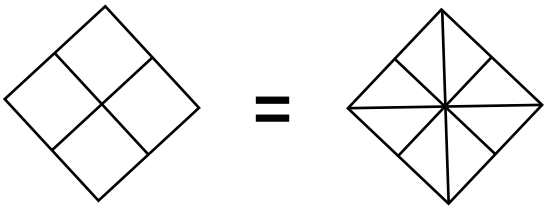
c.) 3 hours after: _____

5. Shade and **write** the difference of the fractions.



$\frac{17}{10}$ minus $\frac{\square}{\square}$ equals $\frac{12}{10}$

6. Shade the two fractions to show two equivalent fractions ➡ 3/4 = 6/8.

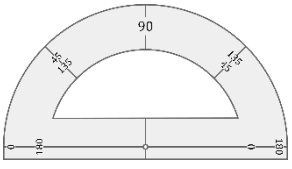


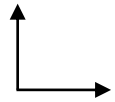
7. The distance from Los Angeles to San Francisco is 398 miles. Jimmy "Speedwagon" Johnson drives at 80 miles per (each) hour. ***About*** many hours will it take Jimmy to reach San Franciso if he leaves Los Angeles and does not stop?

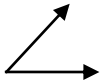
Ⓐ 3 hours Ⓑ 4 hours Ⓒ 5 hours Ⓓ 6 hours

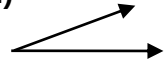
PART 3: *Reflection and Conceptual Understanding*

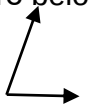
Estimating angle measures is easy if a protractor is **mentally** divided into degrees of 0, 45, 90. If the corner of a piece of paper is 90°, then **half** of that corner is 45°. **Estimate** the angles' measure below using this method.



a.)  *about 90°*

b.)  _____

c.)  _____

d.)  _____

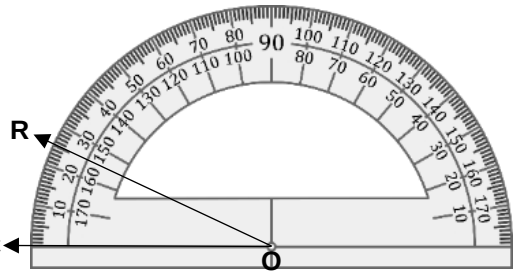
e.)  _____

FALL STAAR WALK - Learning Opportunity 79 for TEKS/STAAR "Journey of Knowledge"

Name: _____

PART 1: *Numeracy Development*

1. Using the **Ray OC** and a ruler, draw the other ray to the create the angle measurement.



a.) 25° ➡ **Draw Ray OR** to create an ***acute*** **angle ∠COR**

b.) 48° ➡ **Draw Ray OS** to create an ***acute*** **angle ∠COS**

c.) 90° ➡ **Draw Ray OT** to create a ***right*** **angle ∠COT**

d.) 127° ➡ **Draw Ray OV** to create an ***obtuse*** **angle ∠COV**

e.) 173° ➡ **Draw Ray OX** to create an ***obtuse*** **angle ∠COX**

2. Is the **decimal** closer to 0, ½ or 1 whole? **Circle** your answer! *Hint: Always think Money – first two digits!*

a.) 0.8 → 0 / ½ / 1

b.) 0.214 → 0 / ½ / 1

c.) 0.61 → 0 / ½ / 1

d.) 0.011 → 0 / ½ / 1

e.) 0.35 → 0 / ½ / 1

f.) 0.4 → 0 / ½ / 1

3. Is the **proper fraction** closer to 0, ½ or 1 whole? **Circle** your answer!

a.) $\frac{800}{1{,}000}$ → 0 / ½ / 1

b.) $\frac{1}{5}$ → 0 / ½ / 1

c.) $\frac{2{,}000}{10{,}000}$ → 0 / ½ / 1

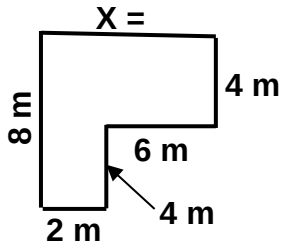
d.) $\frac{8}{11}$ → 0 / ½ / 1

e.) $\frac{7}{16}$ → 0 / ½ / 1

f.) $\frac{454}{1{,}000}$ → 0 / ½ / 1

PART 2: *Application Practice*

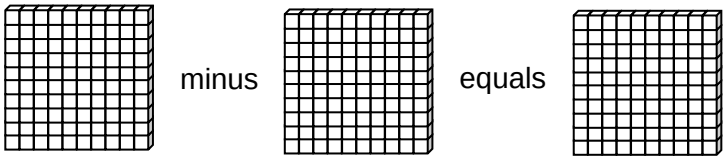
4. Calculate the area and perimeter of an L-Shaped garden shown below.



Perimeter = _____

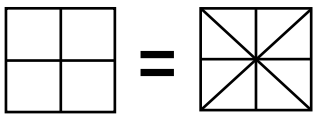
Area = _____

5. Shade and **write** the difference of the fractions.



$\frac{56}{100}$ minus $\frac{32}{100}$ equals $\frac{\square}{\square}$

6. Choose two fractions. Shade each so the two fractions are equivalent.



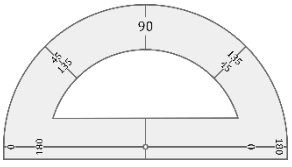
SO $\frac{\square}{\square} = \frac{\square}{\square}$

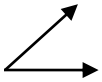
7. Jaxon had a bag of 25 marbles. Double that amount. Divide that amount by 5. Half that number. Triple that number. Add 15. Subtract 5. Finally, Double that amount. What number did you get?

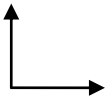
Ⓐ 25 Ⓑ 10 Ⓒ 50 Ⓓ 30

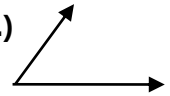
PART 3: *Reflection and Conceptual Understanding*

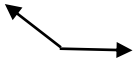
Estimating angle measures is easy if a protractor is **mentally** divided into degrees of 0, 45, 90. If the corner of a piece of paper is 90°, then **half** of that corner is 45°. **Estimate** the angles' measure below using this method.

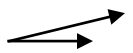


a.)  *about 45°*

b.)  _____

c.)  _____

d.)  _____

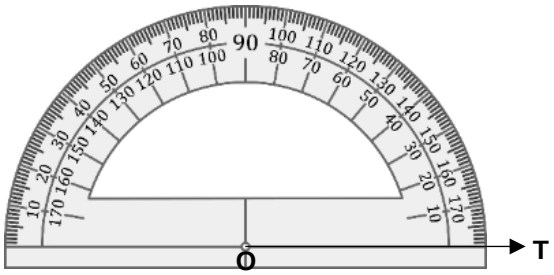
e.)  _____

FALL STAAR WALK - Learning Opportunity 80
for TEKS/STAAR *"Journey of Knowledge"*

Name: _____

PART 1: *Numeracy Development*

1. Using the **Ray OT** and a ruler, draw the other ray to the create the angle measurement.



a.) 12° ➡ **Draw Ray OA** to create an ***acute*** **angle ∠TOA**

b.) 73° ➡ **Draw Ray OB** to create an ***acute*** **angle ∠TOB**

c.) 90° ➡ **Draw Ray OC** to create a ***right*** **angle ∠TOC**

d.) 112° ➡ **Draw Ray OD** to create an ***obtuse*** **angle ∠TOD**

e.) 149° ➡ **Draw Ray OE** to create an ***obtuse*** **angle ∠TOE**

2. Is the **decimal** closer to 0, ½ or 1 whole? **Circle** your answer! *Hint: Always think Money – first two digits!*

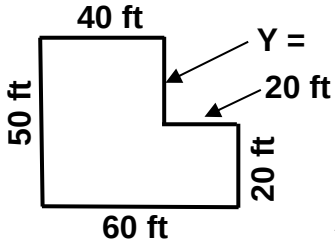
a.)	**b.)**	**c.)**	**d.)**	**e.)**	**f.)**
0	0	0	0	0	0
0.04	0.603	0.9	0.905	0.12	0.6
½	½	½	½	½	½
1	1	1	1	1	1

3. Is the **proper fraction** closer to 0, ½ or 1 whole? **Circle** your answer!

a.)	**b.)**	**c.)**	**d.)**	**e.)**	**f.)**
0	0	0	0	0	0
$\frac{46}{1,000}$	$\frac{7}{8}$	$\frac{8,209}{10,000}$	$\frac{8}{16}$	$\frac{4}{22}$	$\frac{598}{1,000}$
½	½	½	½	½	½
1	1	1	1	1	1

PART 2: *Application Practice*

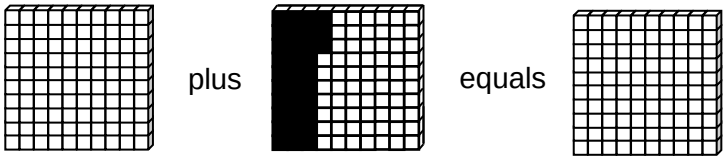
4. Calculate the area and perimeter of a small L-Shaped playground shown below.



Perimeter = _____

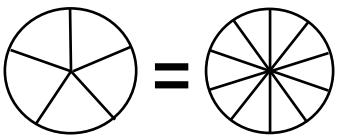
Area = _____

5. Shade and **write** the sum of the fractions.



$\frac{42}{100}$ plus $\frac{\square}{\square}$ equals $\frac{\square}{\square}$

6. Choose two fractions. Shade each so the two fractions are equivalent.



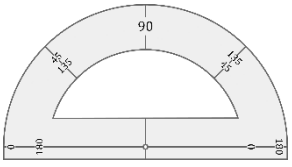
SO $\frac{\square}{\square} = \frac{\square}{\square}$

7. Jasper chose a number. He added 40 to that number. He divided that amount by 2. Then, he subtracted 20. *His answer after all his calculations equaled 5.* What number did Jasper first choose?

Ⓐ 25 Ⓑ 10 Ⓒ 50 Ⓓ 30

PART 3: *Reflection and Conceptual Understanding*

Estimating angle measures is easy if a protractor is **mentally** divided into degrees of 0, 45, 90. If the corner of a piece of paper is 90°, then **half** of that corner is 45°. **Estimate** the angles' measure below using this method.



a.) _____ **b.)** _____ **c.)** _____ **d.)** _____ **e.)** _____

Grade 4

ANSWER KEY

80 Daily Learning Opportunities

Mathematics

Fall Semester

Learning Opportunity 01

Part 1 – Numeracy Development **– Focus on vocabulary (Write *sum, difference, addend,* etc. on the word wall and repeatedly stress*)*** **TEKS**

1.	**a.)** 23	**b.)** 62	**c.)** 79	**d.)** 106	**4.4A**
2.	**a.)** 48	**b.)** 35	**c.)** 63	**d.)** 30	**4.4A**
3.	**a.)** 80	**b.)** 50	**c.)** 10	**d.)** 30	**4.4A**
4.	**a.)** odd	**b.)** even	**c.)** even	**d.)** odd	**2.7A**
5.	**a.)** Given	**b.)** 5,000 + 0 + 20 + 9	**c.)** 3,000 + 0 + 80 + 0	**d.)** 9,000 + 700 + 0 + 7	**4.2B**

Part 2 – Application Practice

6. **D** - **73** (i.e. 73 is the only 2 digit number that is both odd and greater than 36.) **2.7A; 4.2B**

7. **B** - **22** (i.e. 58 - 36 = **22**) **4.1A; 4.4A**

8. Place Value is **hundreds;** Value is **0** **4.2B**

9. **29** (i.e. 20 + 9 = **29**) **4.1A; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 30 + 20 = 50; first box equals '**30**' and second box equals '**20**.' **2.1D; 2.4D; 4.4A**

Learning Opportunity 02

Part 1 – Numeracy Development **– Focus on vocabulary (Write *sum, difference, addend,* etc. on the word wall and repeatedly stress*)*** **TEKS**

1.	**a.)** 28	**b.)** 77	**c.)** 109	**d.)** 101	**4.4A**
2.	**a.)** 60	**b.)** 33	**c.)** 41	**d.)** 45	**4.4A**
3.	**a.)** 70	**b.)** 60	**c.)** 20	**d.)** 50	**4.4A**
4.	**a.)** even	**b.)** odd	**c.)** even	**d.)** odd	**2.7A**
5.	**a.)** 7,000 + 0 + 80 + 1	**b.)** 2,000 + 400 + 0 + 5	**c.)** 8,000 + 0 + 0 + 6	**d.)** 4,000 + 900 + 0 + 0	**4.2B**

Part 2 – Application Practice

6. **C** - **92** (i.e. 92 is the only 2 digit number that is both even and greater than 65, but less 95.) **2.7A; 4.2B**

7. **C** - **$ 1.53** (i.e. $0.97 + $0.56 = **$ 1.53**) **4.1A; 4.4A**

8. Place Value is **thousands;** Value is **4,000** **4.2B**

9. **9** (i.e. 27 - 18 = **9**) **4.1A; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 10 + 50 = 60; first box equals '**10**' and second box equals '**50**.' **2.1D; 2.4D; 4.4A**

Learning Opportunity 03

Part 1 – Numeracy Development **– Focus on vocabulary (Write *sum, difference, addend,* etc. on the word wall and repeatedly stress*)*** **TEKS**

1.	**a.)** 250	**b.)** 470	**c.)** 275	**d.)** 420	**4.4A**
2.	**a.)** 80	**b.)** 150	**c.)** 275	**d.)** 425	**4.4A**
3.	**a.)** 20	**b.)** 15	**c.)** 10	**d.)** 5	**4.4A**
4.	**a.)** odd	**b.)** odd	**c.)** even	**d.)** odd	**2.7A**
5.	**a.)** Given	**b.)** 30,000 + 2,000 + 200 + 0 + 9	**c.)** 10,000 + 6,000 + 0 + 40 + 8	**d.)** 50,000 + 6,000 + 0 + 0 + 2	**4.2B**

Part 2 – Application Practice

6. **A** - **$15.00** (i.e. 32 - 17 = **15**) **4.4A**

7. **D** - **22** (i.e. 6 + 6 + 10 = **22**; Hence, the **? Block = 22 kg.**) **2.7C; 4.4A**

8. Place Value is **ten-thousands;** Value is **60,000** **4.2B**

9. **17** (i.e. Betty = 27 because 39 – 12 = 27; Jesus = 27 - 10 = **17**) **4.1A; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 50 - 30 = 20; first box equals '**50**' and second box equals '**30**.' **2.1D; 2.4D; 4.4A**

Learning Opportunity 04

Part 1 – Numeracy Development **– Focus on vocabulary (Write *sum, difference, addend,* etc. on the word wall and repeatedly stress)** **TEKS**

1.	**a.)** 338	**b.)** 779			**4.4A**
2.	**a.)** 312	**b.)** 525			**4.4A**
3.	**a.)** Given	**b.)** 15	**c.)** 40	**d.)** 45	**4.4A**
	e.) 5	**f.)** 20	**g.)** 35	**h.)** 30	
4.	**a.)** odd	**b.)** even	**c.)** odd	**d.)** even	**2.7A**
5.	**a.)** 40,000 + 5,000 + 10 + 5	**b.)** 30,000 + 200 + 0 + 0	**c.)** 10,000 + 7,000 + 0 + 0	**d.)** 90,000 + 4,000 + 0 + 0 + 3	**4.2B**

Part 2 – Application Practice

6. **C** - **$ 193.00** (i.e. $ 45 + $ 62 + $ 86 = **$ 193.00**) **4.1A; 4.4A**

7. **B** – **16 kg.** (i.e. 2 + 3 + 11 = **16**) **2.1D; 4.4A**

8. Place Value of the **5's** in 4**5**,2**5**1 is**: thousands** and **tens.** **4.2B**

9. **39 > 29 > 16** (i.e. Hugh = 16; Jose = 16 + 23 = **39**; Ronny 39 – 10 = **29**) **4.2C; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **40 - 10 = 30;** first box equals '**40**' and second box equals '**10**.' **2.1D; 2.4D; 4.4A**

Learning Opportunity 05

Part 1 – Numeracy Development **– Stress Mathematics Vocabulary the entire school year: Elapsed Time, Difference, Addends, etc.** **TEKS**

1.	**a.)** 619	**b.)** 782			**4.4A**
2.	**a.)** 292	**b.)** 208			**4.4A**
3.	**a.)** 15	**b.)** 70	**c.)** 75	**d.)** 55	**4.4A**
	e.) 30	**f.)** 5	**g.)** 85	**h.)** 90	
4.	**a.)** even	**b.)** even	**c.)** odd	**d.)** odd	**2.7A**
5.	**a.)** 30,000 + 1,000 + 50	**b.)** 10,000 + 5,000 + 600 + 0 + 4	**c.)** 9,000 + 500 + 30	**d.)** 80,000 + 8	**4.2B**

Part 2 – Application Practice

6. **C** – **24 kites** (i.e. 17 + (17 – 10) = **24**) **4.1A; 4.4A**

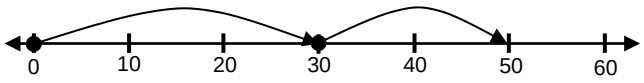
7. **D** – **8 kg.** (i.e. 7 + **?** + 15 = 30); (Hence, 22 + **?** = 30 and the **?** must equal 8) **2.1D; 4.4A**

8. Value and Place Value of the **'9'** in **9**3,071 is: **90,000** and **ten-thousands** **4.2B**

9. **42 > 32 > 27** (i.e. Kim = 42; Jan = 42 - 10 = **32**; Val = 42 – 15 = **27**) **4 .2C; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer:



2.1D; 2.4D; 4.4A

Learning Opportunity 06

Part 1 – Numeracy Development **- Stress Mathematics Vocabulary the entire school year: Elapsed Time, Difference, Addends, etc.** **TEKS**

1.	**a.)** 739	**b.)** 774			**4.4A**
2.	**a.)** 324	**b.)** 233			**4.4A**
3.	**a.)** 45	**b.)** 90	**c.)** 75	**d.)** 85	**4.4A**
	e.) 50	**f.)** 25	**g.)** 95	**h.)** 20	
4.	**a.)** Given	**b.)** 20	**c.)** 5	**d.)** 15	**2.3D**
5.	**a.)** 90,000 + 7,000 + 50 + 6	**b.)** 10,000 + 9,000 + 800 + 0 + 7	**c.)** 50,000 + 0 + 0 + 0 + 9	**d.)** 70,000 + 5,000 + 900	**4.2B**

Part 2 – Application Practice

6. **D** - **767** (i.e. 358 + 409 = **767**) **4.1A; 4.4A**

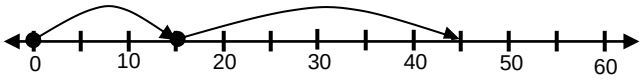
7. **C** – **70 kg.** (i.e. 10 + 65 - 5 = **70**) **2.1D; 4.4A**

8. Place Value is **thousands;** Value is **4,000** **4.2B**

9. **45 > 40 > 35** (i.e. **a.)** 30 + 10 – 5 = **35**; **b.)** 35 – 5 + 15 = **45**; **c.)** 55 – 20 + 5 = **40**) **4.2C; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer:



2.1D; 2.4D; 4.4A

Learning Opportunity 07

Part 1 – Numeracy Development **TEKS**

1.	**a.)** 1,332	**b.)** 3,409			**4.4A**
2.	**a.)** 309	**b.)** 438			**4.4A**
3.	**a.)** 75	**b.)** 95	**c.)** 35	**d.)** 65	**4.4A**
	e.) 45	**f.)** 85	**g.)** 55	**h.)** 25	
4.	**a.)** 30	**b.)** 25	**c.)** 50	**d.)** 40	**2.3D**
5.	**a.)** Given	**b.)** 100,000 + 30,000 + 9,000 +0 + 0 + 7	**c.)** 100,000 + 80,000 + 500 + 3	**d.)** 200,000 + 5,000 + 400	**4.2B**

Part 2 – Application Practice

6. **20 minutes** **4.1A; 4.8C**

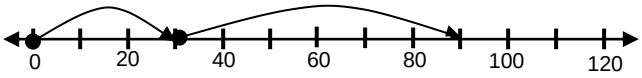
7. **A** – **60 kg.** (i.e. 40 + **?** = 100) Hence, **?** = **60 kg**. **2.1D; 4.4A**

8. **B** – **32 minutes** (i.e. 209 - 177 = **32**) **4.1A; 4.4A**

9. **60 < 65 < 70** **a.)** 50 + 20 – 5 = **65**; **b.)** 45 + 5 + 20 = **70**; **c.)** 75 – 30 + 15 = **60** **4.2C; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer:



2.1D; 2.4D; 4.4A

Learning Opportunity 08

Part 1 – Numeracy Development **TEKS**

1.	**a.)** 8,056	**b.)** 8,245			**4.4A**
2.	**a.)** 237	**b.)** 239			**4.4A**
3.	**a.)** Given	**b.)** 600	**c.)** 400	**d.)** 700	**4.4A**
	e.) 500	**f.)** 100	**g.)** 1,000	**h.)** 300	
4.	**a.)** 15	**b.)** 20	**c.)** 25	**d.)** 40	**2.3D**
5.	**a.)** 100,000 + 40,000 + 700 + 30	**b.)** 200,000 + 40,000 + 9,000 + 0 + 0 + 8	**c.)** 300,000 + 70,000 + 900	**d.)** 600,000 + 700 + 4	**4.2B**

Part 2 – Application Practice

6. **35 minutes** **4.1A; 4.8C**

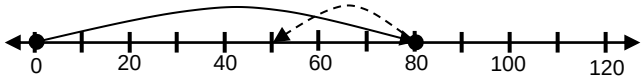
7. **A** – **80 lbs.** (i.e. 30 + 50 = **?**); Hence, **?** = **80** **2.1D; 4.4A**

8. **D** – **100 minutes** (i.e. 30 + 30 + 20 + 20 = **100**) **4.1A; 4.4A**

9. **80 > 75 > 65** **a.)** 90 - 30 + 15 = **75**; **b.)** 80 + 5 - 20 = **65**; **c.)** 100 – 50 + 30 = **80** **4.2C; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer:



2.1D; 2.4D; 4.4A

Learning Opportunity 09

Part 1 – Numeracy Development **TEKS**

1.	**a.)** 11,210	**b.)** 6,210			**4.4A**
2.	**a.)** 488	**b.)** 215			**4.4A**
3.	**a.)** 900	**b.)** 500	**c.)** 1,000	**d.)** 0	**4.4A**
	e.) 400	**f.)** 800	**g.)** 200	**h.)** 300	
4.	**a.)** 50	**b.)** 15	**c.)** 35	**d.)** 25	**2.3D**
5.	**a.)** 500,000 + 900 + 30 + 4	**b.)** 600,000 + 30,000 + 400 + 30 + 0	**c.)** 500,000 + 6,000 + 800	**d.)** 700,000 + 8,000 + 200 + 6	**4.2B**

Part 2 – Application Practice

6. **55 minutes** **4.1A; 4.8C**

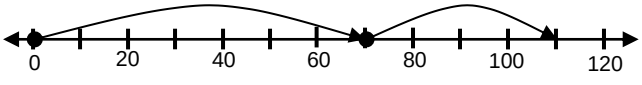
7. **B** – **50 lbs.** (i.e. **?** + 70 = 120); Hence, **?** = **50** **2.1D; 4.4A**

8. **B** – **164 dollars** (i.e. 709 – 545 = **164**) **4.1A; 4.4A**

9. **90 > 65 > 60 > 50** **a.)** 70 - 30 + 50 = **90**; **b.)** 75 + 5 - 20 = **60**; **c.)** 120 - 40 - 30 = **50**; **d.)** 45 + 15 + 5 = **65** **4.2C; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer:



2.1D; 2.4D; 4.4A

Learning Opportunity 10

Part 1 – Numeracy Development **TEKS**

1. **a.)** 12,401 **b.)** 7,905 **4.4A**

2. **a.)** 132 **b.)** 202 **4.4A**

3. **a.)** 200 **b.)** 900 **c.)** 0 **d.)** 1,000 **4.4A**
e.) 100 **f.)** 700 **g.)** 600 **h.)** 800

4. **a.)** 60 **b.)** 80 **c.)** 35 **d.)** 70 **2.3D**

5. **a.)** 200,000 + 90,000 + 60 + 5 **b.)** 800,000 + 0 + 8,000 + 600 + 70 + 0 **c.)** 400,000 + 20,000 + 3,000 + 7 **d.)** 900,000 + 500 **4.2B**

Part 2 – Application Practice

6. **1 hour and 15 minutes** **4.1A; 4.8C**

7. **C** – **60 lbs.** (i.e. **?** + 70 + 30 = 160; **?** + 100 = 160) Hence, **?** = **60 lbs**. **2.1D; 4.4A**

8. **B** – **12** (i.e. Val = 14; Jim = 14 + 10 = 24; Pat is half of 24 which equals **12**) **2.3D; 4.1A; 4.4A**

9. **145 = 145 > 135 > 125** **a.)** 150 - 20 + 15 = **145**; **b.)** 200 - 5 - 60 = **135**; **c.)** 130 - 30 + 25 = **125**; **d.)** 95 + 5 + 45 = **145** **4.1A; 4.2C; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 70 + 30 = 100 **2.1D; 2.4D; 4.4A**

Learning Opportunity 11

Part 1 – Numeracy Development **TEKS**

1. **a.)** 131 **b.)** 372 **4.4A**

2. **a.)** 20 **b.)** 60 **4.4D**

3. **a.)** 150 **b.)** 850 **c.)** 50 **d.)** 550 **4.4A**
e.) 250 **f.)** 350 **g.)** 950 **h.)** 750

4. **a.)** 100 **b.)** 90 **c.)** 45 **d.)** 75 **2.3D**

5. **a.)** 10, 12, 14, 16, 18, 20 **b.)** 80, 100, 120, 140, 160, 180, 200 **3.4I; 3.4E**
c.) 6, 9, 12, 15, 18, 21, 24, 27, 30 **d.)** 0, 30, 60, 90, 120, 150, 180, 210, 240, 270, 300

Part 2 – Application Practice

6. **2 hours 5 minutes** **4.1A; 4.8C**

7. **D** – **30 lbs.** (i.e. **?** + 10 + 30 = 55 + 15); (**?** + 40 = 70) Hence, **?** = **30**; **Note**: Show students 3 + 4 = 7 ⇨ 30 + 40 = 70 **2.1D; 4.4A**

8. **D** – **1 hour** (i.e. half of 120 minutes is **60 minutes** = **1 hour**) **Note**: Show students ¼ hour, ½ hour, ¾ hour in minutes. **4.1A; 4.4A**

9. **145 = 145 < 160 < 175** **a.)** 200 - 50 + 10 = **160**; **b.)** 190 + 5 - 50 = **145**; **c.)** 180 – 30 + 25 = **175**; **d.)** 105 + 35 + 5 = **145** **4.1A; 4.2C; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 110 - 30 = 80 **2.1D; 2.4D; 4.4A**

Learning Opportunity 12

Part 1 – Numeracy Development **TEKS**

1. **a.)** 2,141 **b.)** 2,017 **4.4A**

2. **a.)** 90 **b.)** 80 **4.4D**

3. **a.)** 250 **b.)** 50 **c.)** 350 **d.)** 500 **4.4A**
e.) 450 **f.)** 150 **g.)** 650 **h.)** 950

4. **a.)** 250 **b.)** 150 **c.)** 35 **d.)** 55 **2.3D**

5. **a.)** 2, 4, 6, 8, 10, 12, 14, 16, 18, 20 **b.)** 20, 40, 60, 80, 100, 120, 140, 160, 180, 200 **3.4I; 3.4E**
c.) 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30 **d.)** 0, 30, 60, 90, 120, 150, 180, 210, 240, 270, 300

Part 2 – Application Practice

6. **2 hours 30 minutes** **4.1A; 4.8C**

7. **C** – **15 lbs.** (i.e. 4 x 20 = 50 + **?** + 15); (80 = 65 + **?**) Hence, **?** = **15 lbs.** **2.1D; 4.4A**

8. **A** – **140 dimes** (i.e. half of 60 dimes is 30 dimes – Dao; May = 30 + 20 = 50 dimes) Hence, 60 + 30 + 50 = **140 dimes** **4.1A; 4.4A**

9. **90 < 150 < 315 < 325** **a.)** 300 - 200 - 10 = **90**; **b.)** 500 - 300 - 50 = **150**; **c.)** 400 – 100 + 15 = **315**; **d.)** 200 + 150 - 25 = **325** **4.1A; 4.2C; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 90 - 40 = 50 **2.1D; 2.4D; 4.4A**

Learning Opportunity 13

Part 1 – Numeracy Development **TEKS**

1. **a.)** 3,962 **b.)** 7,815 **4.4A**

2. **a.)** 200 **b.)** 120 **4.4D**

3. **a.)** 850 **b.)** 950 **c.)** 250 **d.)** 50 **4.4A**
e.) 650 **f.)** 150 **g.)** 750 **h.)** 550

4. **a.)** Given **b.)** Given **c.)** 6 **d.)** 60 **1.3D; 4.4B**

5. **a.)** 0, 2, 4, 6, 8 10, 12, 14, 16, 18, 20 **b.)** 0, 20 40, 60. 80, 100, 120, 140, 160, 180, 200 **3.4I; 3.4E**
c.) 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30 **d.)** 0, 30, 90, 120, 150, 180, 210, 240, 270, 300

Part 2 – Application Practice

6. **3 hours; 25 minutes; 3 hours 25 minutes; 3:25** **4.1A; 4.8C**

7. **D** – **25 lbs.** (i.e. 5 x 40 = 150 + 25 + **?**); (200 = 175 + **?**) Hence, **?** = **25 lbs.** **2.1D; 4.4A; 4.4D**

8. **C** – **$ 3.60** (i.e. $ 2.40 + Half of $ 2.40); ($ 2.40 + $ 1.20 = **$ 3.60**) **2.7D; 4.4A**

9. **B** – **120 Bricks** (e.g. 3 x 40 = **120 Bricks**) **4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 120 - 90 = 30 **2.1D; 2.4D; 4.4A**

Learning Opportunity 14

Part 1 – Numeracy Development **TEKS**

1. **a.)** 7,531 **b.)** 2,714 **4.4A**

2. **a.)** 120 **b.)** 120 **4.4D**

3. **a.)** 750 **b.)** 650 **c.)** 50 **d.)** 950 **4.4A**
e.) 550 **f.)** 250 **g.)** 850 **h.)** 450

4. **a.)** 12 **b.)** 120 **c.)** 8 **d.)** 80 **1.3D; 4.4B**

5. **a.)** 0, 4, 8, 12, 16, 20, 24, 28, 32, 36, 40 **b.)** 0, 40, 80, 120, 160, 200, 240, 280, 320, 360, 400 **3.4I; 3.4E**
c.) 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50 **d.)** 0, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500

Part 2 – Application Practice

6. **3 hours; 10 minutes; 3 hours 10 minutes; 3:10** **4.1A; 4.8C**

7. **C** – **40 x 3 = 120** (i.e. 3 equal groups x 40 = 120) **4.4C; 4.4D**

8. **B** – **10 years** (i.e. Sam = 15 x 2 = 30; Hal = 30 – 5 = 25) Difference = 25 – 15 = **10 years** **2.7A; 4.4A; 4.4D**

9. **D** – **80 doves** (i.e. 150 + 55 – 125 = **80 doves**) **4.1A; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 40 x 3 = 3 x 40 = 120; 3 equal groups/equal jumps of 40 each. 40 + 40 + 40 = 120 **4.4A; 4.4D; 4.4C**

Learning Opportunity 15

Part 1 – Numeracy Development **TEKS**

1. **a.)** 1,474 **b.)** 3,109 **4.4A**

2. **a.)** 180 **b.)** 250 **4.4D**

3. **a.)** 5 + 4 = 9; 9 – 4 = 5 **b.)** 90 – 50 = 40 **4.4A**

4. **a.)** 16 **b.)** 160 **c.)** 30 **d.)** 100 **1.3D; 4.4B**

5. **a.)** 0, 4, 8, 12, 16, 20, 24, 28, 32, 36, 40 **b.)** 0, 40 80, 120, 160, 200, 240, 280, 320, 360, 400 **3.4I; 3.4E**
c.) 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50 **d.)** 0, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500

Part 2 – Application Practice

6. **3 hours; 20 minutes; 3 hours 20 minutes; 3:20** **4.1A; 4.8C**

7. **B** – **30 x 4 = 120** (i.e. 4 equal groups x 30 = 120) **4.4C; 4.4D**

8. **D** – **65 marbles** (i.e. George = half of 30 = 15; Tim = double 25 = 50); (15 + 50 = **65 marbles**) **2.7A; 4.4A; 4.4B**

9. **A** – **240 adults** (i.e. 4 groups x 60 adults = **240 adults** – total) **4.1A; 4.4D; 4.4H**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 6 x 20 = 20 x 6 = 120; 6 equal groups/6 equal jumps of 20 each. 20 + 20 + 20 + 20 + 20 + 20 = 120 **4.4A; 4.4D; 4.4C**

Learning Opportunity 16

Part 1 – Numeracy Development **TEKS**

1. **a.)** 3,418 **b.)** 3,509 **4.4A**

2. **a.)** 360 **b.)** 400 **4.4D**

3. **a.)** 2 + 6 = 8; 8 – 6 = 2; **b.)** 10 + 70 = 80; 80 – 10 = 70 **2.4D; 4.4A**

4. **a.)** 100 **b.)** 180 **c.)** 70 **d.)** 90 **1.3D; 4.4B**

5. **a.)** 0, 4, 8, 12, 16, 20, 24, 28, 32, 36, 40 **b.)** 0, 40, 80, 120, 160, 200, 240, 280, 320, 360, 400 **3.4I; 3.4E**

c.) 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50 **d.)** 0, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500

Part 2 – Application Practice

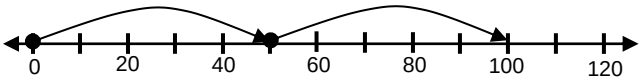
6. **a.)** 87 students **b.)** 53 students **c.)** 19 students **4.1B; 4.4A**

7. **5 x 50 = 250** (i.e. 5 equal groups of 50 each = 250 total) – Equation may be written horizontally or vertically. **4.4C; 4.4D**

8. **D** – **280 sheep** (i.e. 7 x 40 = **280 sheep**) **4.1A; 4.4D; 4.4H**

Part 3 – Reflection and Conceptual Understanding

Student Answer:



4.4A; 4.4D; 4.4C

Learning Opportunity 17

Part 1 – Numeracy Development **TEKS**

1. **a.)** 2,698 **b.)** 3,720 **4.4A**

2. **a.)** 630 **b.)** 540 **4.4D**

3. **a.)** 25 + 10 = 35; 35 – 25 = 10; 35 – 10 = 25 **b.)** 20 + 70 = 90; 90 – 20 = 70; 90 – 70 = 20 **2.4D; 4.4A**

4. **a.)** 140 **b.)** 160 **c.)** 150 **d.)** 200 **1.3D; 4.4B**

5. **a.)** 0, 4, 8, 12, 16, 20, 24, 28, 32, 36, 40 **b.)** 0, 40, 80, 120, 160, 200, 240, 280, 320, 360, 400 **3.4I; 3.4E**

c.) 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50 **d.)** 0, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500

Part 2 – Application Practice

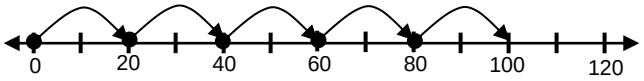
6. **a.)** 322 kg. **b.)** 1,276 kg. **c.)** 645 kg. **4.1B; 4.4A**

7. **7 x 90 = 630** (i.e. 7 equal groups of 90 each = 630 total) **4.1C; 4.4D**

8. **D** – **140 miles** (i.e. 7 x 20 = **140 miles**) **4.1A; 4.4D; 4.4H**

Part 3 – Reflection and Conceptual Understanding

Student Answer:



4.4A; 4.4D; 4.4C

Learning Opportunity 18

Part 1 – Numeracy Development **TEKS**

1. **a.)** 3 **b.)** 2 **4.4B**

2. **a.)** 630 **b.)** 93 **4.4D**

3. **a.)** 25 + 15 = 40; 15 + 25 = 40; 40 – 25 = 15; 40 – 15 = 25 **b.)** 50 + 70 = 120; 70 + 50 = 120; 120 – 50 = 70; 120 – 70 = 50 **2.4D; 4.4A**

4. **a.)** 30 **b.)** 50 **c.)** 150 **d.)** 300 **1.3D; 4.4B**

5. **a.)** 0, 6, 12, 18, 24, 30, 36, 42, 48, 54, 60 **b.)** 0, 60, 120, 180, 240, 300, 360, 420, 480, 540, 600 **3.4I; 3.4E**

c.) 0, 7, 14, 21, 28, 35, 42, 49, 56, 63, 70 **d.)** 0, 70, 140, 210, 280, 350, 420, 490, 560, 630, 700

Part 2 – Application Practice

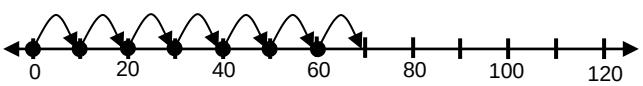
6. **a.)** 4,640 mi^2 **b.)** 1,902 mi^2 **c.)** 1,169 mi^2 < 1,902 mi^2 < 3,471 mi^2 **4.1B; 4.2C; 4.4A**

7. **3 x 31 = 93** (i.e. 3 equal groups of 31 each = 93 total) – Equation may be written horizontally or vertically. **4.4D**

8. **D** – **15 tacks** (i.e. 18 + 12 = 30; Then, half of 30 is **15**) Bucket A = Bucket B = **15 tacks each**. *(average = 15)* **2.7D; 4.4A; 4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer:



4.4A; 4.4D; 4.4C

Learning Opportunity 19

Part 1 – Numeracy Development **TEKS**

1. **a.)** 3 **b.)** 4 **4.4B**

2. **a.)** 48 **b.)** 129 **4.4D**

3. **a.)** 25 + 50 = 75; 50 + 25 = 75; 75 – 25 = 50; 75 – 50 = 25 **b.)** 44 + 40 = 84; 40 + 44 = 84; 84 – 44 = 40; 84 – 40 = 44 **2.4D; 4.4A**

4. **a.)** 500 **b.)** 300 **c.)** 1,000 **d.)** 700 **1.3D; 4.4B**

5. **a.)** 0, 6, 12, 18, 24, 30, 36, 42, 48, 54, 60 **b.)** 0, 60, 120, 180, 240, 300, 360, 420, 480, 540, 600 **3.4I; 3.4E**

c.) 0, 7, 14, 21, 28, 35, 42, 49, 56, 63, 70 **d.)** 0, 70, 140, 210, 280, 350, 420, 490, 560, 630, 700

Part 2 – Application Practice

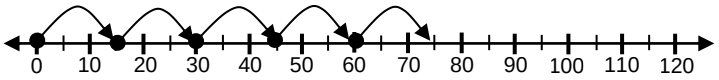
6. **a.)** 23 students **b.)** 11 students **4.9B**

7. **3 x 43 = 129** (i.e. 3 equal groups of 43 each = 129 total) **4.4C; 4.4D**

8. **C** – **20 pins** (i.e. 29 + 11 = 40; Then, half of 40 is **20**) Bucket A = Bucket B = **20 pins each**. *(average = 20)* **2.7D; 4.4A, 4.4B**

Part 3 – Reflection and Conceptual Understanding

Student Answer:



4.4A; 4.4C; 4.4D

Learning Opportunity 20

Part 1 – Numeracy Development **TEKS**

1. **a.)** 3 **b.)** 40 **4.4D**

2. **a.)** 39 **b.)** 306 **4.4D**

3. **a.)** 23 + 16 = 39; 16 + 23 = 39; 39 – 23 = 16; 39 – 16 = 23 **b.)** 35 + 65 = 100; 65 + 35 = 100; 100 – 35 = 65; 100 – 65 = 35 **2.4D; 4.4A**

4. **a.)** 900 **b.)** 600 **c.)** 500 **d.)** 300 **1.3D; 4.4B**

5. **a.)** 0, 6, 12, 18, 24, 30, 36, 42, 48, 54, 60 **b.)** 0, 60, 120, 180, 240, 300, 360, 420, 480, 540, 600 **3.4I; 3.4E**

c.) 0, 7, 14, 21, 28, 35, 42, 49, 56, 63, 70 **d.)** 0, 70, 140, 210, 280, 350, 420, 490, 560, 630, 700

Part 2 – Application Practice

6. **a.)** 6 field trips **b.)** 11 field trips **2.7A; 4.9B**

7. **6 x 51 = 306** (i.e. 6 equal groups of 51 each = 306 total) **4.4C; 4.4D**

8. **B** – **35 B balls** (i.e. 17 + 53 = 70; Then, half of 70 is **35**) Bag A = Bag B = **35 B balls each**. *(average = 35)* **2.7D; 4.4A, 4.4B**

Part 3 – Reflection and Conceptual Understanding

Student Answer: No, it is not correct. The arrows must represent **equal** jumps or **equal** groups. 3 **equal** groups of 25 = 75. **4.1G; 4.4D**

Learning Opportunity 21

Part 1 – Numeracy Development **TEKS**

1. **a.)** 8 **b.)** 4 **4.4D**

2. **a.)** 192 **b.)** 215 **4.4D**

3. **a.)** Given **b.)** Given **c.)** 30 **d.)** 60 **4.2D**

e.) 80 **f.)** 70 **g.)** 20 **h.)** 40

i.) Given **j.)** 500 **k.)** 100 **l.)** 500

4. **a.)** 0, 6, 12, 18, 24, 30, 36, 42, 48, 54, 60 **b.)** 0, 60, 120, 180, 240, 300, 360, 420, 480, 540, 600 **3.4I; 3.4E**

c.) 0, 7, 14, 21, 28, 35, 42, 49, 56, 63, 70 **d.)** 0, 70, 140, 210, 280, 350, 420, 490, 560, 630, 700

Part 2 – Application Practice

5. **a.)** 6 thespians **b.)** 9 thespians **2.7A; 4.9B**

6. **5 x 43 = 215** (i.e. 5 equal groups of 43 each = 215 total) **4.4C; 4.4D**

7. **C** – **195 birds** (i.e. 65 x 3 = **195 birds**) (not an estimation problem – Marco already estimated a number of birds.) **4.4D; 4.4H**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Yes. Chao-lin is correct. Summing any odd number and any even number always yields an odd number. Students should sum an even number and an odd number. Share several student sums to confirm all computed an odd number. **2.7A; 4.1G**

Teacher Proof: n = even number; n + 1 = odd number. Hence, when adding any even number and any odd number: n + (n + 1) = 2n + 1 (**always odd** since 2n is always an even number). Use whole numbers to verify proof: 4 + 5 = 9; Hence, adding any odd number and an even number always yields an odd number.

Learning Opportunity 22

Part 1 – Numeracy Development **TEKS**

1. **a.)** 30 **b.)** 7 **4.4D**

2. **a.)** 304 **b.)** 330 **4.4D**

3. **a.)** 40 **b.)** 60 **c.)** 70 **d.)** 10 **4.2D**
e.) 90 **f.)** 100 **g.)** 0 (closer to zero than ten) **h.)** 20
i.) 100 **j.)** 600 **k.)** 700 **l.)** 100

4. **a.)** 0, 8, 16, 24, 32, 40, 48, 56, 64, 72, 80 **b.)** 0, 80, 160, 240, 320, 400, 480, 560, 640, 720, 800 **3.4I; 3.4E**
c.) 0, 9, 18, 27, 36, 45, 54, 63, 72, 81, 90 **d.)** 0, 90, 180, 270, 360, 450, 540, 630, 720, 810, 900

Part 2 – Application Practice

5. **a.)** Label Bars **b.)** **L:** 3rd; **M:** 5th **c.)** 2nd and 3rd **d.)** 3rd and 5th **e.)** 140 pizzas **4.1D; 4.1F; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Adding any two (2) odd numbers always yields an even number. **2.7A; 4.1G**
Teacher Proof: n = even number; n + 1 = odd number. Hence, (n + 1) + (n + 1) = 2n + 2 or always an even number since 2n is always an even number. Use numbers to verify proof: 5 + 7 = 12; Hence, any two odd numbers always sum to an even number.

Learning Opportunity 23

Part 1 – Numeracy Development **TEKS**

1. **a.)** 70 **b.)** 4 **4.4D**

2. **a.)** 595 **b.)** 736 **4.4D**

3. **a.)** 90 **b.)** 50 **c.)** 40 **d.)** 0 **4.2D**
e.) 20 **f.)** 30 **g.)** 10 **h.)** 60
i.) 200 **j.)** 0 (closer to zero than 100) **k.)** 800 **l.)** 1,000

4. **a.)** 0, 8, 16, 24, 32, 40, 48, 56, 64, 72, 80 **b.)** 0, 80, 160, 240, 320, 400, 480, 560, 640, 720, 800 **3.4I; 3.4E**
c.) 0, 9, 18, 27, 36, 45, 54, 63, 72, 81, 90 **d.)** 0, 90, 180, 270, 360, 450, 540, 630, 720, 810, 900

Part 2 – Application Practice

5. **a.)** Label Bars **b.)** **L:** Ron; **H:** Van **c.)** Dean **d.)** 100 yards; Yes **e.)** Jesus; 150 yards **4.1D; 4.1F; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 48 = 40 + 8; Half of 40 is 20; Half of 8 is 4. Hence, 40 can be divided into two equal groups (20 each) and 8 can be divided into two equal groups (4 each). 20 + 4 = 24. 48 is divided into two equal groups of 24. Therefore, 48 is an even number. Note: The easiest **visual** means to show to students: **48 = 40 + 8** (20 20 4 4) **2.7A; 4.2B; 4.1G**

Note: A **Whole Number** is defined as 'Even' if it is divisible by 2.

Learning Opportunity 24

Part 1 – Numeracy Development **TEKS**

1. **a.)** 90 **b.)** 6 **4.4D**

2. **a.)** 744 **b.)** 497 **4.4D**

3. **a.)** 90 **b.)** 80 **c.)** 10 **d.)** 0 **4.2D**
e.) 10 **f.)** 60 **g.)** 100 **h.)** 90
i.) 1,000 **j.)** 100 **k.)** 100 **l.)** 500

4. **a.)** 0, 8, 16, 24, 32, 40, 48, 56, 64, 72, 80 **b.)** 0, 80, 160, 240, 320, 400, 480, 560, 640, 720, 800 **3.4I; 3.4E**
c.) 0, 9, 18, 27, 36, 45, 54, 63, 72, 81, 90 **d.)** 0, 90, 180, 270, 360, 450, 540, 630, 720, 810, 900

Part 2 – Application Practice

5. **a.)** Label Bars **b.)** **F:** Girls; **M:** Women **c.)** Boys & Men **d.)** Girls **e.)** 225 tickets **4.1D; 4.1F; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Adding any two (2) even numbers always yields an **even number**. **2.7A; 4.2B; 4.1G**
Teacher Proof: n = even number; n + 1 = odd number. Hence, (n) + (n) = 2n or always an even number since 2n is always an even number. Use numbers to verify proof: 6 + 4 = 10; Hence, adding any two even numbers always yields an even number.

Learning Opportunity 25

Part 1 – Numeracy Development **TEKS**

1. **a.)** 240 **b.)** 40 **c.)** 6 **d.)** 270 **4.4D; 4.4F**
e.) 7 **f.)** 9 **g.)** 5 **h.)** 6

2. **a.)** 100 **b.)** 90 **c.)** 50 **d.)** 40 **4.2D**
e.) 500 **f.)** 700 **g.)** 300 **h.)** 100

3. **a.)** 0, 8, 16, 24, 32, 40, 48, 56, 64, 72, 80 **b.)** 0, 80, 160, 240, 320, 400, 480, 560, 640, 720, 800 **3.4I; 3.4E**
c.) 0, 9, 18, 27, 36, 45, 54, 63, 72, 81, 90 **d.)** 0, 90, 180, 270, 360, 450, 540, 630, 720, 810, 900

Part 2 – Application Practice

4. **a.)** Hockey: 8; Basketball: 21; Football: 19; Soccer: 16; Baseball: 17; Gymnastics: 3 **4.1D; 4.1F; 4.4A**
b.) **Least:** Gymnastics; **Most :** Basketball **c.)** Soccer **d.)** Hockey **e.)** 84 ~ 4th graders

Part 3 – Reflection and Conceptual Understanding

Student Answer: All digits in a number can always be broken into equal groups of 2, EXCEPT **possibly** the one's digit. Hence, the one's **4.1D; 4.1F**
digit determines if a number is an even number or an odd number. Expand any number, and the student can prove this as **4.2B**
a fact. For example: **43 = 40 + 3 - odd number.** ***or*** **18 = 10 + 8 - even number**
20 20 '**3** can't be separate into equal groups with whole numbers.' 5 5 4 4

Learning Opportunity 26

Part 1 – Numeracy Development **TEKS**

1. **a.)** 400 **b.)** 20 **c.)** 3 **d.)** 128 **4.4D; 4.4F**
e.) 3 **f.)** 5 **g.)** 9 **h.)** 6

2. **a.)** 1,000 **b.)** 200 **c.)** 0 **d.)** 100 **4.2D**
e.) Given **f.)** 6,000 **g.)** 3,000 **h.)** 6,000

3. **a.)** 0, 11, 22, 33, 44, 55, 66, 77, 88, 99, 110 **b.)** 0, 12, 24, 36, 48, 60, 72, 84, 96, 108, 120 **3.4I; 3.4E**

4. ½; 2 ½; 3 ½ **3.3A; 4.1F; 4.3G**

Part 2 – Application Practice

5. **a.)** Exercise: 9; Sleep/Rest: 5; Watch TV: 21; Video Games: 11; Text Friends: 18; Call Friends: 22 **4.1D; 4.1F; 4.4A**
b.) **Least:** Sleep/Rest; **Most:** Call Friends **c.)** Call Friends/Video Games **d.)** Text Friends **e.)** 51 votes

Part 3 – Reflection and Conceptual Understanding

Student Answer: All digits in a number can always be broken into equal groups of 2, EXCEPT **possibly** the one's digit. Hence, the one's **4.1D; 4.1F**
digit determines if a number is an even number or an odd number. Expand any number, and the student can prove this as **4.2B**
a fact. For example: **65 = 60 + 5 - odd number.** ***Or*** **34 = 30 + 4 - even number**
30 30 '**5** can't be separate into equal groups with whole numbers.' 15 15 2 2

Learning Opportunity 27

Part 1 – Numeracy Development **TEKS**

2. **a.)** 630 **b.)** 10 **c.)** 4 **d.)** 135 **4.4D; 4.4F**
e.) 8 **f.)** 10 **g.)** 4 **h.)** 9

2. **a.)** 600 **b.)** 200 **c.)** 900 **d.)** 200 **4.2D**
e.) 5,000 **f.)** 8,000 **g.)** 4,000 **h.)** 3,000

3. **a.)** 0, 11, 22, 33, 44, 55, 66, 77, 88, 99, 110 **b.)** 0, 12, 24, 36, 48, 60, 72, 84, 96, 108, 120 **3.4I; 3.4E**

4. ½; 1 ½; 2 ½; 3 ½ **3.3A; 4.1F; 4.3G**

Part 2 – Application Practice

5. **a.)** **Least:** AB Type, **Most:** O Type **b.)** 40 + 45 = **85** **c.)** 11 + 4 = **15** **d.)** Not enough available blood – rare **4.1D; 4.1F; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Two ***equal*** groups between *any two* whole numbers. **Fourths – 4ths** (4 Equal Spaces between any two whole numbers) **4.3B**
NOTE TO TEACHER: It is imperative that students are adept at determining the **denominator** of a fractional number line. It is highly recommended that the teacher practice with blank fractional number lines so students can readily determine the correct division of a fractional number line. Students often count the lines between two whole numbers and *INCORRECTLY* arrive at the *INCORRECT* denominator. It is frequently helpful for the teacher to instruct their students that *between any two whole numbers* on a fractional number line to do the following: ***"Count the equal spaces and Label (i.e. write the fractions) the lines."***

Learning Opportunity 28

Part 1 – Numeracy Development **TEKS**

1. **a.)** 0 **b.)** 40 **c.)** 4 **d.)** 370 **4.4D; 4.4F**
e.) 7 **f.)** 8 **g.)** 6 **h.)** 7

2. **a.)** 3,000 **b.)** 1,000 **c.)** 8,000 **d.)** 1,000 **4.2D**
e.) Given **f.)** 20,000 **g.)** 50,000 **h.)** 30,000

3. **a.)** 0, 12, 24, 36, 48, 60, 72, 84, 96, 108, 120 **b.)** 0, 25, 50, 75, 100, 125, 150, 175, 200, 225, 250 **3.4I; 3.4E**

4. 4 ½; 5 ½; 6 ½; 7 ½ **3.3A; 4.1F; 4.3G**

Part 2 – Application Practice

5. **a.)** 21 People **b.)** 33 People **c.)** 14 People **d.)** 68 People **4.1D; 4.1F; 4.4A**

6. **21 ÷ 3 = 7** **Note:** Highly recommended to practice division model so more involved division problems and remainders are easier. **4.4E; 4.4F**

7. **340** cupcakes **4.4D; 4.4H**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **165 = 100 + 60 + 5** - *odd number* – one's digit (**5**) **cannot** be divided by 2 - in two (2) equal groups **4.1D; 4.1F; 4.2B**
50 50 30 30 '**5** ***can't*** be separated into two equal groups with whole numbers.'

Learning Opportunity 29

Part 1 – Numeracy Development **TEKS**

1. **a.)** 99 **b.)** 50 **c.)** 8 **d.)** 516 **4.4D; 4.4F**
e.) 8 **f.)** 7 **g.)** 9 **h.)** 9

2. **a.)** 9,000 **b.)** 0 (closer to 0) **c.)** 10,000 **d.)** 1,000 **4.2D**
e.) 50,000 **f.)** 20,000 **g.)** 40,000 **h.)** 100,000

3. **a.)** 0, 12, 24, 36, 48, 60, 72, 84, 96, 108, 120 **b.)** 0, 25, 50, 75, 100, 125, 150, 175, 200, 225, 250 **3.4I; 3.4E**

4. $^{2}/_{4}$; $^{3}/_{4}$; $1\ ^{1}/_{4}$; $1\ ^{2}/_{4}$; $1\ ^{3}/_{4}$ **3.3A; 4.1F; 4.3G**

Part 2 – Application Practice

5. **a.)** 47 People **b.)** **19**; (e.g. 66 – 47 = **19**) **c.)** **51** People **d.)** **164**; (e.g. 47 + 51 + 66 = **164**) **4.1D; 4.1F; 4.4A**

6. **32 ÷ 4 = 8** . **4.4E; 4.4F**

7. **C - $ 3.20** (e.g. (2 x 55) + (3 x 70) = 110 + 210 = **320 cents = $ 3.20**) **4.4A; 4.4D; 4.4H**

Part 3 – Reflection and Conceptual Understanding

Student Answer: ***"Count the equal spaces"*** between any two whole numbers on a fractional number line. **4.3B**

a.) fourths – 4 **b.)** halves – 2 **c.)** eighths - 8

Learning Opportunity 30

Part 1 – Numeracy Development **TEKS**

1. **a.)** 5 **b.)** 9 **c.)** 8 **d.)** 7 **4.4D; 4.4F**
e.) 9 **f.)** 6 **g.)** 9 **h.)** 9

2. **a.)** 3,000 **b.)** 1,000 **c.)** 10,000 **d.)** 2,000 **4.2D**
e.) 10,000 **f.)** 50,000 **g.)** 0 (closer to 0 than 10,000) **h.)** 80,000

3. **a.)** 0, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150 **b.)** 0, 25, 50, 75, 100, 125, 150, 175, 200, 225, 250 **3.4I; 3.4E**

4. $^{1}/_{4}$; $^{2}/_{4}$; $^{3}/_{4}$; $1\ ^{1}/_{4}$; $1\ ^{2}/_{4}$; $1\ ^{3}/_{4}$ **3.3A; 4.1F; 4.3G**

Part 2 – Application Practice

5. **a.)** 74 Kids **b.)** **39**; (e.g. 74 – 35 = **39**) **c.)** **19** Kids **d.)** 128; (e.g. 74 + 19 + 35 = **128**) **4.1D; 4.1F; 4.4A**

6. **18 ÷ 2 = 9** **4.4E; 4.4F**

7. **A - 9** (e.g. 18 ÷ 2 = **9 pennies**) Note: Matches the model shown in number 6. Above) **4.4F**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **264 = 200 + 60 + 4** - *even number* – all digits can be separated by 2 equal groups, **including the one's digit**!!! **4.1D; 4.1F**
100 100 30 30 2 2 **NOTE**: an even number is defined as a number that is divisible by 2 **4.2B**

Learning Opportunity 31

Part 1 – Numeracy Development **TEKS**

1. **a.)** 6 **b.)** 7 **c.)** 9 **d.)** 7 **4.4D; 4.4F**
e.) 6 **f.)** 4 **g.)** 2 **h.)** 6

2. **a.)** 4 x 2 = 8; 8 ÷ 2 = 4 **b.)** 2 x 6 = 12; 12 ÷ 6 = 2 **4.4D; 4.4F**

3. **a.)** 0, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150 **b.)** 0, 25, 50, 75, 100, 125, 150, 175, 200, 225, 250 **3.4I; 3.4E**

4. $\frac{1}{4}$; $\frac{2}{4}$; $\frac{3}{4}$; $1\frac{1}{4}$; $1\frac{2}{4}$; $1\frac{3}{4}$ **3.3A; 4.1F; 4.3G**

Part 2 – Application Practice

5. **A – $5** (e.g. $15 + (2 x $15) = $ 45 Hence, $50 - $45 = **$5**) **4.1A; 4.4A**

6. **12 ÷ 2 = 6** **Important Note:** 12 ÷ 6 = 2 DOES NOT work. There are **not** 6 groups. There are 2 groups. **4.4E; 4.4F**

7. **C – $140** (i.e. $20 x 7 = **$140**) **4.1A; 4.4D; 4.4H**

8. **A – 6** (i.e. 12 ÷ 2 = **6** or half of 12 is **6**) **Note:** Division model for this problem is shown in problem 6 and the Part 3 number line. **4.4F**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **12 ÷ 2 = 6**; Boxes: **12** is the dividend; **6** is the quotient; 12 is separated into 2 EQUAL groups of 6 each. **4.4E; 4.4F**
Note: Teacher can make-up a word problem that fits this scenario. For example, there were 12 birds sitting on a telephone wire in TWO equal groups. How many birds were in each group?

Learning Opportunity 32

Part 1 – Numeracy Development **TEKS**

1. **a.)** 9 **b.)** 7 **c.)** 8 **d.)** 4 **4.4F**
e.) 4 **f.)** 3 **g.)** 5 **h.)** 9

2. **a.)** 4 x 6 = 24; 24 ÷ 4 = 6; 24 ÷ 6 = 4 **b.)** 4 x 8 = 32; 8 x 4 = 32; 32 ÷ 4 = 8 **4.4D; 4.4F**

3. **a.)** 0, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150 **b.)** 0, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500 **3.4I; 3.4E**

4. $5\frac{1}{4}$; $5\frac{2}{4}$; $5\frac{3}{4}$; $6\frac{1}{4}$; $6\frac{2}{4}$; $6\frac{3}{4}$ **3.3A; 4.1F**

Part 2 – Application Practice

5. **C – 589 miles** (e.g. 1,638 – 1,039 = **589 miles**) **4.1A; 4.4A**

6. **54 ÷ 9 = 6** Note: 54 ÷ 6 = 9 does NOT work. There are NOT 6 groups! There are 9 groups. **3.3A; 4.1F; 4.3G**

7. **D – $ 5** (e.g. $30 ÷ 6 = **$ 5**) **4.1A; 4.4D; 4.4H**

8. **B – 12, 24** (e.g. Bill: 0, 4, 8, **12**, 16, 20, **24**, 28, 32, 36, 40; Julio: 0, 3, 6, 9, **12**, 15, 18, 21, **24**, 27, 30) **3.4I; 3.4E; 4.4A; 4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **12 ÷ 3 = 4**; Box: **12** is the dividend; 4 is the quotient; 12 is separated into 3 EQUAL groups of 4 each. **4.4E; 4.4F**
Note: Teacher can make-up a word problem that fits this scenario. For example, John had 12 pennies. He separated the pennies into 3 equal groups. How many coins are in each group?

Learning Opportunity 33

Part 1 – Numeracy Development **TEKS**

1. **a.)** 2 **b.)** 9 **c.)** 3 **d.)** 4 **4.4F**
e.) 4 **f.)** 8 **g.)** 3 **h.)** 5

2. **a.)** 4 x 7 = 28; 7 x 4 = 28; 28 ÷ 4 = 7; 28 ÷ 7 = 4 **b.)** 6 x 8 = 48; 8 x 6 = 48; 48 ÷ 6 = 8; 48 ÷ 8 = 6 **4.4D; 4.4F**

3. **a.)** 0, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150 **b.)** 0, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500 **3.4I; 3.4E**

4. $7\frac{1}{4}$; $7\frac{2}{4}$; $7\frac{3}{4}$; $8\frac{1}{4}$; $8\frac{2}{4}$; $8\frac{3}{4}$ **3.3A; 4.1F; 4.3G**

Part 2 – Application Practice

5. **D – 46 miles** (e.g. 4 x 6 = 24 miles; 7 x 10 = 70 miles; Hence, 70 miles – 24 miles = **46 miles**) **4.1A; 4.4A; 4.4D**

6. Dividend = **72**; Quotient = **8**; **72 ÷ 9 = 8** Note: 72 ÷ 8 = 9 does NOT work. There are not 8 groups! **4.4E; 4.4F**

7. **B – $ 180** (e.g. $30 x 6 = **$ 180**) **4.1A; 4.4D; 4.4H**

8. **A – 10, 20** (e.g. Luz: 0, 2, 4, 6; 8, **10**, 12, 14, 16, 18, **20**; Jasmine: 0, 5, **10**, 15, **20**, 25, 30, 35, 40, 45, 50) **3.4I; 3.4E; 4.4A; 4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: ***"Count the equal spaces"*** between *any two whole numbers* on a fractional number line. **4.3B**

a.) thirds – 3 **b.)** fifths – 5 **c.)** tenths - 10

Learning Opportunity 34

Part 1 – Numeracy Development **TEKS**

1. **a.)** 4 **b.)** 7 **c.)** 5 **d.)** 3 **4.4F**
e.) 10 **f.)** 6

2. **a.)** 9 x 7 = 63; 7 x 9 = 63; 63 ÷ 9 = 7; 63 ÷ 7 = 9 **b.)** 5 x 6 = 30; 6 x 5 = 30; 30 ÷ 5 = 6; 30 ÷ 6 = 5 **4.4D; 4.4F**

3. **a.)** $3\ ^2/_4$; $3\ ¾$; $4\ ¼$; $4\ ¾$ **b.)** $5\ ^1/_2$; $6\ ^1/_2$; $8\ ^1/_2$ **c.)** $^1/_8$; $^2/_8$; $^3/_8$; $^4/_8$; $^5/_8$; $^7/_8$ **Note:** Count the 'equal spaces' between any two whole numbers. **3.3A; 4.1F; 4.3G**
With students and fractional number lines, "*Count the equal spaces, label the lines."*

Part 2 – Application Practice

4. **a.)** 5 people (15 – (4 + 6) = **5**) **b.)** 6 people – Venn Diagram **c.)** 6 + 5 = 11 people **d.)** 4 people **e.)** 4 + 5 = 9 **4.4A; 4.9A**
Note: The number of people that **like cats** is the 4 people that **only** like **cats** and the 5 people that like **both cats** and dogs (9 total)

5. Dividend = **120**; Divisor = **6**; Quotient = **20**; **120 ÷ 6 = 20** **Note:** 120 ÷ 20 = 6 DOES **NOT** work. There are **not** 20 equal groups. **4.4E; 4.4F**

6. **C – $ 2.70** (e.g. 86 cents rounds to 90 cents. Hence, 90 cents x 3 = **270 cents = $ 2.70**) **4.4D; 4.4H; 4.4G**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 10 x 5 groups = 50 and 50 ÷ 5 groups = 10 **4.4C; 4.4D; 4.4E; 4.4F**

Learning Opportunity 35

Part 1 – Numeracy Development **TEKS**

1. **a.)** 3 **b.)** 30 **c.)** 2 **d.)** 2 **4.4F**
e.) 20 **f.)** 5

2. **a.)** 3 x 20 = 60; 20 x 3 = 60; 60 ÷ 3 = 20; 60 ÷ 20 = 3 **b.)** 5 x 30 = 150; 30 x 5 = 150; 150 ÷ 5 = 30; 150 ÷ 30 = 5 **4.4D; 4.4F**

3. **a.)** ¼; $^2/_4$; ¾; $1\ ¼$; $1\ ^2/_4$; $1\ ¾$ **b.)** $^1/_3$; $^2/_3$; $1\ ^1/_3$; $2\ ^1/_3$; $2\ ^2/_3$ **c.)** $^1/_8$; $^2/_8$; $^3/_8$; $^4/_8$; $^5/_8$; $^6/_8$ **3.3A; 4.1F; 4.3G**
With students and fractional number lines, "*Count the equal spaces, label the lines."* – Count the spaces between *any two whole numbers*.

Part 2 – Application Practice

4. **a.)** 3 people (20 – (8 + 9) = **3**) **b.)** 8 people – Venn Diagram **c.)** 8 + 3 = 11 people **d.)** 9 people **e** **4.4A; 4.9A**
Note: The number of people that **like pants** is the 8 people that **only** like **pants** and the 3 people that like **both pants** and shorts (11 total)

5. Dividend = **140**; Divisor = **7**; Quotient = **20**; **140 ÷ 7 = 20** **Note:** 140 ÷ 20 = 7 does **NOT** work. There are **only** 7 equal groups.**4.4E; 4.4F**

6. **B – $ 3.60** (e.g. (2 x 80 = 160 and 4 x 50 = 200; Hence, 160 + 200 = **360 cents = $ 3.60**) **4.1A**; **4.4D; 4.4H**

Part 3 – Reflection and Conceptual Understanding

Student Answer: ***"Count the equal spaces"*** between any two whole numbers on a fractional number line. **4.3B**
a.) thirds – 3 **b.)** tenths - 10 **c.)** fifths – 5

Learning Opportunity 36

Part 1 – Numeracy Development **TEKS**

1. **a.)** 3 **b.)** 30 **c.)** 3 **d.)** 3 **4.4F**
e.) 30 **f.)** 5

2. **a.)** Given **b.)** 40 **c.)** 0 **d.)** 30 **4.4A**
e.) 20 **f.)** 50

3. **a.)** $^1/_5$; $^2/_5$; $^3/_5$; $1\ ^1/_5$; $1\ ^2/_5$; $1\ ^3/_5$; **b.)** $^1/_3$; $^2/_3$; $1\ ^1/_3$; $1\ ^2/_3$; $2\ ^1/_3$; $2\ ^2/_3$ **c.)** $^1/_8$; $^2/_8$; $^3/_8$; $^4/_8$; $^5/_8$; $^6/_8$; $^7/_8$**3.3A; 4.1F; 4.3G**
With students and fractional number lines, "*Count the equal spaces, label the lines."* – Count the spaces between *any two whole numbers*.

Part 2 – Application Practice

4. **a.)** 3 people (15 – (8 + 4) = **3**) **b.)** 8 people – Venn Diagram **c.)** 8 + 4 = 12 people **d.)** 4 people **e.)** 4 + 3 = 7 **4.4A; 4.9A**
Note: The number of people that **like soup** is the 8 people that **only** like **soup** and the 4 people that like **both soup** and beans (12 total)

5. Dividend = **300**; Divisor = **6**; Quotient = **50**; **300 ÷ 6 = 50** **Note:** 300 ÷ 50 = 6 does **NOT** work. There are **only** 6 equal groups.**4.4E; 4.4F**

6. **Sum = 3,351; Difference = 2,255**; (i.e. 548 + 2,803 = **3,351**; 2,803 – 548 = **2,255**) **4.1A; 4.4A; 4.4H**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 6 groups x 50 = 300; 300 ÷ 6 groups = 50; **NOTE**: Same division model as problem 5 above. **4.4C; 4.4D; 4.4E; 4.4F**

Learning Opportunity 37

Part 1 – Numeracy Development **TEKS**

1. **a.)** 7 **b.)** 70 **c.)** 3 **d.)** 8 **4.4F**
e.) 80 **f.)** 9

2. **a.)** 20 **b.)** 10 **c.)** 50 **d.)** 40 **4.4A**
e.) 30 **f.)** 0

3. **a.)** $1\ ^{1}/_{5};\ 1\ ^{2}/_{5};\ 1\ ^{3}/_{5};\ 1\ ^{4}/_{5};\ 2\ ^{1}/_{5};\ 2\ ^{2}/_{5};\ 2\ ^{3}/_{5};$ **b.)** $2\ ^{1}/_{8};\ 2\ ^{2}/_{8};\ 2\ ^{3}/_{8};\ 2\ ^{4}/_{8};\ 2\ ^{5}/_{8};\ 2\ ^{6}/_{8};\ 2\ ^{7}/_{8}$ **3.3A; 4.1F**
c.) $^{1}/_{10};\ ^{2}/_{10};\ ^{3}/_{10};\ ^{4}/_{10};\ ^{5}/_{10};\ ^{6}/_{10};\ ^{7}/_{10};\ ^{8}/_{10};\ ^{9}/_{10};\ 1\ ^{1}/_{10};\ 1\ ^{2}/_{10};\ 1\ ^{3}/_{10};\ 1\ ^{4}/_{10};\ 1\ ^{5}/_{10};\ 1\ ^{6}/_{10};$

With students and fractional number lines, "*Count the equal spaces, label the lines."* – Count the spaces between *any two whole numbers*.

Part 2 – Application Practice

4. **D – 40;** (e.g. Fourth Graders: 20 x 3 = 60; Fifth Graders: 25 x 4 = 100; Hence, 100 – 60 = **40)** **4.4A; 4.4D; 4.4H**

5. **320** is the dividend; **40** is the quotient; **8** is the **divisor**; **NOTE:** Understanding these models affords students to reduce complicated word problems into a manageable physical representation as well as understand the components of the problem. **4.4E; 4.4F**

6. **C – 6 Kg.** (e.g. 4 x ___ = 24; Hence, 4 groups of **6 kg** must equal 24 kg) **4.4F; 4.4H**

7. **27** (e.g. 27 is the product of 3 x 9; 27 is an odd number and a multiple of 3; 27 is between 24 and 32) **2.7A; 4.4D; 4.4H**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** sixths – 6 **b.)** eighths – 8 **c.)** fourths – 4 **4.3B**

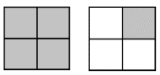
Learning Opportunity 38

Part 1 – Numeracy Development **TEKS**

1. **a.)** Given **b.)** R 1 **c.)** R 1 **d.)** R 2 **4.4F**

2. **a.)** 30 **b.)** 40 **c.)** 50 **d.)** 20 **4.4A**

3. **a.)** $^{1}/_{4};\ ^{2}/_{4};\ ^{3}/_{4};\ 1\ ^{1}/_{4};\ 1\ ^{2}/_{4};\ 1\ ^{3}/_{4};$ **b.)** $^{1}/_{8};\ ^{2}/_{8};\ ^{3}/_{8};\ ^{4}/_{8};\ ^{5}/_{8};\ ^{6}/_{8};\ ^{7}/_{8}$ **3.3A; 4.1F**

4. **a.)**  **b.)**  **c.)**  **d.)**  **3.3A**

Part 2 – Application Practice

5. **A – 1,100 km.** (e.g. 195 rounds to 200; 511 rounds to 500; 362 rounds to 400; Hence, 200 + 500 + 400 = **1,100 km**) **4.4A; 4.4G**

6. **17** is the dividend in the rectangle; **2** is the quotient in the circles; **NOTE:** Understanding these models affords students to reduce complicated word problems into a manageable physical representation as well as understand the components of the problem. **4.4E; 4.4F**

7. **B – 20 lbs.** (e.g. 60 ÷ 3 = **20**) **4.4F; 4.4H**

8. Lewis' age = **8 years old**; Frank's age = **64 years old**; (e.g. Lewis: 32 ÷ 4 = **8**; 32 x 2 = **64** – Dan is $^{1}/_{2}$ of Frank or 32.) **4.4D; 4.4F; 4.4H**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Jennifer has 90 ~ 1-dollar bills. She decides to place the money into 9 equal stacks. How much money is in each stack? **4.4F**

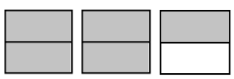
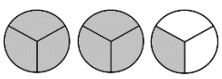
Learning Opportunity 39

Part 1 – Numeracy Development **TEKS**

1. **a.)** R 1 **b.)** R 4 **c.)** R 4 **d.)** R 3 **4.4F**

2. **a.)** 20 **b.)** 15 **c.)** 10 **d.)** 5 **4.4A**

3. **a.)** $^{1}/_{2};\ 1\ ^{1}/_{2};\ 2\ ^{1}/_{2};\ 3\ ^{1}/_{2};$ **b.)** $^{1}/_{3};\ ^{2}/_{3};\ 1\ ^{1}/_{3};\ 1\ ^{2}/_{3};\ 2\ ^{1}/_{3};\ 2\ ^{2}/_{3};$ **3.3A; 4.1F**

4. **a.)**  **b.)**  **c.)**  **d.)**  **3.3A**

Part 2 – Application Practice

5. **B – 250 minutes.** (e.g. 45 rounds to 50; Hence, 50 x 5 = **250 minutes**) **4.4D; 4.4G; 4.4H**

6. **26** is the dividend; **3** is the quotient in the circles; Remainder = **2** **NOTE:** Understanding these models affords students to reduce complicated word problems into a manageable physical representation and understand the components of the problem. **4.4E; 4.4F**

7. **C – 90 shells** (e.g. 270 ÷ 3 = **90**) **4.4F; 4.4H**

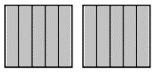
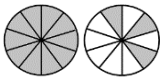
8. **270** is the dividend; **90** is the quotient; divisor is **3**. **NOTE:** Students can understand the problem using a simple diagram. **4.4E; 4.4F**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Given **b.)** 17.0 **c.)** 436.0 **d.)** 2,836.0 **4.2E**
NOTE: Students do not readily understand that the decimal is ALWAYS behind a whole number. Practice - as needed.

Learning Opportunity 40

Part 1 – Numeracy Development **TEKS**

1. **a.)** R 3 **b.)** R 0 **c.)** R 1 **d.)** R 5 **4.4F**
2. **a.)** 35 **b.)** 45 **c.)** 25 **d.)** 55 **4.4A**
3. **a.)** $1\frac{1}{5}$; $1\frac{2}{5}$; $1\frac{3}{5}$; $1\frac{4}{5}$; $2\frac{1}{5}$; $2\frac{2}{5}$; $2\frac{3}{5}$; **3.3A; 4.1F; 4.3G**
   b.) $\frac{1}{10}$; $\frac{2}{10}$; $\frac{3}{10}$; $\frac{4}{10}$; $\frac{5}{10}$; $\frac{6}{10}$; $\frac{7}{10}$; $\frac{8}{10}$; $\frac{9}{10}$; $1\frac{1}{10}$; $1\frac{2}{10}$; $1\frac{3}{10}$; $1\frac{4}{10}$; $1\frac{5}{10}$; $1\frac{6}{10}$;
   With students and fractional number lines, "*Count the equal spaces* (between any two whole numbers), *label the lines.*"
4. **a.)**  **b.)**  **c.)**  **d.)**  **3.3A**

Part 2 – Application Practice

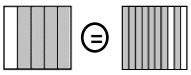
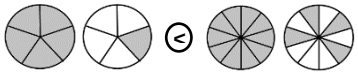
5. **C – 260;** (e.g. Round: 57 to 60; 83 to 80; 45 to 50; 74 to 70; Hence, 60 + 80 + 50 + 70 = **260**) **4.4A; 4.4G; 4.4H**
6. **5 R 2** is the **quotient**; **8** is the **divisor**; **42** is the **dividend.** **4.4E; 4.4F**
7. **A – $ 504** (e.g. $72 x 7 = **$ 504**) **4.4D; 4.4H**
8. **Product = 504**: **Factors = 7** groups and **72** in each group. **NOTE:** Factors could be interchanged – commutative property **4.4C; 4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Jack had 13 plants. He placed them in two equal groups. How many plants could not be placed in two equal groups. Jill has 13 dollars. She gives her two friends and equal amount. How much money did each friend receive and how much money did Jill keep? **Note:** Students need easy examples with small numbers to understand the remainder's physical meaning. **4.4E; 4.4F**

Learning Opportunity 41

Part 1 – Numeracy Development **TEKS**

1. **a.)** R 7 **b.)** R 4 **c.)** R 2 **d.)** R 2 **4.4F**
2. **a.)** 45 **b.)** 35 **c.)** 5 **d.)** 25 **4.4A**
3. **a.)** $\frac{1}{5}$; $\frac{2}{5}$; $\frac{3}{5}$; $\frac{4}{5}$; $1\frac{1}{5}$; $1\frac{2}{5}$; $1\frac{3}{5}$ **b.)** $\frac{1}{10}$; $\frac{2}{10}$; $\frac{3}{10}$; $\frac{4}{10}$; $\frac{5}{10}$; $\frac{6}{10}$; $\frac{7}{10}$; $\frac{8}{10}$; $\frac{9}{10}$; $1\frac{1}{10}$; $1\frac{2}{10}$; $1\frac{3}{10}$; $1\frac{4}{10}$; $1\frac{5}{10}$; $1\frac{6}{10}$; **3.3A; 4.3G**
4. **a.)** Given **b.)**  **c.)**  **3.3A; 4.3D**

Part 2 – Application Practice

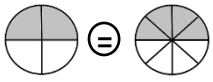
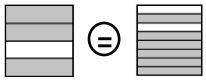
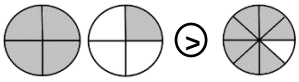
5. **C – 30 feet** (e.g. 10 + 5 + 10 + 5 = **30 feet**) or [2 x (10 + 5) = **30 feet**] **4.4A; 4.4D; 4.4H; 4.5D**
6. **4 R 2** is the quotient; **38** is the dividend; **9** is the divisor; **2** is the remainder **4.4E; 4.4F**
7. **C – 204.** (e.g. 34 x 6 = **204**) **4.4D**
8. **Product = 204**: **Factors = 6** groups and **34** in each group. **NOTE:** Factors could be interchanged – commutative property. **4.4C; 4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: John has 23 marbles. He gives the marbles equally to 5 friends. How many marbles were left over? **4.4E; 4.4F**

Learning Opportunity 42

Part 1 – Numeracy Development **TEKS**

1. **a.)** R 3 **b.)** R 3 **c.)** R 5 **d.)** R 5 **4.4F**
2. **a.)** 15 **b.)** 55 **c.)** 25 **d.)** 35 **4.4A**
3. **a.)** $\frac{1}{4}$; $\frac{2}{4}$; $\frac{3}{4}$; $1\frac{1}{4}$; $1\frac{2}{4}$; $1\frac{3}{4}$; **b.)** $\frac{1}{8}$; $\frac{2}{8}$; $\frac{3}{8}$; $\frac{4}{8}$; $\frac{5}{8}$; $\frac{6}{8}$; $\frac{7}{8}$; **3.3A; 4.1F; 4.3G**
4. **a.)**  **b.)**  **c.)**  **3.3A; 4.3D**

Part 2 – Application Practice

5. **B – 50 square feet.** (10 ft. x 5 ft. = **50 ft**) **Note:** Recommend drawing 1 inch by 1 inch AND 1 foot by 1 foot rectangle to to show students the size of 1 square inch or 1 square foot. In doing so, 50 ~ 1 foot by 1 foot squares is the size of Ms. Taylor's garden. **4.4D; 4.4H; 4.5D**
6. **31** is the dividend; **3 R4** is the quotient in the circles; Remainder = **4**; Divisor = **9** **4.4E; 4.4F**
7. **A – 40** (e.g. 240 ÷ 6 = **60**) **4.4F**
8. **240** is the dividend; **40** is the quotient; divisor is **6**. **NOTE:** Students can understand a word problem using simple diagram. **4.4E; 4.4F**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Given **b.)** $ 19.00 **c.)** $ 140.00 **d.)** $ 3,091.00 **4.2E**
NOTE: Students do not readily understand that the decimal is ALWAYS behind a whole number. Practice as needed.

Learning Opportunity 43

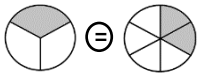
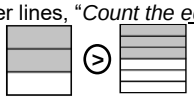
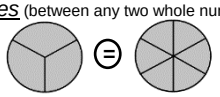
Part 1 – Numeracy Development **TEKS**

1. **a.)** R 4 **b.)** R 1 **c.)** R 2 **d.)** R 3 **4.4F**

2. **a.)** Given **b.)** 0.3 **c.)** 0.1 **d.)** 0.2 **4.4A**

3. **a.)** $\frac{1}{3}$; $\frac{2}{3}$; $1\frac{1}{3}$; $1\frac{2}{3}$; $2\frac{1}{3}$; $2\frac{2}{3}$ **b.)** $\frac{1}{6}$; $\frac{2}{6}$; $\frac{3}{6}$; $\frac{4}{6}$; $\frac{5}{6}$; $1\frac{1}{6}$; $1\frac{2}{6}$; **3.3A; 4.1F; 4.3G**

With students and fractional number lines, "*Count the equal spaces* (between any two whole numbers), *label the lines.*"

4. **a.)**  **b.)**  **c.)**  **3.3A; 4.3D**

Part 2 – Application Practice

5. **D – 6 feet**; (e.g. 30 ÷ 5 = **6**) **4.4F; 4.4H; 4.5D**

6. **C – $ 45**; (e.g. $ 3.15 rounds to $3; Hence, 15 x $ 3 = $ 45) **4.4D; 4.4G; 4.4H**

7. **B – 2**; (e.g. 58 ÷ 7 = 8 R 2) (e.g. The remainder is 2. Hence, Roberta's brother receives **$ 2**.) **4.4F; 4.4H**

8. **8 R 2** is the **quotient**; **7** is the **divisor**; **58** is the **dividend.** **4.4E; 4.4F**

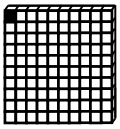
Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Given **b.)** $\frac{302}{1{,}000}$ **c.)** $\frac{7}{10}$ $\frac{}{10}$

Note: This method is an easy way for students to ***convert*** decimals to equivalent fractions. It only takes a little practice. **4.2G**

Learning Opportunity 44

Part 1 – Numeracy Development **TEKS**

1. $\frac{1}{100}$  **4.2E; 4.2G**

2. **a.)** 0.6 **b.)** 0.3 **c.)** 0.8 **d.)** 0.1 **e.)** 0.5 **f.)** 0.7 **4.4A**

3. **a.)** 0.04; 0.05; 0.06; 0.07; 0.08; 0.09 **b.)** 0.15; 0.20; 0.25; 0.30; 0.35; 0.40; 0.45 **c.)** 0.2; 0.3; 0.4; 0.5; 0.6; 0.7; 0.8; 0.9 **4.2H**

4. **a.)** Given **b.)** (6 x 10) + (7 x 1) **c.)** (7 x 10) + (0 x 1) **d.)** (9 x 10) + (8 x 1) **4.2B**

Part 2 – Application Practice

5. **D – 6 feet**; (e.g. 5 + w + 5 + w = 22; 10 + w + w = 22; 10 + 6 + 6 = 22; Hence, w = **6**) **4.4A; 4.5D**

6. **A – 552**; (e.g. 92 x 6 = **552 people**) **4.4D; 4.4H**

7. **B – 5 cars**; (27 ÷ 6 = 4 R 3; Hence, 4 cars + 1 more car = 5 cars) **NOTE:** The remainder dictates an extra car for three people. **4.4F; 4.4H**

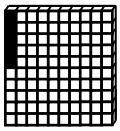
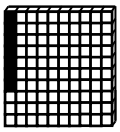
8. **4 R 3** is the **quotient**; **6** is the **divisor**; **27** is the **dividend.** **4.4E; 4.4F**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Given **b.)** 7; 1,000 **c.)** 10; 3; 10 **4.2G**

Learning Opportunity 45

Part 1 – Numeracy Development **TEKS**

1. **a.)** $\frac{5}{100}$  **b.)** $\frac{7}{100}$  **4.2E; 4.2G**

2. **a.)** 0.02; 0.03; 0.04; 0.05; 0.06; 0.07; 0.08; 0.09 **b.)** 0.1; 0.15; 0.2; 0.25; 0.3; 0.35; 0.4; 0.45 **c.)** 0.2; 0.3; 0.4; 0.5; 0.6; 0.7; 0.8; 0.9 **4.2H**

3. **a.)** (8 x 10) + (9 x 1) **b.)** (7 x 10) + (6 x 1) **c.)** (4 x 10) + (0 x 1) **4.2B**

4. **a.)** 0.6 **b.)** 0.4 **c.)** 0.9 **d.)** 0.7 **4.4A**

Part 2 – Application Practice

5. **A – 12 feet**; (e.g. Horizontal dimensions only – 4 ft + 8 ft = **12 feet**) **NOTE:** Use yellow highlighters to stress horizontal dimensions **4.4A; 4.5D**

6. **B – 1,100**; (e.g. 50 x 4 = 200; 300 x 3 = 900; Hence, 200 + 900 = **1,100**) **4.4A; 4.4D; 4.4H**

7. **D – 10 boxes**; (e.g. 75 ÷ 8 = 9 R 3; Hence, 9 boxes + 1 more box = **10 boxes needed**) **4.4F; 4.4H**

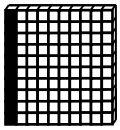
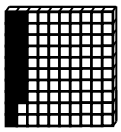
8. **9 R 3** is the **quotient**; **8** is the **divisor**; **75** is the **dividend.** **4.4E; 4.4F**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** 100; 7; 34; 100 **b.)** 9.502; 1,000; 9; 502; 1,000 **c.)** 0.9; 10; 9; 10 **4.2G**

Learning Opportunity 46

Part 1 – Numeracy Development **TEKS**

1. **a.)** $\frac{10}{100}$  **b.)** $\frac{18}{100}$  **4.2E; 4.2G**

2. **a.)** 0; 0.01; 0.02; 0.03; 0.04; 0.05; 0.06; 0.07; 0.08; 0.09 **b.)** 0; 0.05; 0.1; 0.15; 0.2; 0.25; 0.3; 0.35; 0.4; 0.45 **c.)** 0; 0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.7; 0.8; 0.9 **4.2H**

3. **a.)** (1 x 100) + (8 x 10) + (9 x 1) **b.)** (3 x 100) + (0 x 10) + (6 x 1) **c.)** (4 x 100) + (5 x 10) + (0 x 1) **4.2B**

4. **a.)** Given **b.)** 0.25 **4.4A**

Part 2 – Application Practice

5. **B – 4 meters**; (e.g. Horizontal dimensions only – 13m - 9 m = **4 m**) **NOTE:** Use yellow highlighters to stress horizontal dimensions. **4.4A; 4.5D**

6. **C – 9 R 5**; (e.g. 77 ÷ 8 = **9 R 5**) **NOTE:** Stress vocabulary. **4.4F**

7. **B – 8 boxes**; (e.g. 45 ÷ 6 = 7 R 3; Hence, 7 boxes + 1 more box = **8 boxes needed**) **4.4F; 4.4H**

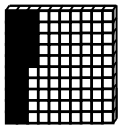
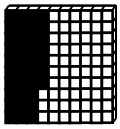
8. **D – 1:20** (e.g. Make 60: 50 to 1:00 is 10 minutes; 20 minutes more to **1:20**) **4.4A; 4.8C**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** 85; 100 **b.)** 156; 1,000 **c.)** 7; 10 **d.)** 2; 7; 10 **4.2G**

Learning Opportunity 47

Part 1 – Numeracy Development **TEKS**

1. **a.)** $\frac{25}{100}$  **b.)** $\frac{37}{100}$  **4.2E; 4.2G**

2. **a.)** 0; 0.01; 0.02; 0.03; 0.04; 0.05; 0.06; 0.07; 0.08; 0.09 **b.)** 0; 0.05; 0.1; 0.15; 0.2; 0.25; 0.3; 0.35; 0.4; 0.45 **c.)** 0; 0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.7; 0.8; 0.9 **4.2H**

3. **a.)** (2 x 100) + (6 x 10) + (4 x 1) **b.)** (9 x 100) + (8 x 10) + (0 x 1) **c.)** (5 x 100) + (0 x 10) + (0 x 1) **4.2B**

4. **a.)** 0.35 **b.)** 0.15 **4.4A**

Part 2 – Application Practice

5. **A – 8; 3**; (e.g. 12 – 4 = **8**; 7 – 4 = **3**) **NOTE:** Use yellow and orange highlighters to stress horizontal and vertical dimensions **4.4A; 4.5D**

6. **B – 221**; (e.g. 407 – 186 = **221**) **NOTE:** Stress vocabulary. **4.4A**

7. **D – 55 min.**; (e.g. Make 60: 15 minutes to 4 o'clock; 40 more minutes to 4:40; Hence, 15 + 40 = **55**) **4.4A; 4.8C**

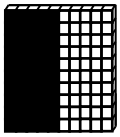
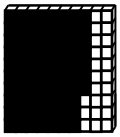
8. **B – $^{2}/_{4}$**; (e.g. shade diagram; $^{2}/_{4}$ eaten; **$^{2}/_{4}$ NOT eaten**) or ($^{4}/_{4} - {}^{2}/_{4} = {}^{2}/_{4}$) **4.3E**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** 51; 1,000 **b.)** 67; 100 **c.)** 5; 10 **d.)** 7; 1; 10 **4.2G**

Learning Opportunity 48

Part 1 – Numeracy Development **TEKS**

1. **a.)** $\frac{50}{100}$  **b.)** $\frac{77}{100}$  **4.2E; 4.2G**

2. **a.)** 0; 0.02; 0.04; 0.06; 0.08; 0.1; 0.12; 0.14; 0.16; 0.18 **b.)** 0; 0.25; 0.5; 0.75; 1.0; 1.25; 1.5; 1.75; 2.0; 2.25 **4.2H**
c.) 0; 0.5; 1.0; 1.5; 2.0; 2.5; 3.0; 3.5; 4.0; 4.5

3. **a.)** (6 x 100) + (3 x 10) + (0 x 1) **b.)** (8 x 100) + (9 x 10) + (1 x 1) **c.)** (9 x 100) + (0 x 10) + (5 x 1) **4.2B**

4. **a.)** 0.45 **b.)** 0.75 **4.4A**

Part 2 – Application Practice

5. **A – 4; 48**; (e.g. vertical dimensions only – 9 m - 5 m = **4 meters**; Perimeter: 9 + 5 + 5 + 10 + **4** + 15 = **48 meters**) **4.4A; 4.5D**

6. **A – 392**; (e.g. 56 x 7 = **392**) Stress vocabulary. **4.4D**

7. **D – 12:00**: (e.g. Time is 10:45; Make 60 – 15 minutes to 11:00; 1 hour more is **12:00**) **4.4A; 4.8C**

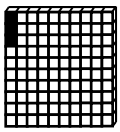
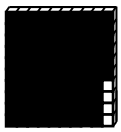
8. **C – $^{3}/_{5}$**; (e.g. shade diagram; $^{2}/_{5}$ weeded; **$^{3}/_{5}$ NOT weeded**) or ($^{5}/_{5} - {}^{2}/_{5} = {}^{3}/_{5}$) **4.3E**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** 6; 1,000 **b.)** 6; 10 **c.)** 4; 3; 100 **d.)** 4; 3; 10 **4.2G**

Learning Opportunity 49

Part 1 – Numeracy Development **TEKS**

1. a.) $\frac{3}{100}$  **b.)** $\frac{96}{100}$  **4.2E; 4.2G**

2. a.) 0; 0.03; 0.06; 0.09; 0.12; 0.15; 0.18; 0.21; 0.24; 0.27 **b.)** 0; 0.25; 0.5; 0.75; 1.0; 1.25; 1.5; 1.75; 2.0; 2.25 **c.)** 0; 0.5; 1.0; 1.5; 2.0; 2.5; 3.0; 3.5; 4.0; 4.5 **4.2H**

3. a.) Given **b.)** (2 x 1,000) + (0 x 100) + (9 x 10) + (1 x 1) **c.)** (3 x 1,000) + (7 x 100) + (0 x 10) + (2 x 1) **4.2B**

4. a.) 0.85 **b.)** 0.55 **4.4A**

Part 2 – Application Practice

5. C – 7; **34**; (e.g. "X" = 3 + 4 = **7**; Perimeter = 10 + 7 + 4 + 4 + 6 + 3 = **34**) **4.4A; 4.5D**

6. C – 321; (e.g. 808 – 487 = **321**) **NOTE:** Stress vocabulary. **4.4F**

7. C – 11:00; (e.g. 12:30 subtracting 1 hr. 30 min = **11:00**) **4.4A; 4.8C**

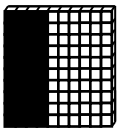
8. D – $\frac{4}{5}$; (e.g. Shade $\frac{1}{5}$ and $\frac{3}{5}$ for a total of $\frac{4}{5}$) **NOTE:** Teacher should show students related addition equation: $\frac{1}{5} + \frac{3}{5} = \frac{4}{5}$ **4.3E**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** 8; 1,000 **b.)** 8; 10 **c.)** 1; 1; 100 **d.)** 1; 1; 10 **4.2G**

Learning Opportunity 50

Part 1 – Numeracy Development **TEKS**

1. a.) $\frac{40}{100}$  **b.)** $\frac{4}{10}$  **4.2E; 4.2G**

2. a.) 0; 0.04; 0.08; 0.12; 0.16; 0.20; 0.24; 0.28; 0.32; 0.36 **b.)** 0; 0.25; 0.5; 0.75; 1.0; 1.25; 1.5; 1.75; 2.0; 2.25 **c.)** 0; 0.5; 1.0; 1.5; 2.0; 2.5; 3.0; 3.5; 4.0; 4.5 **4.2H**

3. a.) (4 x 1,000) + (1 x 100) + (1 x 10) + (1 x 1) **b.)** (5 x 1,000) + (0 x 100) + (4 x 10) + (3 x 1) **c.)** (6 x 1,000) + (8 x 100) + (0 x 10) + (4 x 1) **4.2B**

4. a.) 0.95 **b.)** 0.05 **4.4A**

Part 2 – Application Practice

5. D – 46 ft²; (e.g. Area = (4 x 4) + (10 x 3) = **46**) or (Area = (4 x 7) + (6 x 3) = **46**) or (Area = (10 x 7) - (6 x 4) = **46**) **4.4A; 4.4D; 4.5D**

6. $\frac{2}{5}$; $\frac{1}{5}$; and $\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$ **4.3E**

7. B – 4:15; (e.g. 6:15 subtract 2 hours = **4:15**) **4.4A; 4.8C**

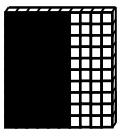
8. C – $\frac{3}{5}$; (e.g. Shade $\frac{2}{5}$ and $\frac{1}{5}$ for a total of $\frac{3}{5}$) and **$\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$** **NOTE:** Exact same problem as 6. Above Different medium. **4.3E**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Yes. They are equal. 4 dimes equals 40 pennies. A zero may always be added behind a decimal point and not change the overall value. For example: 1.0 = 1.00 = 1.000 or 0.9 = 0.90 = 0.900. **5.2B**

Learning Opportunity 51

Part 1 – Numeracy Development **TEKS**

1. a.) $\frac{60}{100}$  **b.)** $\frac{6}{10}$  **4.2E; 4.2G**

2. a.) 0; 0.06; 0.12; 0.18; 0.24; 0.30; 0.36; 0.42; 0.48; 0.54 **b.)** 0; 0.25; 0.5; 0.75; 1.0; 1.25; 1.5; 1.75; 2.0; 2.25 **c.)** 0; 0.5; 1.0; 1.5; 2.0; 2.5; 3.0; 3.5; 4.0; 4.5 **4.2H**

3. a.) (6 x 1,000) + (0 x 100) + (0 x 10) + (9 x 1) **b.)** (8 x 1,000) + (0 x 100) + (7 x 10) + (1 x 1) **c.)** (2 x 1,000) + (3 x 100) + (1 x 10) + (8 x 1) **4.2B**

4. a.) 0.45 **b.)** 0.65 **4.4A**

Part 2 – Application Practice

5. C – 200 in²; (e.g. Area = (10 x 5) + (10 x 15) = **200**) or (Area = (5 x 20) + (10 x 10) = **200**) or (Area = (15 x 20) - (10 x 10) = **46**) **4.4A; 4.4D; 4.5D**

6. $\frac{1}{4}$; $\frac{2}{4}$; and $\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$ **4.3E**

7. C – 2:10; (e.g. 6:55; 9:05; Hence, elapsed time is **2:10**) **4.4A; 4.8C**

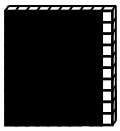
8. C – $\frac{3}{8}$; (e.g. Shade $\frac{5}{8}$ Then, $\frac{3}{8}$ ***NOT*** shaded; Hence, **$\frac{8}{8} - \frac{5}{8} = \frac{3}{8}$** **4.3E**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Yes. They are equal. 6 dimes equals 60 pennies. A zero may always be added behind a decimal point and not change the overall value. For example: 1.0 = 1.00 = 1.000 or 0.7 = 0.70 = 0.700 = 0.7000. **5.2B**

Learning Opportunity 52

Part 1 – Numeracy Development **TEKS**

1. a.) 90/100  **b.)** 9/10  **4.2E; 4.2G**

2. Proper Fractions: $^{2}/_{4}$; $^{3}/_{4}$; **Improper Fractions:** $^{4}/_{4}$; $^{5}/_{4}$; $^{7}/_{4}$; $^{8}/_{4}$; **Mixed Numbers:** $1\ ^{1}/_{4}$; $1\ ^{3}/_{4}$; $2\ ^{0}/_{4}$; **4.3G**

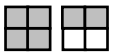
3. a.) Given **b.)** (1 x 10,000) + (8 x 1,000) + (0 x 100) + (4 x 10) + (1 x 1) **4.2B**

Part 2 – Application Practice

4. Perimeter = **70 cm**; Area = **196 cm²**; (e.g. Perimeter = 2 x (28 + 7) = **70**; Area = 28 x 7 = **196**) **4.4A; 4.4D; 4.4H; 4.5D**

5. **$^{3}/_{4}$; $^{1}/_{4}$;** and $^{3}/_{4} - {}^{1}/_{4} = {}^{2}/_{4}$ **4.3E**

6. **A – 3:45;** (e.g. 5:55 – 5 minutes to 6:00; 3 hours to 9:00; 40 minutes to 9:40; Hence, 3 hours + 5 min. + 40 min. = **3:45**) **4.4A; 4.8C**

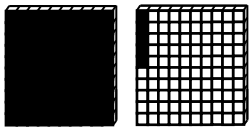
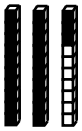
7. **$1\ ^{2}/_{4}$** =  **$^{6}/_{4}$** =  and **$1\ ^{2}/_{4} \ominus {}^{6}/_{4}$** **3.3A; 4.3D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: A zero or zeros can always be added to the end of a decimal and not change its value. For example, **0.9** equals 9 dimes out of 10 dimes or **90 cents**. **0.90** equals 90 pennies out of 100 pennies or **90 cents**. Hence, 0.9 = 0.90. **5.2B**

Learning Opportunity 53

Part 1 – Numeracy Development **TEKS**

1. a.) 1 5/100  **b.)** 2 3/10  **4.2E; 4.2G**

2. Proper Fractions: $^{1}/_{3}$; $^{2}/_{3}$; **Improper Fractions:** $^{3}/_{3}$; $^{5}/_{3}$; $^{6}/_{3}$; $^{7}/_{3}$; $^{8}/_{3}$; **Mixed Numbers:** $1\ ^{1}/_{3}$; $1\ ^{2}/_{3}$; $2\ ^{0}/_{3}$; $2\ ^{1}/_{3}$; $2\ ^{2}/_{3}$; **4.3G**

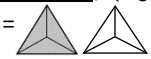
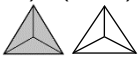
3. a.) (4 x 10,000) + (0 x 1,000) + (3 x 100) + (5 x 10) + (7 x 1) **b.)** (7 x 10,000) + (8 x 1,000) + (6 x 100) + (0 x 10) + (1 x 1) **4.2B**

Part 2 – Application Practice

4. Perimeter = **100 in**; Area = **141 in²**; (e.g. Perimeter = 2 x (47 + 3) = **100**; Area = 47 x 3 = **141**) **4.4A; 4.4D; 4.4H; 4.5D**

5. **$^{1}/_{3}$; $^{1}/_{3}$; $^{1}/_{3}$;** and **$^{1}/_{3} + {}^{1}/_{3} + {}^{1}/_{3} = {}^{3}/_{3}$** **Note:** Emphasize that **$^{3}/_{3}$** = 1 Whole = 1 **4.3E**

6. **A – 183 miles;** (e.g. (11 x 9) + (14 x 6) = **183**) **4.4A; 4.4D; 4.4H**

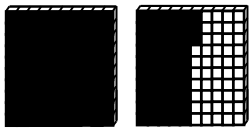
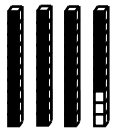
7. **$1\ ^{0}/_{3}$** =  **$^{3}/_{3}$** =  and **$1\ ^{0}/_{3} \ominus {}^{3}/_{3}$** **3.3A; 4.3D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: True. An improper fraction that has numerator and a denominator that both have the same whole number is always equal to 1 or 1 whole. Refer to problem 5 and 7 for examples of improper fractions that are equal to 1. **5.2B**

Learning Opportunity 54

Part 1 – Numeracy Development **TEKS**

1. a.) 1 53/100  **b.)** 3 7/10  **4.2E; 4.2G**

2. Proper Fractions: $^{0}/_{2}$; $^{1}/_{2}$; **Improper Fractions:** $^{2}/_{2}$; $^{3}/_{2}$; $^{4}/_{2}$; $^{5}/_{2}$; $^{6}/_{2}$; $^{7}/_{2}$; $^{8}/_{2}$; **Mixed Numbers:** $1\ ^{0}/_{2}$; $2\ ^{0}/_{2}$; $2\ ^{1}/_{2}$; $3\ ^{1}/_{2}$; $4\ ^{0}/_{2}$; **4.3G**

3. a.) (5 x 10,000) + (2 x 1,000) + (0 x 100) + (9 x 10) + (4 x 1) **b.)** (9 x 10,000) + (9 x 1,000) + (3 x 100) + (0 x 10) + (2 x 1) **4.2B**

Part 2 – Application Practice

4. "**Y**" = **5 in**; (e.g. 120 – 55 – 55 = 10; 10 ÷ 2 = **5**) **4.4D; 4.4F; 4.4H; 4.5D**

5. **$^{1}/_{2} + {}^{1}/_{2} + {}^{1}/_{2} = {}^{3}/_{2}$** **Note:** Emphasize that **$^{3}/_{2}$** = 1 ½; Use number line in problem 2 above to show visual in different medium. **4.3E**

6. **D – $^{2}/_{3}$;** (e.g. 1 = $^{3}/_{3} - {}^{1}/_{3} = {}^{2}/_{3}$) **4.3E**

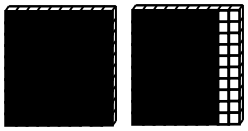
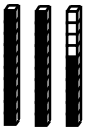
7. **$1\ ^{1}/_{2}$** =  **$^{3}/_{2}$** =  and **$1\ ^{1}/_{2} \ominus {}^{3}/_{2}$** **3.3A; 4.3D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 2; 3; 5; 8; 12; 45; 100. An improper fraction that has numerator and a denominator that both have the same whole number is always equal to 1 or 1 whole. **5.2B**

Learning Opportunity 55

Part 1 – Numeracy Development **TEKS**

1. a.) $1\frac{80}{100}$  **b.)** $2\frac{6}{10}$  **4.2E; 4.3G**

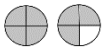
2. Proper Fractions: $^0/_5$; $^1/_5$; $^2/_5$; $^3/_5$; $^4/_5$ **Improper Fractions:** $^5/_5$; $^6/_5$; $^7/_5$; $^8/_5$; **Mixed Numbers:** $1\ ^0/_5$; $1\ ^1/_5$; $1\ ^2/_5$; $1\ ^3/_5$; **4.3G**

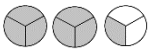
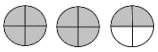
3. a.) Given **b.)** (4 x 100,000) + (3 x 10,000) + (8 x 1,000) + (6 x 100) + (0 x 10) + (1 x 1) **4.2B**

Part 2 – Application Practice

4. "**X**" = **70 inches**; (e.g. Perimeter = 150 = 5 + 5 + **X** + **X**; → 150 = 10 + **X** + **X**; → 140 = **X** + **X**; Hence, **X = 70**) **4.4A; 4.4H; 4.5D**

5. $^3/_2 - {}^2/_2 = {}^1/_2$ **4.3E**

6. C – $^1/_4$; (e.g. Shade $^5/_4$ and $^2/_4$ of the two circles; $^1/_4$ is left unshaded) →  **4.3E**

7. $2\ ^1/_3$ =  $^{10}/_4$ =  and $2\ ^1/_3 < {}^{10}/_4$ **3.3A; 4.3D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 2; 6; 10; 6; 16; 10; 60; 50; 500; **NOTE:** Stress vocabulary and **half** of denominator. **4.3D**

Learning Opportunity 56

Part 1 – Numeracy Development **TEKS**

1. a.) $\frac{4}{100} = 0.04$ **b.)** $1\frac{4}{10} = \frac{14}{10} = 1.4$ **4.2E; 4.3G; 4.3C**

2. Proper Fractions: $^0/_4$; $^1/_4$; $^2/_4$; $^3/_4$; **Improper Fractions:** $^4/_4$; $^5/_4$; $^6/_4$; $^7/_4$; $^8/_4$; **Mixed Numbers:** $1\ ^0/_4$; $1\ ^1/_4$; $1\ ^2/_4$; $1\ ^3/_4$; $2\ ^0/_4$; **4.3G**

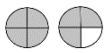
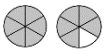
3. a.) (8 x 100,000) + (3 x 10,000) + (7 x 1,000) + (9 x 1) **b.)** (5 x 100,000) + (0 x 10,000) + (0 x 1,000) + (7 x 100) + (8 x 10) + (1 x 1) **4.2B**

Part 2 – Application Practice

4. Perimeter = **48 cm**; (e.g. Perimeter = 6 x 8 cm = **48**) **4.4A; 4.4D; 4.4H; 4.5D**

5. $ 8; (e.g. multiples approach: 3 for $2; 6 for $4; 8 for **$8**) or (3 x 4 = 12 cupcakes and $2 x 4 = **$8** – Factor of 4) **4.4A; 4.4D; 4.4H**

6. C – 10 weeks; (e.g. (85 ÷ 9 = 9 R 4) The extra 4 dollars means 1 extra week: 9 weeks + 1 week = **10 weeks**) **4.4F; 4.4H**

7. $1\ ^3/_4$ =  $^{11}/_6$ =  and $1\ ^3/_4 < {}^{11}/_6$ **3.3A; 4.3D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 3; 14; 8; 30; 6; 50; 10; 200; 200; 500; **NOTE:** Stress vocabulary and **half** of denominator. **4.3D**

Learning Opportunity 57

Part 1 – Numeracy Development **TEKS**

1. a.) $\frac{25}{100} = 0.25$ **b.)** $2\frac{8}{10} = \frac{28}{10} = 2.8$ **4.2E; 4.3G; 4.3C**

2. a.) 2.4 + 5.3 = **7.7** **b.)** 9.4 - 6.3 = **3.1** **4.4A**

3. D – w , y lines; (e.g. the lines of symmetry of a rectangle are lines w and y) **NOTE:** A diagonal is NOT a line of symmetry for a rectangle**.** **4.6B**

4. D – b, e & c, d lines; **NOTE**: The word 'para**ll**el' possesses two "L's" side by side. Use the double L's to remind students of para**ll**el. **4.6A**

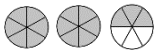
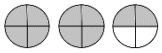
5. a.) Given **b.)** thirty-two **c.)** one hundred forty-nine **d.)** two hundred seventeen **4.2B**

Part 2 – Application Practice

6. B – 9 m; (e.g. 45 ÷ 5 = **9**) **4.4F; 4.4H; 4.5D**

7. $^3/_8$; (e.g. $^8/_8 - (^3/_8 + {}^2/_8) = {}^3/_8$) **4.3E**

8. B – $ 232; (e.g. 58 x 4 = **232**) **4.4D; 4.4H**

9. $^{15}/_6$ =  $2\ ^2/_4$ =  and $^{15}/_6 = 2\ ^2/_4$ **3.3A; 4.3D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 5; 7; 10; 13; 2; 50; 100. An improper fraction that has numerator and a denominator that both have the same whole number is always equal to 1 or 1 whole. **4.3D**

Learning Opportunity 58

Part 1 – Numeracy Development **TEKS**

1. a.) $\frac{86}{100} = 0.86$ **b.)** $4\frac{1}{10} = \frac{41}{10} = 4.1$ **4.2E; 4.3C; 4.3G**

2. a.) 3.7 + 2.3 = **6.0** **b.)** 7.2 - 4.6 = **2.6** **4.4A**

3. D – w , x , y lines; (e.g. the lines of symmetry of a **square** are lines w, x and y) **NOTE:** A diagonal is a line of symmetry for a **square.** **4.6B**

4. D – a, e & b, c lines; **NOTE**: The word 'para**ll**el' possesses two "L's" side by side. Use the double L's to remind students of para**ll**el. **4.6A**

5. a.) three hundred nineteen **b.)** forty-five **c.)** seven hundred forty-nine **d.)** two thousand eleven **4.2B**

Part 2 – Application Practice

6. 3.1 > 3.01 > 2.98 > 0.9 > 0.09 **Note:** Add zeros so the decimal is in the form money – Ex. 0.9 becomes 0.90; 3.1 becomes 3.10 **4.2F**

7. L = **6 cm;** W = **2 cm;** (L + W) = **8 cm;** P = **2 x 8 cm** = **16 cm;** **4.4A; 4.4D; 4.5C; 4.5D**

8. a.) 1: **Given** **b.)** 2: **Given** **c.)** 3: **{1, 3}** **d.)** 4: **{1, 2, 4}** **e.)** 5: **{1, 5}** **f.)** 6: **{1, 2, 3, 6}** **g.)** 7: **{1, 7}** **h.)** 8: **{1, 2, 4, 8}** **4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 6; 3; 4 **Note:** The *Compression Method* is effective & efficient. Start with 1 x number (12), if even – divisible by 2, etc. **4.4D**

Learning Opportunity 59

Part 1 – Numeracy Development **TEKS**

1. a.) $1\frac{5}{100} = \frac{105}{100} = 1.05$ **4.2E; 4.3C; 4.3G**

2. a.) 14 x 20 = **280** **b.)** 23 x 32 = **736** **4.4D**

3. a.) 9.6 + 4.7 = **14.3** **b.)** 14.2 - 3.6 = **10.6** **4.4A**

4. C – z line ONLY **NOTE**: Students can check by viewing a line of symmetry as folding the object in two equal halves. **4.6B**

5. C – a, e lines; **NOTE**: Students can place the corner (90 degrees) of a piece of paper at the intersection to determine if perpendicular. **4.6A**

6. a.) three thousand two hundred forty-one **b.)** seven thousand nine hundred ten **4.2B**

Part 2 – Application Practice

7. 0.05 < 0.5 < 1.05 < 1.5 < 2.05 **Note:** Add zeros so the decimal is in the form money – Ex. 0.5 becomes 0.50; 1.5 becomes 1.50 **4.2F**

8. L = **6 cm;** W = **3 cm;** (L + W) = **9 cm;** P = **2 x 9 cm** = **18 cm;** **4.4A; 4.4D; 4.5C; 4.5D**

9. a.) 1: **{1}** **b.)** 2: **{1, 2}** **c.)** 3: **{1, 3}** **d.)** 4: **{1, 2, 4}** **e.)** 5: **{1, 5}** **f.)** 6: **{1, 2, 3, 6}** **g.)** 7: **{1, 7}** **h.)** 8: **{1, 2, 4, 8}** **4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 10; 4; 5; **Note:** Start with 1 x number (20); 20 is even – divisible by 2; 20 ends in '0' divisible by 5. **4.4D**

Learning Opportunity 60

Part 1 – Numeracy Development **TEKS**

1. a.) $1\frac{25}{100} = \frac{125}{100} = 1.25$ **4.2E; 4.3C; 4.3G**

2. a.) 42 x 42 = **1,764** **b.)** 30 x 61 = **1,830** **4.4D**

3. a.) 10.7 + 8.8 = **19.5** **b.)** 17.3 - 3.6 = **13.7** **4.4A**

4. w, x, y, z lines **NOTE**: All lines divide hexagon into two equal halves; hence, all four lines are **lines of symmetry**. **4.6B**

5. D – a, e & c, d; **NOTE**: Students can place the corner (90 degrees) of a piece of paper at the intersection to determine if perpendicular. **4.6A**

6. a.) twenty-four thousand fifty-six **b.)** ninety-seven thousand six hundred forty **4.2B**

Part 2 – Application Practice

7. 0.70 = 0.7 > 0.51 > 0.5 > 0.07 **Note:** Add zeros so the decimal is in the form money – Ex. 0.7 becomes 0.70 **4.2F**

8. P = **2 x 12 in** = **24 inches;** **4.4A; 4.4D; 4.5C; 4.5D**

9. a.) 5: **{1,5}** **b.)** 6: **{1, 2, 3, 6}** **c.)** 7: **{1, 7}** **d.)** 8: **{1, 2, 4, 8}** **e.)** 9: **{1, 3, 9}** **f.)** 10: **{1, 2, 5, 10}** **g.)** 11: **{1, 11}** **h.)** 12: **{1, 2, 3, 4, 6, 12}** **4.4D**

Part 3 – Reflection and Conceptual Understanding

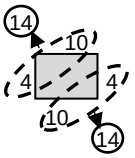
Student Answer: 2; 9; 3; 6; {1, 2, 3, 6, 9, 18} **Note:** Start with 1 x number (18); 18 is even – divisible by 2, divisible by 3; **4.4D**

Note: With consistent daily practice, students become very adept at Factor Strings – ***well worth the time investment.***

Learning Opportunity 61

Part 1 – Numeracy Development **TEKS**

1. a.) $1\frac{80}{100} = \frac{180}{100} = 1.80 = 1.8$ **4.2E; 4.3C; 4.3G**



Problem 8

2. a.) 47 x 51 = **2,397** **b.)** 16 x 72 = **1,152** **4.4D**

3. a.) 10.7 + 18.8 = **29.5** **b.)** 17.3 - 10.6 = **6.7** **4.4A**

4. D – *q* , *t* lines; (e.g. the lines of symmetry of a **regular pentagon** must intersect at a vertex and bisect a side. **4.6B**

5. Perpendicular Lines: **b, e & b, d**; Parallel Lines: **d, e** **4.6A**

6. a.) seventy thousand seven hundred seven **b.)** two hundred seventeen thousand seven hundred thirty **4.2B**

Part 2 – Application Practice

7. 0.9 < 1.09 < 1.40 = 1.4 < 1.90 **Note:** Add zeros so the decimal is in the form money – Ex. 0.9 becomes 0.90; 1.4 becomes 1.40 **4.2F**

8. P = **2 x 14 m** = **28 m;** See Diagram above. **4.4D; 4.5C; 4.5D**

9. a.) 5: **{1, 5}** **b.)** 6: **{1, 2, 3, 6}** **c.)** 7: **{1, 7}** **d.)** 8: **{1, 2, 4, 8}** **e.)** 9: **{1, 3, 9}** **f.)** 10: **{1, 2, 5, 10}** **g.)** 11: **{1, 11}** **h.)** 12: **{1, 2, 3, 4, 6, 12}** **4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Decimal points are lined-up to **preserve place value** – a one is added to a one, a ten to a ten, etc. **4.4A**

Learning Opportunity 62

Part 1 – Numeracy Development **TEKS**

1. a.) Acute angles: AOB (Given); COD; COE; DOE; EOF; COB; BOD **b.) Right:** AOC (Given); COF **c.) Obtuse:** AOD; AOE; BOF **4.6C**
NOTE: The vertex must always be the middle letter of the classified angle; ***hence, angle COD = DOC***, where ***O*** is the rays' vertex.

2. 12 x 16 = 16 x 12 = **192 stars** **Note:** Recommend stressing multiplication of 2 digit numbers is the same model as 1 digit numbers. **4.4C; 4.4D**

3. a.) 6 + 3.8 = 6.0 + 3.8 = **9.8** **b.)** 7 - 4.2 = 7.0 + 4.2 = **2.8** **4.4A**

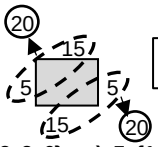
4. a.) Given **b.)** 1 pair – parallel lines; trapezoid **c.)** 3 pair – parallel lines; hexagon **4.6B**

5. a.) three hundred ninety thousand five hundred sixteen **b.)** six hundred seven thousand eighty-seven **4.6A**

Part 2 – Application Practice

6. 0.9 > 0.09 or 0.90 > 0.09 **Note:** Recommend repeatedly remind students that money represents decimals – magnitudes. **4.2F**

7. P = **2 x 20 ft** = **40 ft** **4.4C; 4.4D; 4.5D**



Note: 2 equal groups of 20 ft. = 2 x 20 = 40 ft.

8. a.) 5: **{1, 5}** **b.)** 6: **{1, 2, 3, 6}** **c.)** 7: **{1, 7}** **d.)** 8: **{1, 2, 4, 8}** **e.)** 9: **{1, 3, 9}** **f.)** 10: **{1, 2, 5, 10}** **g.)** 11: **{1, 11}** **h.)** 12: **{1, 2, 3, 4, 6, 12}** **4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Decimal points are lined-up to **preserve place value** – Always line-up decimals: 2 + 3 = 2.0 + 3.0 = 6 = 6.0. **4.4A**

Learning Opportunity 63

Part 1 – Numeracy Development **TEKS**

1. a.) Acute: SOT; SOU; SOV; TOW; TOU; TOV; UOV; UOW; VOW; **b.) Right:** ROS; SOW **c.) Obtuse:** ROT; ROU; ROV **4.6C**
NOTE: The vertex must always be the middle letter of the classified angle; ***hence, angle ROS = SOR***, where ***O*** is the rays' vertex.

2. 32 x 21 = 21 x 32 = **672 sq. units** **Note:** Recommend stressing multiplication of 2 digit numbers is the same model as 1 digit numbers. **4.4C; 4.4D**

3. a.) 11 + 9.4 = 11.0 + 9.4 = **20.4** **b.)** 1 - 0.6 = 1.0 – 0.6 = **0.4** **4.4A**

4. a.) Given **b.)** 2 pair – parallel lines; parallelogram **c.)** 0 pair – parallel lines; triangle **4.6B**

5. a.) Given **b.)** five-tenths **c.)** two and four-tenths **d.)** eight-tenths **4.2B**

Part 2 – Application Practice

6. 0.78 < 0.8 or 0.78 < 0.80 **Note:** Recommend repeatedly remind students that money represents decimals – magnitudes. **4.2F**

7. a.) Perimeter = 5 + 30 + 5 + 30 = **70 m** **b.)** Perimeter = 2 x 35 m = **70 m;** **Note:** Same Perimeter value. **4.4A; 4.4D; 4.5C; 4.5D**

8. a.) 9: **{1, 3, 9}** **b.)** 10: **{1, 2, 5, 10}** **c.)** 11: **{1, 11}** **d.)** 12: **{1, 2, 3, 4, 6, 12}** **e.)** 13: **{1, 13}** **f.)** 14: **{1, 2, 7, 14}** **4.4D**
g.) 15: **{1, 3, 5, 15}** **h.)** 16: **{1, 2, 4, 8, 16}**

Part 3 – Reflection and Conceptual Understanding

Student Answer: "And" is **only** used in *decimal word place value*. "AND" signifies the decimal point – 2.3 = two AND three-tenths. **4.4A**
For example: It is **incorrect** to say for 135, one-hundred *AND* thirty-five. "**AND**" only used in decimal word form notation.

Learning Opportunity 64

Part 1 – Numeracy Development **TEKS**

1. **a.)** **Acute angles:** NOH; NOT; HOT; HOK; TOK **b.)** **Right:** JON; NOK **c.)** **Obtuse:** JOH; JOT **4.6C**

2. **a.)** 28 x 19 = **532**; **NOTE:** The teacher should stress 2-digit multiplication is physically the same model as 1-digit multiplication. **4.4C; 4.4D**

3. **a.)** 2 + 3.48 = **5.48** **b.)** 1 – 0.66 = **0.34** **NOTE:** Students should rewrite problem vertically. **4.4A**

4. **a.)** 2 pair – parallel lines; rhombus **b.)** 0 pair – parallel lines; pentagon **c.)** 3 pair – parallel lines; hexagon **4.6B**

5. **a.)** Given **b.)** fifty-one hundredths **c.)** three and two-tenths **d.)** one and fifty-one hundredths **4.2B**

Part 2 – Application Practice

6. **D = 7 feet;** (e.g. Area = 35 ÷ 5 = **7 feet**) **4.4F; 4.5D**

7. **a.)** **100 feet;** (8 + 42 + 8 + 42 = **100 feet**) **b.)** **100 feet**; (2 x (8 + 42)) = **100 feet**) **4.4A; 4.4D; 4.5C; 4.5D**

8. **a.)** 13: **{1, 13}** **b.)** 14: **{1, 2, 7, 14}** **c.)** 15: **{1, 3, 5, 15}** **d.)** 16: **{1, 2, 4, 8, 16}** **e.)** 17: **{1, 17}** **f.)** 18: **{1, 2, 3, 6, 9, 18}** **g.)** 19: **{1, 19}** **4.4D**

h.) 20: **{1, 2, 4, 5, 10, 20}** **NOTE:** This method is so powerful. These students can do this, but they must be taught – specifically on the methodology. For example, ***Using 20***: Begin with the IDENTITY PROPERTY – (1 and the 20), Move inwards. Is the number even? *Yes, 20 is even.* Then, 2 is a factor. Now, the only factors left are BETWEEN 2 and 10. *Is 3 a factor. No!* Divisibility Rule of 2, 3, 5 and 10 are really easy to teach to students. *Next, is 4 a factor? Yes.* 4 x 5. Place both factors in the string of 20. There are no WHOLE numbers left between 4 and 5. Done. Hence, all the factors for 20 are neatly written and ready for use in lowest terms on fractions or other related work. Knowing factor strings greatly enhances a student's numeracy ability. The COMPRESSION METHOD is a simple and easy method to summarize the work. (Organized!)

Part 3 – Reflection and Conceptual Understanding

Student Answer: Decimal points are lined-up to **preserve place value** – a one is added or subtracted to a one, a ten to a ten, etc. **4.4A**

Learning Opportunity 65

Part 1 – Numeracy Development **TEKS**

1. **a.)** Given **b.)** obtuse **c.)** acute **d.)** right **e.)** obtuse **f.)** acute **4.6C**

g.) right **h.)** straight **NOTE:** the word "acute" is defined as 'sharp' – pointed, and the word "obtuse" is defined as 'dull'

2. **a.)** 43 x 75 = **3,225** **b.)** 60 x 50 = **3,000** **4.4C; 4.4D**

3. **a.)** 6.1 + 5.08 = **11.18** **b.)** 1 – 0.62 = **0.38** **NOTE:** Students should rewrite problem vertically. **4.4A**

4. **a.)** Given **b.)** 60 x 6 = 360 **c.)** 50 x 8 = 400 **NOTE:** Do not round single digit **4.4D; 4.4G**

5. **a.)** seven-hundredths **b.)** five and seven-hundredths **c.)** six and eight-tenths **d.)** eight-tenths **4.2B**

Part 2 – Application Practice

6. **C = $^{2}/_{5}$;** (e.g. $^{2}/_{5} + {}^{1}/_{5} = {}^{3}/_{5}$; Hence, $^{5}/_{5} - {}^{3}/_{5} = {}^{2}/_{5}$) **4.3E**

7. **a.)** **100 feet;** (25 + 25 + 25 + 25 = **100 feet**) **NOTE:** 4 groups of 25 **b.)** **100 feet**; (4 x (100) = **100 feet**) **4.4A; 4.4D; 4.5C; 4.5D**

8. **a.)** 13: **{1, 13}** **b.)** 14: **{1, 2, 7, 14}** **c.)** 15: **{1, 3, 5, 15}** **d.)** 16: **{1, 2, 4, 8, 16}** **e.)** 17: **{1, 17}** **f.)** 18: **{1, 2, 3, 6, 9, 18}** **g.)** 19: **{1, 19}** **4.4D**

h.) 20: **{1, 2, 4, 5, 10, 20}** **See Note in problem 8 in Learning Opportunity 64. Factor Strings are a tremendous asset in arithmetic numeracy!**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 75 in group model diagram 1; 43 in group model diagram 2; Highly recommend teacher stress that 1 digit model is ***EXACTLY*** the same physical meaning as 2 digit multiplication. Same with multiplication arrays and area models! **4.4C; 4.4D**

Learning Opportunity 66

Part 1 – Numeracy Development **TEKS**

1. **a.)** obtuse **b.)** acute **c.)** right **d.)** straight **e.)** right **f.)** obtuse **4.6C**

g.) acute **h.)** acute **NOTE:** the word "acute" is defined as 'sharp' – pointed, and the word "obtuse" is defined as 'dull'

2. **a.)** 80 x 30 = **2,400** **b.)** 62 x 87 = **5,394** **4.4D**

3. **a.)** 6.09 + 3.1 = **9.19** **b.)** 3.7 – 0.06 = **3.64** **NOTE:** Students should rewrite problem vertically. **4.4A**

4. **a.)** 70 x 8 = 560 **b.)** 80 x 3 = 240 **c.)** 80 x 4 = 320 **NOTE:** Do not round single digit. **4.4D; 4.4G**

5. **a.)** thirty-four hundredths **b.)** four and eight-hundredths **c.)** nine and two-tenths **d.)** six-tenths **4.2B**

Part 2 – Application Practice

6. **A = $ 630;** (e.g. Hence, Round 89 to 90; Do not round single digit in multiplication estimation; Hence, 90 x 7 = **630**) **4.4D; 4.4G; 4.4H**

7. **a.)** **40 feet;** (10 + 10 + 10 + 10 = **40 feet**) **NOTE:** 4 groups of 10 **b.)** **40 feet**; (4 x (10) = **40 feet**) **4.4A; 4.4D; 4.5C; 4.5D**

8. **a.)** 17: **{1, 17}** **b.)** 18: **{1, 2, 3, 6, 9, 18}** **c.)** 19: **{1,19}** **d.)** 20: **{1, 2, 4, 5, 20}** **e.)** 21: **{1, 3, 7, 21}** **f.)** 24: **{1, 2, 3, 4, 6, 8, 12, 24}** **4.4D**

g.) 25: **{1, 5, 25}** **h.)** 27: **{1, 3, 9, 27}** **See NOTE in problem 8 in LO 64 above. Factor Strings are a tremendous asset in arithmetic numeracy!**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 5,394, 87 in group model diagram 1; 5,394, 62 in group model diagram 2; Highly recommend teacher stress that 1 digit model is ***EXACTLY*** the same physical meaning as 2 digit multiplication. Same with multiplication arrays and area models! **4.4C; 4.4D**

Learning Opportunity 67

Part 1 – Numeracy Development **TEKS**

1. **a.)** right **b.)** acute **c.)** straight **d.)** right **e.)** acute **f.)** obtuse **4.6C**
g.) obtuse **h.)** obtuse **NOTE:** the word "acute" is defined as 'sharp' – pointed, and the word "obtuse" is defined as 'dull'

2. **a.)** 45 x 8 = **360** **b.)** 19 x 19 = **361** **4.4D**

3. **a.)** 70 x 8 = 560 **b.)** 80 x 3 = 240 **c.)** Given **d.)** 20 x 30 = 600 **4.4D; 4.4G**

4. **a.)** Given **b.)** $^{1}/_{10} + {}^{8}/_{100}$ **c.)** $^{2}/_{10} + {}^{3}/_{100}$ **d.)** $^{0}/_{10} + {}^{8}/_{100}$ **4.2B; 4.3B**

Part 2 – Application Practice

5. **C = 420;** (e.g. 72 rounds to 70; Hence, 70 x 6 = **420**) **4.4D; 4.4G; 4.4H**

6. **300 jellybeans;** (e.g. 936 rounds to 900; 550 rounds to 600; Hence, 900 – 600 = **300**) **4.4A; 4.4G; 4.4H**

7. **a.)** 21: **{1, 3, 7, 21}** **b.)** 24: **{1, 2, 3, 4, 6, 8, 12, 24}** **c.)** 25: **{1, 5, 25}** **d.)** 27: **{1, 3, 9, 27}** **e.)** 28: **{1, 2, 4, 7, 14, 28}** **4.4D**
f.) 30: **{1, 2, 3, 5, 6, 10, 15, 30}** **g.)** 32: **{1, 2, 4, 8, 16, 32}** **h.)** 33: **{1, 3, 11, 33}** **NOTE: See Note in Problem 8; LO 64 on Factor Strings.**

8. **D = 7 inches;** (e.g. 21: {1, 3, **7**, 21} and 28: {1, 2, 4, **7**, 14, 28}; Hence, only common factors are 1 and **7** – Only 7 works with area values) **4.4D; 4.4H**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 22 x 41 = 902; **Diagram 1:** 902, 22 in circles, 41 in square; **Diagram 2:** 902; 41 in circles; 22 in square **4.4C; 4.4D**

Learning Opportunity 68

Part 1 – Numeracy Development **TEKS**

1. **a.)** Given **b.)** right; 90° **c.)** acute; 30° **d.)** right; 90° **e.)** straight; 180° **f.)** obtuse; 140° **4.6C; 4.7C**
g.) acute; 65° **h.)** acute; 70° **i.)** obtuse; 115° **j.)** acute; 20°
NOTE: If students write the angle type (i.e. acute, obtuse, right, straight) **first**, the reasonableness of the angle measure makes sense.

2. **a.)** 20 x 4 = 80 **b.)** 20 x 40 = 800 **c.)** 30 x 60 = 1,800 **d.)** 70 x 3 = 210 **4.4D; 4.4G**

3. **a.)** $^{5}/_{10} + {}^{6}/_{100}$ **b.)** $^{8}/_{10} + {}^{7}/_{100}$ **4.2B; 4.3C**

Part 2 – Application Practice

4. **B = 5 cages;** (e.g. 27 ÷ 6 = 4 R 3; Hence, **5 cages** are needed. 4 cages with 6 snakes, 1 cage with 3 snakes) **4.4F; 4.4H**

5. **C = 3 snakes;** (e.g. 27 ÷ 6 = 4 R 3; Hence, remainder = 3. 4 cages with 6 snakes, 1 cage with **3 snakes**) **4.4F; 4.4H**

6. **a.)** 21: **{1, 3, 7, 21}** **b.)** 24: **{1, 2, 3, 4, 6, 8, 12, 24}** **c.)** 25: **{1, 5, 25}** **d.)** 27: **{1, 3, 9, 27}** **e.)** 28: **{1, 2, 4, 7, 14, 28}** **4.4D**
f.) 30: **{1, 2, 3, 5, 6, 10, 15, 30}** **g.)** 32: **{1, 2, 4, 8, 16, 32}** **h.)** 33: **{1, 3, 11, 33}** **NOTE: See Note in Problem 8; LO 64 on Factor Strings.**

7. $^{3}/_{8}$; (e.g. $^{2}/_{8} + {}^{3}/_{8} = {}^{5}/_{8}$; Hence, $^{8}/_{8} - {}^{5}/_{8} = {}^{3}/_{8}$) **4.3E**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 25 x 31 = 775; **Diagram 1:** 775, 25 in circles; 1, 2, & 31 in squares; **Diagram 2**: 775; 31 in circles; 25 in square **4.C; 4.4D**

Learning Opportunity 69

Part 1 – Numeracy Development **TEKS**

1. **a.)** Given **b.)** acute; 10° **c.)** acute; 15° **d.)** acute; 15° **e.)** obtuse; 135° **f.)** acute; 80° **4.6C; 4.7C**
g.) obtuse; 130° **h.)** acute; 85° **i.)** acute; 40° **j.)** acute; 50°
NOTE: If students write the angle type (i.e. acute, obtuse, right, straight) **first**, the reasonableness of the angle measure makes sense.

2. **a.)** 90 x 7 = 630 **b.)** 30 x 50 = 1,500 **c.)** 40 x 90 = 3,600 **d.)** 60 x 20 = 1,200 **4.4D; 4.4G**

3. **a.)** $^{0}/_{10} + {}^{9}/_{100}$ **b.)** $2 + {}^{5}/_{10} + {}^{8}/_{100}$ **4.2B; 4.3B**

Part 2 – Application Practice

4. **C = 3,000 trees;** (e.g.45 rounds 50; 62 rounds 60; Hence, 50 x 60 = **3,000**) **4.4D; 4.4G; 4.4H**

5. **C = 22 cm;** (e.g. 15 + 15 = 30; Hence, 52 – 30 = **22 cm**) **4.4A; 4.5D**

6. **a.)** 28: **{1, 2, 4, 7, 14, 28}** **b.)** 30: **{1, 2, 3, 5, 6, 10, 15, 30}** **c.)** 32: **{1, 2, 4, 8, 16, 32}** **d.)** 27: **{1, 3, 9, 27}** **4.4D**
e.) 36: **{1, 2, 3, 4, 6, 9, 12, 18, 36}** **f.)** 40: **{1, 2, 4, 5, 8, 10, 20, 40}** **g.)** 45: **{1, 3, 5, 9, 15, 45}** **h.)** 49: **{1, 7, 49}**

7. $^{7}/_{6}$; (e.g. $^{2}/_{6} + {}^{3}/_{6} = {}^{5}/_{6}$; Hence, $^{12}/_{6} - {}^{5}/_{8} = {}^{7}/_{6}$) **NOTE:** It is highly recommended to show equations as well as counting fraction pieces in a picture. Students must readily understand that $^{12}/_{6}$ is equivalent to the whole number 2. **4.3E**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 49 x 50 = 2,450; **Diagram 1:** 2,450; 49 in circles; 1, 2, & 50 in squares; **Diagram 2**: 2,450; 50 in circles; 1, 2, & 49 in squares. **4.4C; 4.4D**

Learning Opportunity 70

Part 1 – Numeracy Development **TEKS**

1. **a.)** acute; 30° **b.)** obtuse; 100° **c.)** right; 90° **d.)** straight; 180° **e.)** acute; 5° **f.)** acute; 50° **4.6C; 4.7C**
   g.) acute; 30° **h.)** acute; 20° **i.)** right; 90° **j.)** acute; 70°
   NOTE: If students write the angle type (i.e. acute, obtuse, right, straight) **first**, the reasonableness of the angle measure makes sense.
2. **a.)** 10 x 3 = 30 **b.)** 70 x 30 = 2,100 **c.)** 70 x 90 = 6,300 **d.)** 70 x 20 = 1,400 **4.4D; 4.4G**
3. **a.)** $1 + {}^{2}/_{10} + {}^{9}/_{100}$ **b.)** $3 + {}^{0}/_{10} + {}^{4}/_{100}$ **4.2B; 4.3B**

Part 2 – Application Practice

4. **B = 1,625 soldiers;** (e.g. 65 x 25 = **1,625**) **4.4D; 4.4H**
5. **1,464 pandas;** (e.g. 11,556 – (2,654 + 7,438) = **1,464 panda bears**) **4.4A; 4.4H**
6. **a.)** 36: **{1, 2, 3, 4, 6, 9, 12, 18, 36}** **b.)** 40: **{1, 2, 4, 5, 8, 10, 20, 40}** **c.)** 45: **{1, 3, 5, 9, 15, 45}** **d.)** 49: **{1, 7, 49}** **4.4D**
7. **D = 40°;** (e.g. 120 – 80 = ? or 80 + ? = 120; Hence, ? = **40 degrees**) **4.7E**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Yes **b.)** Yes **c.)** No **4.6C**

Learning Opportunity 71

Part 1 – Numeracy Development **TEKS**

1. **a.)** 30° **b.)** 20° **c.)** 50° **d.)** Given **e.)** 80° **f.)** 90° **4.6C; 4.7C; 4.7E**
   g.) 10° **h.)** 130° **i.)** 100° **j.)** 150°
2. **a.)** Given **b.)** 1 vertex **c.)** 0 vertices **d.)** 2 vertices **4.6A**
3. **a.)** $7 + {}^{0}/_{10} + {}^{6}/_{100}$ **b.)** $10 + 6 + {}^{0}/_{10} + {}^{4}/_{100}$ **4.2B; 4.3B**

Part 2 – Application Practice

4. **B = ∠ ROT;** (e.g.∠ **ROS** = 30° and∠ **SOT** = 20°; Hence, 30° + 20° = 50° =∠ **ROT**) **4.7E**
5. **Mia;** (e.g. 730 – 115 = **615** = **Mia**) **4.4A; 4.4H**
6. **a.)** 36: **{1, 2, 3, 4, 6, 9, 12, 18, 36}** **b.)** 40: **{1, 2, 4, 5, 8, 10, 20, 40}** **c.)** 45: **{1, 3, 5, 9, 15, 45}** **d.)** 49: **{1, 7, 49}** **4.4D**
7. **C = ∠ RAT = 105°;** (e.g. 70° + 35° = **105°** =∠ **RAT**) **4.7E**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Yes **b.)** Yes **c.)** No **4.6C**

Learning Opportunity 72

Part 1 – Numeracy Development **TEKS**

1. **a.)** 45° **b.)** 20° **c.)** 55° **d.)** 65° **e.)** 75° **f.)** 10° **4.6C; 4.7C; 4.7E**
   g.) 50° **h.)** 15° **i.)** 60° **j.)** 65°
2. **a.)** 1 vertex **b.)** 4 vertices **c.)** 0 vertices **d.)** 5 vertices **4.6A**
3. **a.)** $200 + 10 + 3 + {}^{5}/_{10} + {}^{4}/_{100}$ **b.)** $50 + 6 + {}^{7}/_{10}$ **4.2B; 4.3B**

Part 2 – Application Practice

4. **C = ∠ JOD;** (e.g.∠ **JOG** = 60° and∠ **DOG** = 55°; Hence, 60° + 55° = 115° =∠ **JOD**) **4.7E**
5. **$^{9}/_{5}$ minus $^{6}/_{5}$ equals $^{3}/_{5}$;**  **3.3A; 4.3E**
6. **a.)** 36: **{1, 2, 3, 4, 6, 9, 12, 18, 36}** **b.)** 40: **{1, 2, 4, 5, 8, 10, 20, 40}** **c.)** 45: **{1, 3, 5, 9, 15, 45}** **d.)** 49: **{1, 7, 49}** **4.4D**
7. **C = ∠ CAT = 125°;** (e.g. 95° + 30° = **125°** =∠ **CAT**) **4.7E**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Obtuse **b.)** Right **c.)** Acute **4.6C**

Learning Opportunity 73

Part 1 – Numeracy Development **TEKS**

1. **a.)** Given **b.)** acute; KOM **c.)** acute; KOL **d.)** obtuse; KOR **e.)** 45° **f.)** acute; VOS **4.6C; 4.7C; 4.7E**
g.) acute; VOT **h.)** obtuse; NOV **i.)** acute; VOR **j.)** 30°
NOTE: Instruct students to **look** at the angle measure value (45 degrees) on the protractor to recognize the specific angle (KOM).

2. **a.)** Given **b.)** PF **c.)** IF **d.)** MN **e.)** MN **f.)** PF **3.1D**: **4.1F**

3. **a.)** Given **b.)** 1 **c.)** 0 **d.)** ½ **e.)** ½ **f.)** 1 **4.3F**
NOTE: Instruct students to look at the relative size of the numerator and denominator. How much of the numerator is shaded compared to denominator? Is the numerator about **half** of the denominator? If so, the fraction is about ½. Is the numerator almost all shaded? Then, the fraction is about 1.

Part 2 – Application Practice

4. **C = 90°** (e.g. Angle NOK = 70 degrees; Angle PON = 20 degrees; Hence, 70 + 20 = **90**) **4.7E**

5. **$^4/_5$ plus $^1/_5$ equals $^5/_5$;**  **3.3A; 4.3E**

6. **a.)** Given **b.)** = **c.)** > **d.)** > **e.)** < **f.)** < **4.2F**
NOTE: Add zeros as needed for students to compare decimals as money. For instance: 0.9 = 0.90; 9 dimes = 90 pennies. **4.4G; 4.4H**

7. **D = 2,200;** (e.g. 29 rounds to 30; 15 rounds to 20; 30 x 20 = 600; 41 rounds to 40; 35 rounds to 40; 40 x 40 = 1,600; 600 + 1,600 = **2,200**) **4.4A; 4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Acute **b.)** Obtuse **c.)** Right **4.6C**

Learning Opportunity 74

Part 1 – Numeracy Development **TEKS**

1. **a.)** Given **b.)** obtuse; ROW **c.)** acute; ROT **d.)** obtuse; ROX **e.)** acute; ROV **f.)** acute; XOZ **4.6C; 4.7C**
g.) acute; YOZ **h.)** acute; WOZ **i.)** obtuse; SOZ **j.)** obtuse; ROZ
NOTE: Instruct students to **look** at the angle measure value (45 degrees) on the protractor to recognize the specific angle (KOM).

2. **a.)** IF **b.)** IF **c.)** MN **d.)** MN **e.)** PF **f.)** IF **3.1D**: **4.1F**

3. **a.)** 0 **b.)** 1 **c.)** ½ **d.)** 1 **e.)** ½ **f.)** 0 See **NOTE** LO 73 **4.3F**

Part 2 – Application Practice

4. **A = 37°** (e.g. Angle YOZ = 13 degrees; Angle PON = 24 degrees; Hence, 13 + 24 = **37**) **4.7E**

5. **$^1/_2$ plus $^2/_2$ equals $^3/_2$;**  **3.3A; 4.3E**

6. **a.)** > **b.)** = **c.)** < **d.)** = **e.)** > **f.)** < **4.2F**
NOTE: Add zeros as needed for students to compare decimals as money. For instance: 0.9 = 0.90; 9 dimes = 90 pennies.

7. **C = 6:40 PM;** (e.g. 4:30 + 2:10 = **6:40**) **4.4A; 4.8C**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Right **b.)** Obtuse **c.)** Acute **4.6C**

Learning Opportunity 75

Part 1 – Numeracy Development **TEKS**

1. **a.)** Given **b.)** obtuse; COG **c.)** obtuse; COH **d.)** acute; HOK **e.)** acute; JOK **f.)** acute; COF **4.6C; 4.7C**
g.) obtuse; FOK **h.)** acute; GOK **i.)** obtuse; COJ **j.)** obtuse; EOK
NOTE: Instruct students to **look** at the angle measure value (45 degrees) on the protractor to recognize the specific angle (KOM).

2. **a.)** PF **b.)** IF **c.)** MN **d.)** MN **e.)** IF **f.)** PF **3.1D**: **4.1F**

3. **a.)** 1 **b.)** ½ **c.)** 1 **d.)** 0 **e.)** 1 **f.)** ½ See **NOTE** LO 73 **4.3F**

Part 2 – Application Practice

4. **Angle FAT = 109°** (e.g. 47 + 62 = **109**) **4.7E**

5. $^1/_2$  plus **$^2/_2$** equals **$^3/_2$;**  **3.3A; 4.3E**

6. **a.)** > **b.)** < **c.)** = **d.)** = **e.)** < **f.)** = **4.2F**
NOTE: Add zeros as needed for students to compare decimals as money. For instance: 0.9 = 0.90; 9 dimes = 90 pennies.

7. **C = 12 kg;** (e.g. square block = 2 kg + 2 kg = 4 kg; ? triangle = 4 kg + 4 kg + 4 kg = 3 x 4 kg = **12 kg.**) **4.4A; 4.4C; 4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Given **b.)** About 20° **c.)** About 85° **d.)** About 100° **e.)** About 10° **4.6C**
NOTE: Students should practice using both hands making 45 degree, 90 degree – 135 degree and 180 degree angles. A couple practice times during math for a minute on each of these 4 angle measures for a week, and they will have a tactile tool that is readily available at all times to identify angle measures between 0° and 180°.

Learning Opportunity 76

Part 1 – Numeracy Development **TEKS**

1. **a.)** Given **b.)** obtuse; FON **c.)** obtuse; FOL **d.)** right; FOK; POK **e.)** straight; FOP **f.)** acute; FOJ **4.6C; 4.7C**
g.) obtuse; POJ **h.)** acute; FOH **i.)** acute; FOG **j.)** obtuse; GOP

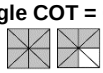
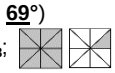
NOTE: Instruct students to **look** at the angle measure value (45 degrees) on the protractor to recognize the specific angle (KOM).

2. **a.)** IF **b.)** MN **c.)** PF **d.)** IF **e.)** MN **f.)** IF **3.1D; 4.1F**

3. **a.)** 1 **b.)** ½ **c.)** 0 **d.)** ½ **e.)** 1 **f.)** ½ See **NOTE** LO 73 **4.3F**

Part 2 – Application Practice

4. **Angle COT = 69°** (e.g. 152 - 83 = **69°**) **4.7E**

5. $^{14}/_{8}$  minus $^{5}/_{8}$ equals $^{9}/_{8}$;  **3.3A; 4.3E**

6. **a.)** > **b.)** < **c.)** > **d.)** = **e.)** > **f.)** > **4.2F**

NOTE: Add zeros as needed for students to compare decimals as money. For instance: 0.9 = 0.90; 9 dimes = 90 pennies.

7. **C = 50 kg;** (e.g. square block = 15 kg - 5 kg = 10 kg; Hence, **? pentagon** = 5 x 10 kg = **50 kg.)** **4.4C; 4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Given **b.)** About 45° **c.)** About 20° **d.)** About 90° **e.)** About 100° **4.6C**

NOTE: Students should practice using both hands making 45 degree, 90 degree – 135 degree and 180 degree angles. A couple practice times during math for a minute on each of these 4 angle measures for a week, and they will have a tactile tool that is readily available at all times to identify angle measures between 0° and 180°.

Learning Opportunity 77

Part 1 – Numeracy Development **TEKS**

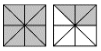
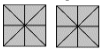
1. **Review student work on a.) b.) c.) d.) e.)** **NOTE:** Recommendation: Place pencil point on angle vertex and use ruler to rotate on fixed point to align with angle value. **4.6C; 4.7C**

2. **a.)** 0 **b.)** 1 **c.)** ½ **d.)** 0 **e.)** ½ **f.)** 1 **3.1D; 4.1F**

3. **a.)** 0 **b.)** 0 **c.)** 1 **d.)** 0 **e.)** ½ **f.)** 0 **4.3F**

Part 2 – Application Practice

4. **a.)** 9:45 **b.)** 9:10 **c.)** 7:55 **4.4A; 4.8C**

5. $^{11}/_{8}$  plus $^{5}/_{8}$ equals $^{16}/_{8}$;  **3.3A; 4.3E**

6. **B = 2,100; 2,015;** (e.g. 65 rounds to 70; 31 rounds to 30; Estimate: 70 x 30 = **2,100**; 65 x 31 = **2,015**) **4.4D; 4.4G; 4.4H**

7. **D = 60 kg;** (e.g. square block = 25 kg – (2 x 7 kg) = 11 kg; Hence, **? hexagon** = (6 x 11 kg) – 6 kg = **60 kg.)** **4.4C; 4.4D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Given **b.)** About 120° **c.)** About 45° **d.)** About 80° **e.)** About 90° **4.6C**

NOTE: Students should practice using both hands making 45 degree, 90 degree – 135 degree and 180 degree angles. A couple practice times during math for a minute on each of these 4 angle measures for a week, and they will have a tactile tool that is readily available at all times to identify angle measures between 0° and 180°.

Learning Opportunity 78

Part 1 – Numeracy Development **TEKS**

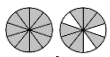
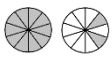
1. **Review student work on a.) b.) c.) d.) e.)** **NOTE:** Recommendation: Place pencil point on angle vertex and use ruler to rotate on fixed point to align with angle value. **4.7D**

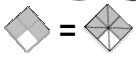
2. **a.)** 1 **b.)** 1 **c.)** ½ **d.)** 0 **e.)** 1 **f.)** 0 **3.1D; 4.1F**

3. **a.)** 0 **b.)** ½ **c.)** 1 **d.)** 0 **e.)** ½ **f.)** 0 **4.3F**

Part 2 – Application Practice

4. **a.)** 10:40 **b.)** 8:45 **c.)** 12:55 **4.4A; 4.8C**

5. $^{17}/_{10}$  minus $^{5}/_{10}$  equals $^{12}/_{10}$;  **3.3A; 4.3E**

6.  **4.3C**

7. **C = 5 hours;** (e.g. 398 rounds to 400; 80 x N = 400 or 400 ÷ 80 = **5**) **4.4D; 4.4F; 4.4G/ 4.4H**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Given **b.)** About 45° **c.)** About 20° **d.)** About 80° **e.)** About 175° **4.6C**

NOTE: Students should practice using both hands making 45 degree, 90 degree – 135 degree and 180 degree angles. A couple practice times during math for a minute on each of these 4 angle measures for a week, and they will have a tactile tool that is readily available at all times to identify angle measures between 0° and 180°.

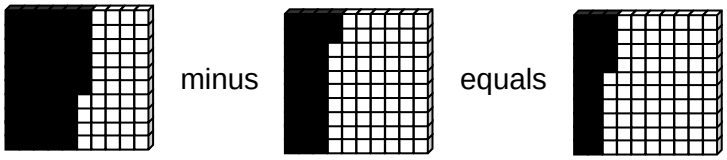
Learning Opportunity 79

Part 1 – Numeracy Development **TEKS**

1. **Review student work on a.) b.) c.) d.) e.)** **NOTE:** Recommendation: Place pencil point on angle vertex and use ruler to rotate on fixed point to align with angle value. **4.7D**
2. **a.)** 1 **b.)** 0 **c.)** ½ **d.)** 0 **e.)** ½ **f.)** ½ **3.1D; 4.1F**
3. **a.)** 1 **b.)** 0 **c.)** 0 **d.)** 1 **e.)** ½ **f.)** ½ **4.3F**

Part 2 – Application Practice

4. **Perimeter =** (8 + (X = 8) + 4 + 6 + 4 + 2 = **32 m**); **Area =** ((4 x 6) + (8 x 2) = **40 m²**) **4.4A; 4.4D; 4.5D**
5. $^{56}/_{100}$ minus $^{32}/_{100}$ equals $^{24}/_{100}$; **3.3A; 4.3E**



6. **Answers Vary** (e.g. ¼ = $^{2}/_{8}$; $^{2}/_{4}$ = $^{4}/_{8}$; ¾ = $^{6}/_{8}$; $^{4}/_{4}$ = $^{8}/_{8}$) **4.3C**
7. **C = 50;** (e.g. 25; x 2 equals 50; ÷ 5 equals 10; half 10 equals 5; 3 x 5 equals 15; 2 x 15 equals 30; subtract 5 = 25 x 2 = **50**) **4.4A; 4.4D; 4.4F**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** Given **b.)** About 90° **c.)** About 60° **d.)** About 150° **e.)** About 10° **4.6C**

NOTE: Students should practice using both hands making 45 degree, 90 degree – 135 degree and 180 degree angles. A couple practice times during math for a minute on each of these 4 angle measures for a week, and they will have a tactile tool that is readily available at all times to identify angle measures between 0° and 180°.

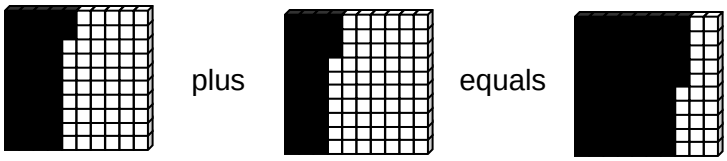
Learning Opportunity 80

Part 1 – Numeracy Development **TEKS**

1. **Review student work on a.) b.) c.) d.) e.)** **NOTE:** Recommendation: Place pencil point on angle vertex and use ruler to rotate on fixed point to align with angle value. **4.7D**
2. **a.)** 0 **b.)** ½ **c.)** 1 **d.)** 1 **e.)** 0 **f.)** ½ **3.1D; 4.1F**
3. **a.)** 0 **b.)** 1 **c.)** 1 **d.)** ½ **e.)** 0 **f.)** ½ **4.3F**

Part 2 – Application Practice

4. **Perimeter =** (50 + 40 + (Y = 30) + 20 + 20 + 60 = **220 ft.**); **Area =** ((50 x 40) + (20 x 20) = **2,400 ft.²**) **4.4A; 4.4D; 4.5D**
5. $^{42}/_{100}$ plus $^{33}/_{100}$ equals $^{75}/_{100}$; **3.3A; 4.3E**



6. **Answers Vary** (e.g. $^{1}/_{5}$ = $^{2}/_{10}$; $^{2}/_{5}$ = $^{4}/_{10}$; $^{3}/_{5}$ = $^{6}/_{10}$; $^{4}/_{5}$ = $^{8}/_{10}$; $^{5}/_{5}$ = $^{10}/_{10}$) **4.3C**
7. **B = 10;** (e.g. 5; + 20 equals 25; x 2 equals 50; - 40 equals **10**) **NOTE:** Students must work backwards by reversing the operation to obtain the original number; then test forward to ensure that their answer is correct: 10, (+ 40), (÷ 2), (- 20) = **5** – checks. **4.4A; 4.4D; 4.4F**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **a.)** About 45° **b.)** About 90° **c.)** About 60° **d.)** About 175° **e.)** About 135° **4.6C**

NOTE: Students should practice using both hands making 45 degree, 90 degree – 135 degree and 180 degree angles. A couple practice times during math for a minute on each of these 4 angle measures for a week, and they will have a tactile tool that is readily available at all times to identify angle measures between 0° and 180°.