

Grade 5 MATH Fall STAAR™ Walk



80 Daily Learning Opportunities

*“Journey of
Knowledge”*

Fall Semester

No part of this instructional resource can be reproduced or transmitted in any form beyond the licensee's grade level without the written consent of Amara Publishing, LLC using either electronic, digital or mechanical means to include: photocopying, scanning, recording, any digital information storage, transfer and retrieval system. Unlicensed use of copyrighted products is prohibited under Federal copyright provenance statutes of the United States government.

If another school, grade level or district wants to implement Amara Publishing, LLC educational products in their classrooms, that school, grade level or district must purchase a copy license per product per grade level. Amara Publishing, LLC materials must remain at the licensed or purchasing school or grade level and not transferred to another school by school personnel, parents or educational advocates.

Site licenses, information and product purchases can be made at the amara4education.com website - Contact information below.

Telephone: 512 – 669 – 3678

Email: bahelwig@gmail.com

Website: thenew3rseducationconsulting.com

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



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

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 is separated into Numeracy Development and Application Rigor.

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

Introduction and Implementation – Bridge Resource

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.

Introduction and Implementation – Bridge Resource

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 (3rd) 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 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 our students.

Thank you,

Amara

Bridge Resource - Table of Contents	
Section 1	Daily Learning Opportunities (01 – 80)
Section 2	Daily Learning Opportunities (01 – 80) Answer Key



Grade 5

Mathematics

for STAAR

Fall Semester

80 Daily Learning Opportunities

Student Name: _____

Teacher Name: _____





— PART 1: Numeracy Development —

<p>1. Find the <u>sum</u>:</p> <p>a.) $10 + 37 = \square$</p> <p>b.) $62 + 20 = \square$</p> <p>c.) $\begin{array}{r} 48 \\ + 61 \\ \hline \end{array}$ d.) $\begin{array}{r} 85 \\ + 27 \\ \hline \end{array}$</p>	<p>2. Find the <u>difference</u>:</p> <p>a.) $\begin{array}{r} 67 \\ - 32 \\ \hline \end{array}$ b.) $\begin{array}{r} 54 \\ - 26 \\ \hline \end{array}$</p> <p>c.) $\begin{array}{r} 92 \\ - 52 \\ \hline \end{array}$ d.) $\begin{array}{r} 80 \\ - 34 \\ \hline \end{array}$</p>	<p>3. Find the missing <u>addend</u> to sum 100.</p> <p>a.) $80 + \underline{\quad} = 100$</p> <p>b.) $50 + \underline{\quad} = 100$</p> <p>c.) $90 + \underline{\quad} = 100$</p> <p>d.) $70 + \underline{\quad} = 100$</p>	<p>4. Is the number <u>even or odd</u>?</p> <p>a.) $6 \Rightarrow \underline{\quad}$</p> <p>b.) $31 \Rightarrow \underline{\quad}$</p> <p>c.) $64 \Rightarrow \underline{\quad}$</p> <p>d.) $0 \Rightarrow \underline{\quad}$</p>
<p>5. Expand each number to show each digit's <u>value</u>.</p> <p>a.) $22,307 = \underline{20,000 + 2,000 + 300 + 0 + 7}$</p> <p>b.) $8,029 = \underline{\hspace{10em}}$</p> <p>c.) $13,080 = \underline{\hspace{10em}}$</p> <p>d.) $39,705 = \underline{\hspace{10em}}$</p>		<p>6. Fact Family Review.</p> <p style="text-align: center;">$5 + 6 = 11$</p> <hr style="width: 80%; margin: auto;"/> <p style="text-align: center;">$11 - 6 = 5$</p> <hr style="width: 80%; margin: auto;"/>	

— PART 2: Application Practice —

<p>7. Bill is thinking of a number. It is a <u>two digit number</u> that is <u>greater</u> than 41. The number is also an <u>odd number</u>. Find Bill's number.</p> <p>(A) 28 (C) 109</p> <p>(B) 42 (D) 73</p>	<p>8. Carolyn has 91 plants in her garden. If she removes 62 plants, what will be the total number of plants that remain in her garden?</p> <p>(A) 27 (C) 9</p> <p>(B) 22 (D) 29</p>
<p>9. A teacher wrote the number, "20,589" on the classroom white board. What is the <u>place value</u> and <u>value</u> of the '0' digit in that number?</p> <div style="border: 1px solid black; height: 30px; width: 100%; margin-top: 10px;"></div>	<p>10. Bojing is 19 years old. His brother, Chao-Lin, is 13 years older than Bojing. How old is Chao-Lin?</p> <div style="border: 1px solid black; height: 30px; width: 100%; margin-top: 10px;"></div>

— PART 3: Reflection and Conceptual Understanding —

Math equations may have parenthesis - (). The parenthesis mean the following, "Do my math first!"

Find the answer to each of the math equations below.

a.) $(5 + 3) - 2 = \square$ b.) $10 - (1 + 3) = \square$ c.) $(4 + 2) + (1 + 0) = \square$



PART 1: Numeracy Development

<p>1. Find the <u>sum</u>:</p> <p>a.) $40 + 42 = \square$</p> <p>b.) $78 + 30 = \square$</p> <p>c.) $\begin{array}{r} 428 \\ + 641 \\ \hline \end{array}$ d.) $\begin{array}{r} 994 \\ + 207 \\ \hline \end{array}$</p>	<p>2. Find the <u>difference</u>:</p> <p>a.) $\begin{array}{r} 99 \\ - 8 \\ \hline \end{array}$ b.) $\begin{array}{r} 70 \\ - 43 \\ \hline \end{array}$</p> <p>c.) $\begin{array}{r} 192 \\ - 28 \\ \hline \end{array}$ d.) $\begin{array}{r} 850 \\ - 334 \\ \hline \end{array}$</p>	<p>3. Find the missing <u>addend</u> to sum 100.</p> <p>a.) $40 + \underline{\quad} = 100$</p> <p>b.) $60 + \underline{\quad} = 100$</p> <p>c.) $30 + \underline{\quad} = 100$</p> <p>d.) $10 + \underline{\quad} = 100$</p>	<p>4. Is the number <u>even or odd</u>?</p> <p>a.) $59 \Rightarrow \underline{\quad}$</p> <p>b.) $231 \Rightarrow \underline{\quad}$</p> <p>c.) $564 \Rightarrow \underline{\quad}$</p> <p>d.) $100 \Rightarrow \underline{\quad}$</p>
<p>5. Expand each number to show each digit's <u>value</u>.</p> <p>a.) $64,470 = \underline{\hspace{2cm}}$</p> <p>b.) $48,002 = \underline{\hspace{2cm}}$</p> <p>c.) $17,000 = \underline{\hspace{2cm}}$</p> <p>d.) $80,301 = \underline{\hspace{2cm}}$</p>		<p>6. Fact Family Review.</p> <p style="text-align: center;">$3 + 9 = 12$</p> <p>_____</p> <p>_____</p> <p>_____</p>	

PART 2: Application Practice

<p>7. Jasmine is thinking of a number that is even and a 3-digit number. Which of the numbers below is Jasmine's?</p> <p>(A) 88 (C) 996</p> <p>(B) 421 (D) 687</p>	<p>8. Jesus and Max collected butterflies. Jesus had 246 butterflies in his collection and Max had 450. How many more butterflies does Max have than Jesus?</p> <p>(A) 204 (C) 796</p> <p>(B) 214 (D) 216</p>
<p>9. Luz wrote the number 50,346 in her notebook. What is the place value and value of the 5 in that number?</p> <p style="text-align: center; border: 1px solid black; width: 300px; height: 30px; margin: 10px auto;"></p>	<p>10. Bettina is 20 years old. Pat is half the age of Bettina, and Pat is 6 years older than Luis. What are Pat and Luis' ages?</p> <p style="text-align: center; margin: 10px auto;">Pat = _____ Luis = _____</p>

PART 3: Reflection and Conceptual Understanding

Math equations may have parenthesis - (). The parenthesis mean the following, "Do my math first!" Find the answer to each of the math equations below.

a.) $(8 + 7) - 6 = \square$ b.) $12 - (9 - 4) = \square$ c.) $(2 + 8) + (4 + 3) = \square$



— PART 1: Numeracy Development —

<p>1. Find the <u>sum</u>:</p> <p>a.) $\begin{array}{r} 428 \\ + 641 \\ \hline \end{array}$ b.) $\begin{array}{r} 356 \\ + 409 \\ \hline \end{array}$</p>	<p>2. Find the <u>difference</u>:</p> <p>a.) $\begin{array}{r} 921 \\ - 240 \\ \hline \end{array}$ b.) $\begin{array}{r} 706 \\ - 449 \\ \hline \end{array}$</p>	<p>3. Find the missing <u>addend</u> to sum 100.</p> <p>a.) $50 + \underline{\hspace{2cm}} = 100$</p> <p>b.) $20 + \underline{\hspace{2cm}} = 100$</p>	<p>4. Is the number <u>even or odd</u>?</p> <p>a.) $1,009 \Rightarrow \underline{\hspace{2cm}}$</p> <p>b.) $964 \Rightarrow \underline{\hspace{2cm}}$</p>
--	---	--	---

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

a.) Multiples of 1: 0, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

b.) Multiples of 10: 0, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

<p>6. Expand each number to show each digit's <u>value</u>.</p> <p>a.) $90,082 =$ _____</p> <p>b.) $61,320 =$ _____</p> <p>c.) $34,000 =$ _____</p>	<p>7. Write the Fact Family for 4, 12, and 8.</p> <p>_____</p> <p>_____</p> <p>_____</p>
--	---

— PART 2: Application Practice —

<p>8. Find the number that is between 150 and 400 and is even.</p> <p>(A) 177 (C) 402</p> <p>(B) 200 (D) 148</p>	<p>9. The distance between Los Angeles and San Francisco is 382 miles. What is the total distance when a person travels from Los Angeles to San Francisco and back to Los Angeles?</p> <p>(A) 764 (C) 754</p> <p>(B) 191 (D) 664</p>
--	--

<p>10. The <i>5th Grade Daily Math Challenge</i> required students to write the number that has 7 ten thousands, 4 tens, 3 ones, 2 hundreds and 0 thousands. Write the number in standard form on the line below.</p> <p style="text-align: center;">_____</p>	<p>11. Jeff's age is double that of Dan's. If Dan is 12 years old, what is Jeff's age?</p> <p style="text-align: right;">Jeff = _____</p>
--	---

— PART 3: Reflection and Conceptual Understanding —

Math equations may have parenthesis - (). The parenthesis mean the following, "Do my math first!" Find the answer to each of the math equations below.

a.) $(13 - 7) - 5 = \square$ b.) $12 + (9 - 4) = \square$ c.) $(2 + 8) - (4 + 1) = \square$



PART 1: Numeracy Development

1. Find the sum:

a.) $\begin{array}{r} 676 \\ + 843 \\ \hline \end{array}$ b.) $\begin{array}{r} 929 \\ + 809 \\ \hline \end{array}$

2. Find the difference:

a.) $\begin{array}{r} 775 \\ - 369 \\ \hline \end{array}$ b.) $\begin{array}{r} 600 \\ - 387 \\ \hline \end{array}$

3. Add up to find the missing addend.

a.) $95 + \underline{\hspace{2cm}} = 100$
b.) $85 + \underline{\hspace{2cm}} = 100$

4. Is the number even or odd?

a.) $13,072 \Rightarrow \underline{\hspace{2cm}}$
b.) $21,965 \Rightarrow \underline{\hspace{2cm}}$

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

- a.) Multiples of 1: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____
- b.) Multiples of 10: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

6. Expand each number to show each digit's value.

- a.) $130,082 =$ _____
- b.) $321,605 =$ _____
- c.) $409,190 =$ _____

PART 2: Application Practice

7. The teacher wrote the following two **addends** on the board: 6 and 9.

Write the **fact family** for the two addends on the lines below.

8. The table shows the number of ounces in two bottles each containing both soda and water.

Container	Soda	Water
Bottle 1	21 oz.	7 oz.
Bottle 2	19 oz.	15 oz.

Use the data in the table to answer the questions.

- a.) What is the total ounces of liquid in bottle 2?

- b.) How much more soda than water is in both bottles 1 and 2?

9. Use the data in the box to compose the number in **standard form** on the line below.

5 thousands; 2 tens; 9 ten thousands;
0 ones; 0 hundreds; 3 hundred thousands

PART 3: Reflection and Conceptual Understanding

Making 100 by **adding up**.

Fill in the missing numbers.

$\begin{array}{|c|} \hline + 5 \\ \hline \end{array}$ $\begin{array}{|c|} \hline + 20 \\ \hline \end{array}$

75 80 100

75 $\begin{array}{|c|} \hline 25 \\ \hline \end{array}$ ✓

$\begin{array}{|c|} \hline + \\ \hline \end{array}$ $\begin{array}{|c|} \hline + \\ \hline \end{array}$

85 90 100

85 $\begin{array}{|c|} \hline \\ \hline \end{array}$ ✓

$\begin{array}{|c|} \hline + \\ \hline \end{array}$ $\begin{array}{|c|} \hline + \\ \hline \end{array}$

55 60 100

55 $\begin{array}{|c|} \hline \\ \hline \end{array}$ ✓

$\begin{array}{|c|} \hline + \\ \hline \end{array}$ $\begin{array}{|c|} \hline + 0 \\ \hline \end{array}$

95 100 100

95 $\begin{array}{|c|} \hline \\ \hline \end{array}$ ✓



PART 1: Numeracy Development

1. Add or Subtract.

a.) $\begin{array}{r} 9,595 \\ + 8,063 \\ \hline \end{array}$ b.) $\begin{array}{r} 5,506 \\ - 2,063 \\ \hline \end{array}$

2. *Make 10.*

8 \Rightarrow $\boxed{2}$ 7 \Rightarrow $\boxed{}$

5 \Rightarrow $\boxed{}$ 9 \Rightarrow $\boxed{}$

3. **Add up** to find the missing addend.

a.) $75 + \underline{\hspace{2cm}} = 100$

b.) $65 + \underline{\hspace{2cm}} = 100$

4. Is the number even or odd?

a.) $33,338 \Rightarrow \underline{\hspace{2cm}}$

b.) $79,370 \Rightarrow \underline{\hspace{2cm}}$

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: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

6. Expand the number to show each digit's value.

760,041 = _____

PART 2: Application Practice

7. Write the correct name of each number.

WORD BANK

subtrahend, sum, minuend, difference, addend

$\begin{array}{r} 6 \\ + 8 \\ \hline 14 \end{array} \Rightarrow \underline{\hspace{2cm}}$ $\begin{array}{r} 9 \\ - 7 \\ \hline 1 \end{array} \Rightarrow \underline{\hspace{2cm}}$

9. The population of Las Vegas, Nevada is 641,578. What is the **place value** and **value** of the 6?

6 \rightarrow _____

8. The table shows the number of boys and girls in the 4th and 5th grade at Graham Elementary.

Grade Level	Boys	Girls
Fourth	69	71
Fifth	58	75

Use the data in the table to answer the questions.

a.) What grade level has more students?

b.) How many more girls are there than boys in the 4th and 5th grades?

PART 3: Reflection and Conceptual Understanding

Making 100 by **adding up**.

Fill in the missing numbers.

$\begin{array}{ccc} \boxed{} & \boxed{} & \\ \swarrow & \searrow & \\ 35 & 40 & 100 \\ \swarrow & \searrow & \\ 35 & \boxed{} & \checkmark \end{array}$

$\begin{array}{ccc} \boxed{} & \boxed{} & \\ \swarrow & \searrow & \\ 15 & 20 & 100 \\ \swarrow & \searrow & \\ 15 & \boxed{} & \checkmark \end{array}$

$\begin{array}{ccc} \boxed{} & \boxed{} & \\ \swarrow & \searrow & \\ 55 & 60 & 100 \\ \swarrow & \searrow & \\ 55 & \boxed{} & \checkmark \end{array}$

$\begin{array}{ccc} \boxed{} & \boxed{} & \\ \swarrow & \searrow & \\ 45 & 50 & 100 \\ \swarrow & \searrow & \\ 45 & \boxed{} & \checkmark \end{array}$



PART 1: Numeracy Development

<p>1. Add or Subtract.</p> <p>a.) $5,817$ b.) $8,003$ $+ 5,465$ $- 4,028$</p>	<p>2. Make 10.</p> <p>4 \Rightarrow <input type="text"/> 5 \Rightarrow <input type="text"/> 8 \Rightarrow <input type="text"/> 7 \Rightarrow <input type="text"/></p>	<p>3. Add up to find the missing <u>addend</u>.</p> <p>a.) $35 + \underline{\hspace{2cm}} = 100$ b.) $25 + \underline{\hspace{2cm}} = 100$</p>	<p>4. Round each to the nearest 10.</p> <p>22 \Rightarrow <u>20</u> 35 \Rightarrow <u> </u> 36 \Rightarrow <u> </u> 11 \Rightarrow <u> </u></p>
--	--	---	---

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: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

6. Expand the number to show each digit's value.

$2,306,808 =$ _____

PART 2: Application Practice

7. Write the correct name of each number.

WORD BANK

sum, difference, subtrahend, minuend, addend

$9 \Rightarrow$ _____ $5 \Rightarrow$ _____
 $7 \Rightarrow$ _____ $3 \Rightarrow$ _____
 $16 \Rightarrow$ _____ $2 \Rightarrow$ _____

9. Last year, 3,025,981 tourists visited Mt. Rushmore in South Dakota. What is the **place value** and **value** of the 3?

3 \rightarrow _____

8. The table shows the number of people that went to the movies on Friday and Sunday at JJ's Theater.

Movie	Friday	Sunday
Lion King	245	579
Avengers	789	855

a.) How many people watched the Avengers on Friday and Sunday? _____

b.) What is the difference between the number of moviegoers watching Avengers rather than the Lion King on Sunday? _____

PART 3: Reflection and Conceptual Understanding

Making 100 by adding up.

Fill in the missing numbers.

<input type="text"/>											
5	10	100	25	30	100	45	50	100	75	80	100
5	<input type="text"/>	✓	25	<input type="text"/>	✓	45	<input type="text"/>	✓	75	<input type="text"/>	✓



PART 1: Numeracy Development

<p>1. Add.</p> $\begin{array}{r} 25,309 \\ + 7,465 \\ \hline \end{array}$	<p>2. Make 10.</p> <p>2 \Rightarrow <input type="text"/> 3 \Rightarrow <input type="text"/></p> <p>0 \Rightarrow <input type="text"/> 1 \Rightarrow <input type="text"/></p>	<p>3. Multiply.</p> $\begin{array}{r} 30 \\ \times 3 \\ \hline \end{array}$ $\begin{array}{r} 51 \\ \times 5 \\ \hline \end{array}$ $\begin{array}{r} 28 \\ \times 2 \\ \hline \end{array}$	<p>4. Round to the nearest 10.</p> <p>73 \Rightarrow ___ 61 \Rightarrow ___ 8 \Rightarrow ___</p> <p>45 \Rightarrow ___ 4 \Rightarrow ___ 13 \Rightarrow ___</p>
---	--	---	--

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

a.) Multiples of 3: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

b.) Multiples of 30: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

c.) Multiples of 4: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

d.) Multiples of 40: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

6. Expand the number to show each digit's value.

43,057,950 = _____

PART 2: Application Practice

7. Write the correct name of each number.

WORD BANK

addend, subtrahend, difference, sum, minuend

$6 \Rightarrow$ _____	$8 \Rightarrow$ _____
$1 \Rightarrow$ _____	$3 \Rightarrow$ _____
$5 \Rightarrow$ _____	$11 \Rightarrow$ _____

9. Write the number that has 5 tens, 3 ones, 9 hundreds, 0 thousands and hundred thousands, 6 millions, 7 ten millions, and 4 ten thousands.

_____, _____, _____

8. Dao saved 32 dollars each month for 9 months. What is the total amount of money Dao saved?

(A) \$ 278 (C) \$ 288

(B) \$ 41 (D) \$ 23

10. Luz placed pennies in the *array* shown on the right. Which equation can be used to find **T**, the total number of pennies?

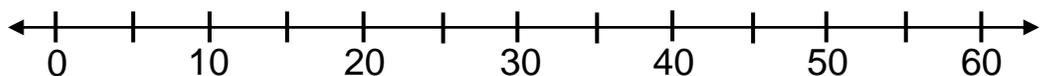
(A) $T = 5 \times 3$ (C) $T = 3 \times 5$

(B) $T = 5 + 5$ (D) Both A and C

PART 3: Reflection and Conceptual Understanding

Draw the arrows () that represent the multiplication equation shown below. Remember that the first arrow must begin at '0'.

$10 \times 4 = 40$





PART 1: Numeracy Development

1. Subtract. $\begin{array}{r} 35,302 \\ - 8,035 \\ \hline \end{array}$	2. Make 100. 90 → <input type="text"/> 75 → <input type="text"/> 85 → <input type="text"/> 50 → <input type="text"/>	3. Multiply. $\begin{array}{r} 20 \\ \times 7 \\ \hline \end{array}$ $\begin{array}{r} 37 \\ \times 6 \\ \hline \end{array}$ $\begin{array}{r} 68 \\ \times 5 \\ \hline \end{array}$	4. Round to the nearest 10. 84 ⇨ ___ 97 ⇨ ___ 2 ⇨ ___ 25 ⇨ ___ 9 ⇨ ___ 65 ⇨ ___
--	--	---	---

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: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

6. Expand the number to show each digit's value.

207,608,730 = _____

PART 2: Application Practice

7. Write the correct number in each box.

Number Bank					
12	4	8	9	3	6

⇨ *minuend* ⇨ *addend*

- ⇨ *subtrahend* + ⇨ *addend*

⇨ *difference* ⇨ *sum*

9. Write the number that has a 9 in the hundred millions place, a 2 in the ten millions place and a 5 in the thousands place. All other digits are equal to 0.

_____, _____, _____

8. On Saturday, Jesus ran 1 mile. He ran 3 miles on both Sunday and Monday. What is the total number of miles, **M**, Jesus ran on all 3 days?

(A) $M = (3 \times 3) - 1$ (C) $M = (3 \times 2) + 1$

(B) $M = (1 \times 1) + 3$ (D) $M = (1 \times 2) + 3$

10. Find the equation **R** for the star array which calculates the total number of stars in the rectangular formation.

★	★	★	★
★	★	★	★
★	★	★	★
★	★	★	★
★	★	★	★

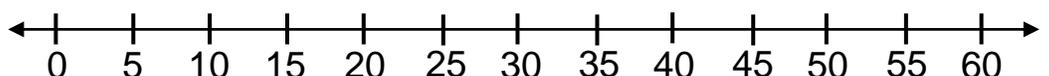
(A) $R = 4 \times 4$ (C) $R = 3 \times 5$

(B) $R = 6 \times 3$ (D) $R = 6 \times 4$

PART 3: Reflection and Conceptual Understanding

Draw the arrows (→) that represent the multiplication equation shown below. Remember that the first arrow must begin at '0'.

15 x 3 = 45





— PART 1: Numeracy Development —

<p>1. Add.</p> $\begin{array}{r} 32,367 \\ + 44,815 \\ \hline \end{array}$	<p>2. Make 100.</p> <p>55 → <input style="width: 30px; height: 30px;" type="text"/> 15 → <input style="width: 30px; height: 30px;" type="text"/></p> <p>25 → <input style="width: 30px; height: 30px;" type="text"/> 20 → <input style="width: 30px; height: 30px;" type="text"/></p>	<p>3. Multiply.</p> $\begin{array}{r} 70 \\ \times 8 \\ \hline \end{array}$ $\begin{array}{r} 59 \\ \times 6 \\ \hline \end{array}$ $\begin{array}{r} 25 \\ \times 6 \\ \hline \end{array}$	<p>4. Round to the nearest 100.</p> <p>184 ↻ _____ 74 ↻ _____ 245 ↻ _____</p> <p>135 ↻ _____ 23 ↻ _____ 350 ↻ _____</p>
--	---	---	---

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: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

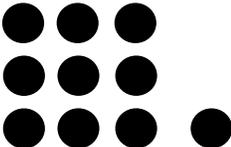
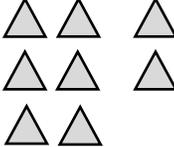
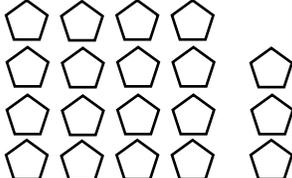
d.) Multiples of 50: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

6. Expand the number to show each digit's value.

480,702,506 = _____

— PART 2: Application Practice —

7. Complete the math equation for each figure to compute the total number of objects.

			
$M = (3 \times 3) + 1$	$T = (_ \times _) + _$	$H = (_ \times _) + _$	$K = _ + (_ \times _)$

8. Write the number that has a:

- 5 in the hundred millions and hundreds place.
- 2 in the hundred thousands and ones place.
- 3 tens and zero (0) in all other place locations.

_____ , _____ , _____

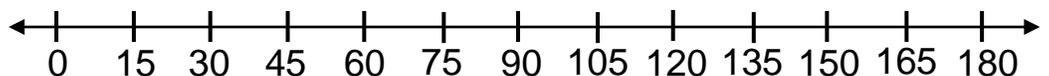
9. Ralph bought a printer for \$ 325 and a computer for 1,680 dollars. How much money did he spend on his technology purchases?

\$

— PART 3: Reflection and Conceptual Understanding —

Draw the arrows () that represent the **multiplication equation** shown below. Remember that the first arrow must begin at '0'.

30 x 5 = 150





PART 1: Numeracy Development

<p>1. Subtract.</p> $\begin{array}{r} 57,005 \\ - 16,849 \\ \hline \end{array}$	<p>2. Make 100.</p> <p>75 → <input type="text"/> 5 → <input type="text"/></p> <p>35 → <input type="text"/> 25 → <input type="text"/></p>	<p>3. Multiply.</p> $\begin{array}{r} 70 \\ \times 23 \\ \hline \end{array}$ $\begin{array}{r} 59 \\ \times 16 \\ \hline \end{array}$	<p>4. Round to the nearest 100.</p> <p>150 ⇨ _____ 580 ⇨ _____ 39 ⇨ _____</p> <p>323 ⇨ _____ 351 ⇨ _____ 509 ⇨ _____</p> <p>470 ⇨ _____ 67 ⇨ _____ 449 ⇨ _____</p>
---	--	---	--

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. Complete the math equation for each figure to compute the total number of objects.

$S = (_ \times _) + _$	$N = (_ \times _) + _$	$A = _ + (_ \times _)$	$K = _ + (_ \times _)$

7. Ricardo makes 12 dollars per hour to work at the local grocery store. If he works 40 hours in one week, how much money will he earn?

Note: per means each.

8. Angela wants to purchase a new car for \$18,464. If she makes \$5,390 selling her old car, how much will the new car cost?

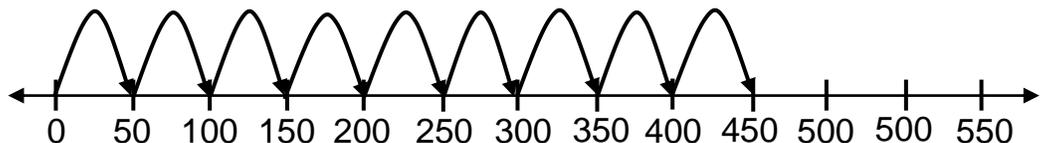
(A) \$ 23,854 (C) \$ 23,754

(B) \$ 13,074 (D) \$ 13,034

PART 3: Reflection and Conceptual Understanding

Write the **multiplication equation** that represents the diagram shown below.

× =



— **PART 1: Numeracy Development** —

1. Make 1 Whole (1.00) $0.80 + \underline{0.20} = 1.00$ $0.60 + \underline{\quad} = 1.00$ $0.50 + \underline{\quad} = 1.00$ $0.90 + \underline{\quad} = 1.00$ $0.20 + \underline{\quad} = 1.00$ $0.70 + \underline{\quad} = 1.00$	2. Multiply. $\begin{array}{r} 68 \\ \times 57 \\ \hline \end{array}$ $\begin{array}{r} 62 \\ \times 12 \\ \hline \end{array}$	3. Round to the nearest 100. $549 \rightarrow \underline{\quad}$ $52 \rightarrow \underline{\quad}$ $841 \rightarrow \underline{\quad}$ $978 \rightarrow \underline{\quad}$ $23 \rightarrow \underline{\quad}$ $850 \rightarrow \underline{\quad}$
---	--	--

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: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

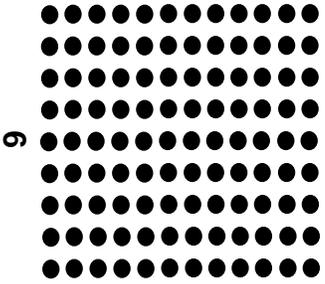
d.) Multiples of 70: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

— **PART 2: Application Practice** —

5. Evaluate and simplify each equation or expression.

$(15 \div 5) - 2 = \boxed{1}$	$2 \times (15 - 5) = \boxed{\quad}$
$(2 \times 3) + 4 = \boxed{\quad}$	$2 \times 3 \times 4 = \boxed{\quad}$
$(6 + 3) - 7 = \boxed{\quad}$	$6 \text{ times } 5 = \boxed{\quad}$

6. Answer the questions about the **array.**

12


What are the array's **factors**?

What is the array's **product**?

7. Dharma drove her car at 65 miles per hour for 10 hours. How many total miles did she drive?
 Note: per means each.

miles

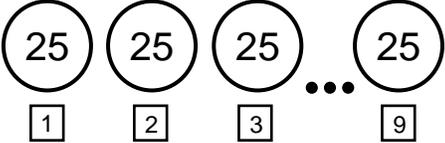
8. Sergio invested 85 dollars in a computer business. His investment doubled in value. How much money does Sergio have now?

(A) \$ 0 (C) \$ 160
 (B) \$ 170 (D) \$ 100

— **PART 3: Reflection and Conceptual Understanding** —

Write the **multiplication equation** and answer the questions on the **group model** diagram below.

___ **x** ___ = ___



- a.) What are the equation's **factors**?

- b.) What is the equation's **product**?

— **PART 1: Numeracy Development** —

1. Make 1 Whole. $0.30 + \underline{\quad} = 1.00$ $0.10 + \underline{\quad} = 1.00$ $0.40 + \underline{\quad} = 1.00$	2. Multiply. $\begin{array}{r} 92 \\ \times 56 \\ \hline \end{array}$	3. Round to nearest 1,000. $5,349 \Rightarrow \underline{5,000}$ $1,504 \Rightarrow \underline{\quad}$ $794 \Rightarrow \underline{\quad}$	4. Write the <u>value</u> of the bold digit. $0.562 = \underline{0.002}$ $0.\underline{9}1 = \underline{\quad}$ $0.\underline{3}0 = \underline{\quad}$ $0.\underline{6} = \underline{\quad}$ $0.0\underline{5}6 = \underline{\quad}$ $0.10\underline{7} = \underline{\quad}$
--	---	--	---

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: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

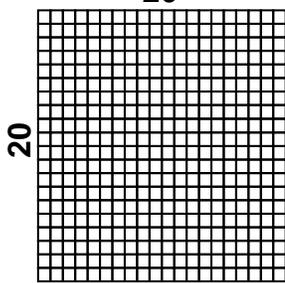
— **PART 2: Application Practice** —

6. Evaluate and simplify each equation or expression.

$(4 \times 5) \div 2 = \square$	$6 \div (12 \div 4) = \square$
8 times 10 = \square	$6 \times 2 \times 2 = \square$
$(13 - 6) \times 6 = \square$	5 groups of 8 = \square

7. Answer the questions about the **array.**

20



20

What are the array's **factors**?

What is the array's **product**?

8. Daniella placed toy soldiers in a rectangular array. There were 24 soldiers in each row and 12 soldiers in each column. How many total soldiers are in the Daniella's array?

soldiers

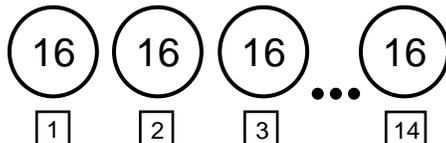
9. Last Friday, 15,508 people watched Reagan High School play Mondale Senior High in football. Last year, only 4,783 people attended the game. How many more people attended this year's game?

(A) 20,291 (C) 10,285
 (B) 19,281 (D) 10,725

— **PART 3: Reflection and Conceptual Understanding** —

Write the **multiplication equation** and answer the questions on the **group model** diagram below.

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$



- a.) What are the equation's **factors**?
- _____
- b.) What is the equation's **product**?
- _____

— PART 1: Numeracy Development —

<p>1. <i>Make 1 Whole.</i></p> <p>0.30 + ____ = 1.00</p> <p>0.20 + ____ = 1.00</p> <p>0.10 + ____ = 1.00</p>	<p>2. Round each number to nearest 1,000.</p> <p>6,500 ⇨ ____ 3,756 ⇨ ____</p> <p>2,208 ⇨ ____ 8,900 ⇨ ____</p> <p>400 ⇨ ____ 850 ⇨ ____</p>	<p>3. Write the <u>value</u> of the bold digit.</p> <p>0.63 = ____ 0.34 = ____</p> <p>0.130 = ____ 0.3 = ____</p> <p>0.309 = ____ 0.983 = ____</p>
---	---	--

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

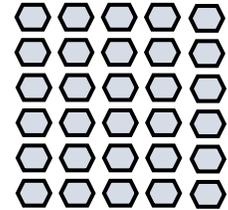
a.) Multiples of 8: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

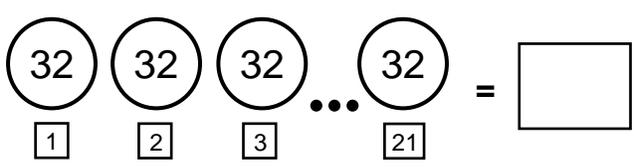
b.) Multiples of 80: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

c.) Multiples of 9: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

d.) Multiples of 90: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

— PART 2: Application Practice —

<p>5. Evaluate and simplify.</p> <p>$(3 + 5) \div 2 = \square$ $9 \div (15 \div 5) = \square$</p> <p>5 times 8 = \square $4 \times 2 \times 2 = \square$</p> <p>$(11 - 9) + 7 = \square$ 4 groups of 9 = \square</p>	<p>6. Complete the math equations.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">    </div> <div style="text-align: center;">   </div> </div> <p>$B = (_ \times _) + _$ $C = _ + (_ \times _)$</p>
---	--

<p>7. The teacher drew the following group model for multiplication on the board. What is the model's product?</p> <div style="text-align: center;">  </div>	<p>8. Corina drove her go-cart at 50 feet per second for 21 seconds. How many total feet did Corina travel?</p> <p>(A) 1,050 (C) 29</p> <p>(B) 71 (D) 1,550</p>
--	---

— 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.) $0.06 \Rightarrow \frac{0.06}{100} = \frac{6}{100}$ b.) $0.409 \Rightarrow \frac{0.409}{1000} = \frac{\square}{\square}$ c.) $0.9 \Rightarrow \frac{0.9}{\square} = \frac{\square}{\square}$



— PART 1: Numeracy Development —

1. Make 1 Whole.

$0.80 + \underline{\quad} = 1.00$

$0.40 + \underline{\quad} = 1.00$

$0.30 + \underline{\quad} = 1.00$

2. Round each number to nearest 1,000.

$4,350 \rightarrow \underline{\quad}$ $6,173 \rightarrow \underline{\quad}$

$1,780 \rightarrow \underline{\quad}$ $9,600 \rightarrow \underline{\quad}$

$800 \rightarrow \underline{\quad}$ $210 \rightarrow \underline{\quad}$

3. Write the value of the **bold** digit.

$0.7\mathbf{6}9 = \underline{\quad}$ $0.1\mathbf{7} = \underline{\quad}$

$0.1\mathbf{6} = \underline{\quad}$ $0.\mathbf{9} = \underline{\quad}$

$0.3\mathbf{0} = \underline{\quad}$ $0.50\mathbf{9} = \underline{\quad}$

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. Evaluate and simplify.

$(6 + 5) - 2 = \square$

3 groups of 6 = \square

$(11 \times 9) + 1 = \square$

6. Zach had 12 bags with 25 pieces of gum in each bag. What are the factors and the product of his bags of gum?

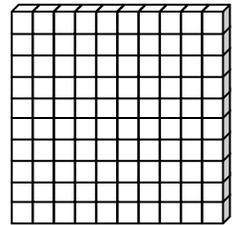
Factors: _____

Product: _____

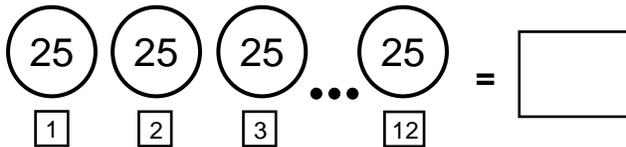
7. Write and shade the **equivalent fraction** to the decimal.

$50 \text{ pennies} = 50 \text{ cents} =$
 $= 2 \text{ quarters} = 50\text{¢} = 0.50$

$0.50 = \frac{\square}{\square} \rightarrow$



8. The teacher drew the following group model for multiplication on the board. What is the model's **product**?



9. Emily bought a computer for \$857 and a printer for \$115. About how much money did she spend?

- (A) \$ 900 (C) \$ 1,000
- (B) \$ 800 (D) \$ 700

— 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.) $0.37 \Rightarrow \frac{0.37}{1\mathbf{00}} = \frac{\square}{\square}$

b.) $0.501 \Rightarrow \frac{0.501}{1\mathbf{000}} = \frac{\square}{\square}$

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



PART 1: Numeracy Development

1. Make 1 Whole.

0.85 + ____ = 1.00

0.75 + ____ = 1.00

0.95 + ____ = 1.00

2. Round each number to nearest 1,000.

8,870 ⇨ ____ 4,589 ⇨ ____

6,280 ⇨ ____ 9,325 ⇨ ____

3,333 ⇨ ____ 921 ⇨ ____

3. Write the value of the bold digit.

0.0**8** = ____ 0.1**7**2 = ____

0.1**2**4 = ____ 0.7**9** = ____

0.**2** = ____ 0.**8**59 = ____

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. Evaluate and simplify.

(12 x 3) + 4 =

12 groups of 6 =

(10 + 5) x 2 =

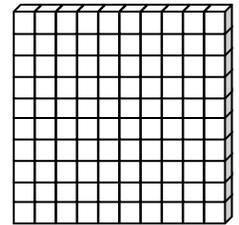
6. Hannah saved \$35 each month for 18 months. Compute the total amount of money she saved.

\$

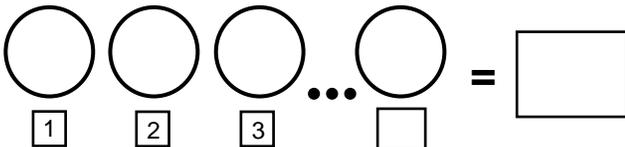
7. Write and shade the equivalent fraction to the decimal.

5 pennies = 5 cents = 5¢ = 0.05

0.05 = /



8. Complete the group model diagram using the factors and product from Problem 6 above.



9. Cayden bought a shirt for \$22. He also bought two pairs of pants for \$65. About how much more money did he spend on the pants than the shirt?

- A) \$ 50 C) \$ 90 B) \$ 80 D) \$ 40

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 and mixed numbers.

a.) 0.42 = /

b.) 0.307 = /

c.) 0.5 = /

d.) 3.2 = /



PART 1: Numeracy Development

<p>1. Make 1.00</p> <p>0.45 ⇒ _____</p> <p>0.05 ⇒ _____</p> <p>0.25 ⇒ _____</p>	<p>2. Double each number.</p> <p>50 ⇒ _____ 40 ⇒ _____</p> <p>15 ⇒ _____ 60 ⇒ _____</p> <p>25 ⇒ _____ 30 ⇒ _____</p>	<p>3. Add or subtract decimals.</p> $\begin{array}{r} 5.4 \\ + 4.3 \\ \hline \end{array}$ $\begin{array}{r} 7.5 \\ - 2.1 \\ \hline \end{array}$ $\begin{array}{r} 8.2 \\ + 4.8 \\ \hline \end{array}$ $\begin{array}{r} 9.0 \\ - 5.7 \\ \hline \end{array}$	<p>4. Fact family.</p> <p>_____</p> <p>_____</p> <p>18 ÷ 6 = 3</p> <p>_____</p>
---	---	---	---

5. Complete the **decimal multiple strings** below. *Multiple strings always begin with zero (0).*

a.) Multiples of 0.01: 0 , _____ , _____ , _____ , _____ , _____ , _____ , 0.07 , _____ , _____ , _____

b.) Multiples of 0.02: _____ , _____ , _____ , _____ , 0.08 , _____ , _____ , _____ , _____ , 0.18 , _____

6. Complete the whole number expansion in **Base 10 Place Value Form**.

7,098 = _____

PART 2: Application Practice

7. Katie had 5 dollars and 6 dimes. Perry had 3 dollars and 2 dimes. How much money do they have together?

\$ _____ . _____

8. Write and shade the equivalent fraction or mixed number.

81 pennies = 81 cents
= 81¢ = 0.81

2 dollars and 4 dimes = 2.40 = 2.4

0.81 = $\frac{\square}{\square}$ →

2.4 = $\square \frac{\square}{\square}$ →

9. Caleb planted 45 rows of corn with 75 plants in each row. How many total corn plants are in Caleb's field?

(A) 3,055 (C) 540

(B) 3,375 (D) 490

10. Calculate and compare (<, >, =) the two students' answers:

Jack = (4 x 5), Double, Subtract 10, Divide by 2 = \square

Jill = (20 ÷ 5), Times 6, Subtract 20, Add 40 = \square

_____ > _____

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 and mixed numbers.

a.) 0.17 = $\frac{\square}{\square}$ b.) 8.9 = $\square \frac{\square}{\square}$ c.) 0.078 = $\frac{\square}{\square}$ d.) 8.67 = $\square \frac{\square}{\square}$



PART 1: Numeracy Development

<p>1. Make 1.00</p> <p>0.15 ⇒ _____</p> <p>0.95 ⇒ _____</p> <p>0.35 ⇒ _____</p>	<p>2. Double.</p> <p>70 ⇒ _____</p> <p>25 ⇒ _____</p> <p>35 ⇒ _____</p>	<p>3. Add or Subtract</p> $\begin{array}{r} 6.79 \\ + 7.3 \\ \hline \end{array}$ $\begin{array}{r} 5.53 \\ - 4.8 \\ \hline \end{array}$	<p>4. Compare (<, >, =).</p> <p>0.04 ○ 0.4</p> <p>0.07 ○ 0.05</p> <p>0.80 ○ 0.8</p>	<p>5. Divide.</p> $4 \overline{)84}$ $6 \overline{)126}$
---	---	---	---	--

6. Complete the **decimal** multiple strings below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 0.01:* _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

b.) *Multiples of 0.02:* _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

7. Complete the whole number expansion in **Base 10 Place Value Form**.

21,980 = _____

PART 2: Application Practice

8. Write and shade the mixed number.

1 dollar and 8 pennies = 1.08

1.08 = →

3 dollars and 6 dimes = 3.60 = 3.6

3.6 = →

9. Isaac won 145 dollars. If he is paid 5 dollars each week, how many weeks will he receive money?

(A) 28 weeks (C) 140 weeks

(B) 29 weeks (D) 150 weeks

10. Calculate and compare (<, >, =) the two students' answers:

Jim = Double 20, Subtract 10, Multiply by 10 =

Luz = (100 ÷ 5), Times 6, Subtract 20, Add 100 =

_____ ○ _____

PART 3: Reflection and Conceptual Understanding

Use SPACES (---) above each digit in the dividend. This method helps determine the maximum possible number of digits and including zeros in the quotient. Write the correct number for each division term.

<p>A.) $\begin{array}{r} \bullet 21 \\ 6 \overline{)126} \end{array}$</p> <p>Dividend = <u>126</u></p> <p>Divisor = <u>6</u></p> <p>Quotient = <u>21</u></p>	<p>B.) $\begin{array}{r} 105 \\ 5 \overline{)525} \end{array}$</p> <p>Dividend = _____</p> <p>Divisor = _____</p> <p>Quotient = _____</p>	<p>C.) $\begin{array}{r} \bullet 52 \\ 7 \overline{)364} \end{array}$</p> <p>Dividend = _____</p> <p>Divisor = _____</p> <p>Quotient = _____</p>
---	--	---



PART 1: Numeracy Development

<p>1. Double.</p> <p>80 ⇒ _____</p> <p>45 ⇒ _____</p> <p>50 ⇒ _____</p>	<p>2. Add or Subtract</p> $\begin{array}{r} 1.4 \\ + 3.68 \\ \hline \end{array}$ $\begin{array}{r} 5.4 \\ - 2.36 \\ \hline \end{array}$	<p>3. Compare (<, >, =).</p> <p>0.84 ○ 0.91 0.72 ○ 0.8</p> <p>0.01 ○ 0.1 0.81 ○ 0.18</p> <p>0.30 ○ 0.3 0.9 ○ 0.90</p>	<p>4. Divide.</p> $5 \overline{)275}$ $8 \overline{)168}$
---	---	--	---

5. Complete the **decimal multiple strings** below. *Multiple strings always begin with zero (0).*

a.) *Multiples of 0.05:* _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

b.) *Multiples of 0.10:* _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

6. Complete the whole number expansion in **Base 10 Place Value Form**.

207,625 = _____

PART 2: Application Practice

7. Write and shade the mixed number.

$2.48 = \square \frac{\square}{\square} \Rightarrow$	$5.1 = \square \frac{\square}{\square} \Rightarrow$
$1.03 = \square \frac{\square}{\square} \Rightarrow$	$6.7 = \square \frac{\square}{\square} \Rightarrow$

8. Diego placed 176 bricks in 8 equal stacks. How many bricks are placed in each stack?

(A) 20 stacks (C) 22 stacks

(B) 21 stacks (D) 23 stacks

9. Calculate and compare (<, >, =) the two students' answers:

Rob = (24 ÷ 6), Times 20, Double, Subtract 10 =

Yaz = (100 x 5), Subtract 400, Divide by 10, Add 100 =

_____ ○ _____

PART 3: Reflection and Conceptual Understanding

When we add or subtract decimals, **why** are numbers lined-up on their **decimal point**?

Line-up decimal points.

_____	→	_____	→
_____		$\begin{array}{r} 15.67 \\ + 4.8 \\ \hline \end{array}$	$\begin{array}{r} 15. \\ - 6.7 \\ \hline \end{array}$



— PART 1: Numeracy Development —

1. Add or Subtract.

$4.1 + 5.38 = \boxed{}$

$7.42 - 6.3 = \boxed{}$

2. Find Half.

$10 \Rightarrow \underline{5}$

$18 \Rightarrow \underline{}$

$20 \Rightarrow \underline{}$

3. Compare ($<$, $>$, $=$).

$0.70 \bigcirc 0.9 \quad 0.6 \bigcirc 0.52$

$0.015 \bigcirc 0.14 \quad 0.67 \bigcirc 0.7$

$0.20 \bigcirc 0.1 \quad 0.400 \bigcirc 0.4$

4. Divide.

$3 \overline{)249} \quad 4 \overline{)448}$

5. Complete the **decimal multiple strings** below. *Multiple strings always begin with zero (0).*

a.) Multiples of 0.05: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

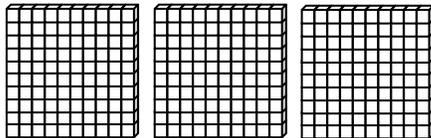
b.) Multiples of 0.10: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

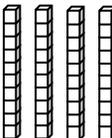
6. Complete the whole number expansion in **Base 10 Place Value Form**.

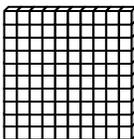
$680,428 = \underline{} \underline{} \underline{} \underline{} \underline{} \underline{} \underline{}$

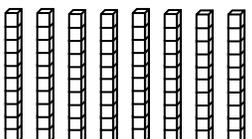
— PART 2: Application Practice —

7. Write and shade the **proper fraction** or **mixed number**.

$2.07 = \boxed{} \frac{\boxed{}}{\boxed{}} \Rightarrow$


$3.1 = \boxed{} \frac{\boxed{}}{\boxed{}} \Rightarrow$


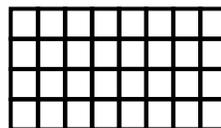
$0.51 = \frac{\boxed{}}{\boxed{}} \Rightarrow$


$7.3 = \boxed{} \frac{\boxed{}}{\boxed{}} \Rightarrow$


8. Sergio walked 12 miles each day for 8 days. He also walked 4 miles on the 9th day. What equation **M** calculates the total amount of miles he walked?

- (A) $M = 8 + (4 \times 12)$ (C) $M = (8 \times 12) + 12$
 (B) $M = (4 \times 12) + 4$ (D) $M = (8 \times 12) + 4$

9. Calculate the **area (A)** of the rectangle below.



$A = \underline{}$

10. Calculate the **perimeter (P)** of the rectangle shown in problem 9.

$P = \underline{}$

— 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** for each whole number below.

a.) $4 \Rightarrow \boxed{4.0}$

b.) $15 \Rightarrow \boxed{}$

c.) $376 \Rightarrow \boxed{}$

d.) $7,053 \Rightarrow \boxed{}$



PART 1: Numeracy Development

1. Add or Subtract.

$7 + 2.382 = \boxed{}$

$8 - 5.6 = \boxed{}$

2. Find Half.

$16 \Rightarrow \underline{}$

$20 \Rightarrow \underline{}$

$30 \Rightarrow \underline{}$

3. Compare ($<$, $>$, $=$).

$0.730 \bigcirc 0.8$

$0.015 \bigcirc 0.123$

$0.206 \bigcirc 0.14$

4. Make 1,000 – Add up!

$200 \Rightarrow \boxed{800}$ $700 \Rightarrow \boxed{}$

$500 \Rightarrow \boxed{}$ $900 \Rightarrow \boxed{}$

$750 \Rightarrow \boxed{}$ $550 \Rightarrow \boxed{}$

5. Complete the whole number **multiple strings** below. *Multiple strings always begin with zero (0).*

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

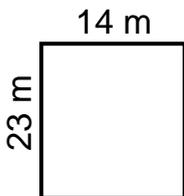
b.) *Multiples of 12:* _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

6. Write the whole number in **word form**.

3,428 = _____

PART 2: Application Practice

7. Find the **area** of the rectangle below.



- (A) 37 m²
- (B) 74 m²
- (C) 222 m²
- (D) 322 m²

8. If the dividend is 115 and the divisor is the 5, compute the quotient.

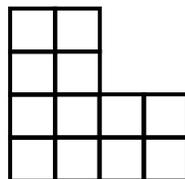


9. Marisol left the house at the time shown on the clock on the top. She returned home at the clock on the bottom. How long was she away from home?

10. Jack is 12 years old. Paula is three times older than Jack. Betty is 5 years older than Paula. Which equation **B** calculates Betty's correct age?

- (A) $B = 5 - (3 \times 12)$
- (B) $B = (3 \times 12) + 5$
- (C) $B = (12 \div 3) - 5$
- (D) $B = (12 \times 3) - 5$

11. Calculate the **area (A)** of the rectangle below.



A = _____

12. Calculate the **perimeter (P)** of the rectangle shown in problem 9.

P = _____

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 0.7, and then, **0.7 still equal 0.70**? *Why or why not?*

HINT: Think of money – dimes and pennies.



FALL STAAR WALK - Learning Opportunity 22

for TEKS/STAAR

"Journey of Knowledge"

Name: _____

PART 1: Numeracy Development

1. Add or Subtract.

4.89 + 8 =

4 - 2.25 =

2. Find Half.

60 ⇒ _____

70 ⇒ _____

80 ⇒ _____

3. Compare (<, >, =).

0.963 ○ 0.954

0.07 ○ 0.081

0.249 ○ 0.3

4. Make 1,000 – Add up!

300 ⇒ 600 ⇒

150 ⇒ 950 ⇒

350 ⇒ 850 ⇒

5. Complete the whole number multiple strings below. Multiple strings always begin with zero (0).

a.) Multiples of 11: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

b.) Multiples of 12: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

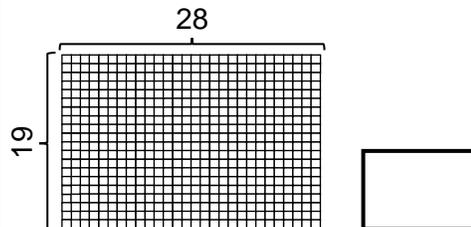
6. Write the whole number in word form.

9,430 = _____

PART 2: Application Practice

7. Cal ran the 100-meter dash in 10.2 seconds. The 100-meter world record is 9.58 seconds. How much faster does Cal need to run to equal world record time?

8. A grid has the following dimensions. What is its area?



9. Liberty went to the store at the time shown on the clock. She came home 3 hours and 15 minutes later. What time did she arrive home?

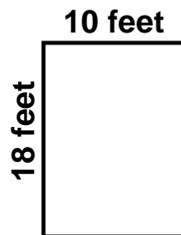


10. Use the table to answer the questions below.

Building	Location	Height
Sears Tower	Chicago	1,729 feet
Empire State	New York City	1,454 feet

How much taller is the Sears Tower than the Empire State Building? _____ ft.

11. Calculate the area (A) and perimeter (P) of Yaz's garden.



A = _____

P = _____

12. Josh bought a car for \$14,845. Sam purchased a new jeep for \$24,507. What was the total amount of money both boys paid?

\$ _____

PART 3: Reflection and Conceptual Understanding

Compare the following decimals using <, > or = in the circle.

0.7 ○ 0.70

0.70 ○ 0.700

0.700 ○ 0.7000

Can any number of zeros (0's) be added behind a decimal and not change its value? Yes No



PART 1: Numeracy Development

1. Add or Subtract.

5.7 + 2.035 =

7.1 - 5.67 =

2. Find Half.

100 ⇒ _____

80 ⇒ _____

90 ⇒ _____

3. Find proper fraction equivalencies.

0.805 = $\frac{805}{1,000}$

0.7 = _____

0.04 = _____

0.219 = _____

4. Make 1,000

100 ⇒

250 ⇒

50 ⇒

5. Complete the whole number multiple strings below. Multiple strings always begin with zero (0).

a.) Multiples of 12: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

b.) Multiples of 15: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

6. Write the whole number in word form.

31,045 = _____

PART 2: Application Practice

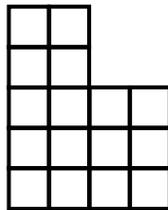
7. Which equation T correctly calculates the area of the figure.

(A) $T = (4 \times 3) - (2 \times 1)$

(B) $T = (4 \times 3) + (2 \times 2)$

(C) $T = (4 \times 3) + (2 \times 3)$

(D) $T = (4 \times 3) - (2 \times 3)$



8. Lori owns 206 yo-yo's. She sold each yo-yo for \$4. How much money did she make?

\$ _____

9. Jasper got home at the time shown on the clock. He was gone for 1 hour and 30 minutes. What time did he leave his house?



10. Use the table to answer the questions.

City	State	Population
Santa Monica	California	91,857
Pensacola	Florida	52,689
Palm Springs	California	49,133
Trenton	New Jersey	84,913

a.) How many more people live in Trenton than Pensacola?

b.) How many people live in the two California cities?

c.) Order the cities' populations from least to greatest.

< < <

PART 3: Reflection and Conceptual Understanding

Is the following mathematical equality a true statement?

$0.2 = 0.20 = 0.200 = 0.2000 = 0.20000$

Yes

No

Can any number of zeros (0's) be added behind a decimal and not change its value?

Yes

No



— PART 1: Numeracy Development —

1. Make 1,000

450 →

150 →

750 →

2. Find proper fraction equivalencies.

0.95 = _____ 0.6 = _____

0.046 = _____ 0.200 = _____

3. Find the missing number.

$2 \times 2 \times \underline{\hspace{1cm}} = 12$ $19 - \underline{\hspace{1cm}} = 10$

$4 + \underline{\hspace{1cm}} + 1 = 10$ $\underline{\hspace{1cm}} - 3 = 8$

$17 - \underline{\hspace{1cm}} = 8$ $5 \times \underline{\hspace{1cm}} \times 2 = 30$

4. Complete the whole number multiple strings below. Multiple strings always begin with zero (0).

a.) Multiples of 15: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

b.) Multiples of 25: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

5. Write the whole number in word form.

439,743 = _____

— PART 2: Application Practice —

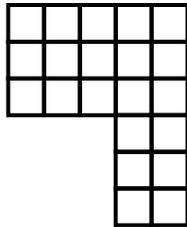
6. Which equation R correctly calculates the area of the figure.

(A) $R = (5 \times 3) - (2 \times 2)$

(B) $R = (5 \times 3) + (1 \times 2)$

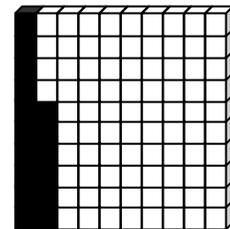
(C) $R = (5 \times 3) + (2 \times 3)$

(D) $R = (5 \times 3) - (2 \times 3)$



7. Jay paid his TV bill of 50 dollars each month for 36 months. How much total money has Jay paid?

8. Write the proper fraction and the decimal.



_____ proper fraction

_____ decimal

9. Use the table to answer the questions.

Animal	Mass (kg)
Dog	18.6
Cat	6.94
Hamster	0.756

a.) How much more mass does the dog have than the cat?

b.) How much mass do the cat and hamster have combined?

10. Sergio's age is double the age of Jim. Jim is 5 years younger than Bill. If Bill is 15 years old, how old is Sergio?

Sergio's Age = _____

— PART 3: Reflection and Conceptual Understanding —

The approximate value of a decimal is easy if the digits AFTER the decimal point are viewed as money. Write about how much money (cents - ¢) each decimal number represents.

~~(0.26)4~~ ⇒ 26¢

0.673 ⇒ _____ ¢

0.053 ⇒ _____ ¢

0.152 ⇒ _____ ¢

0.2 ⇒ _____ ¢

0.84 ⇒ _____ ¢

0.0241 ⇒ _____ ¢

0.7 ⇒ _____ ¢



PART 1: Numeracy Development

1. Divide.

30 \overline{)180}

2. Find proper fraction equivalencies.

0.025 = _____ 0.4 = _____
0.108 = _____ 0.83 = _____

3. Find the missing number.

_____ x 2 x 5 = 60 20 - _____ = 10
7 + _____ + 8 = 20 _____ - 2 = 9
18 - _____ = 9 6 x _____ x 1 = 30

4. Complete the whole number multiple strings below. Multiple strings always begin with zero (0).

- a.) Multiples of 15: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____
b.) Multiples of 25: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

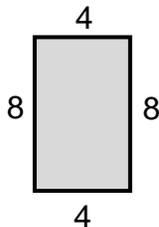
5. Write the whole number in word form.

807,943 = _____

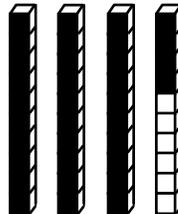
PART 2: Application Practice

6. Which equation P correctly calculates the perimeter.

- (A) P = 2 x (4 + 4)
(B) P = 2 x (8 + 8)
(C) P = 2 x (7 + 7)
(D) P = 2 x (4 + 8)

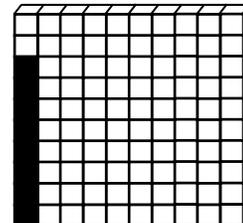


7. Write the mixed number and the decimal - shaded.



_____ mixed number
_____ decimal

8. Write the proper fraction and the decimal - shaded.



_____ proper fraction
_____ decimal

9. Use the table to answer the questions.

Table with 2 columns: Object, Height (m). Rows: Light Pole (6.25), Radar Antenna (?), Flagpole (14.1)

- a.) What is the height of the radar antenna if its height is 7.95 meters higher than the flagpole? _____
b.) What is the difference in height between the light pole and flagpole? _____

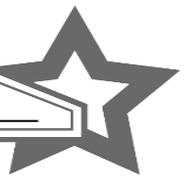
10. A division's problem dividend is equal to 180 and its divisor is 15. Find the quotient.

quotient = _____

PART 3: Reflection and Conceptual Understanding

The approximate value of a decimal is easy if the digits AFTER the decimal point are viewed as money. Write about how much money (cents - ¢) each decimal number represents.

- (0.03)2 ¢ => _____ ¢ 0.011 ¢ => _____ ¢ 0.094 ¢ => _____ ¢ 0.22 ¢ => _____ ¢
0.9 ¢ => _____ ¢ 0.9013 ¢ => _____ ¢ 0.8807 ¢ => _____ ¢ 0.4 ¢ => _____ ¢



— PART 1: Numeracy Development —

1. Divide.

$$\begin{array}{r} \overline{45)405} \quad \overline{20)260} \end{array}$$

2. Find the proper fraction.

$$\begin{array}{l} 0.005 = \underline{\hspace{2cm}} \quad 0.13 = \underline{\hspace{2cm}} \\ 0.08 = \underline{\hspace{2cm}} \quad 0.8 = \underline{\hspace{2cm}} \end{array}$$

3. Find the missing number.

$$\begin{array}{l} \underline{\hspace{1cm}} \times 6 \times 5 = 90 \quad 50 - \underline{\hspace{1cm}} = 20 \\ \underline{\hspace{1cm}} + 5 + 10 = 25 \quad \underline{\hspace{1cm}} - 7 = 1 \\ 15 - \underline{\hspace{1cm}} = 9 \quad 6 \times \underline{\hspace{1cm}} \times 2 = 36 \end{array}$$

4. Complete the whole number **multiple strings** below. *Multiple strings always begin with zero (0).*

- a.) Multiples of 15: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____
- b.) Multiples of 25: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

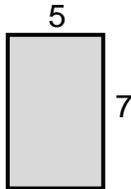
5. Write the whole number in **word form**.

1,302,061 = _____

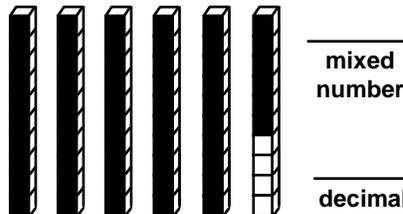
— PART 2: Application Practice —

6. Which equation **P** correctly calculates the **perimeter**.

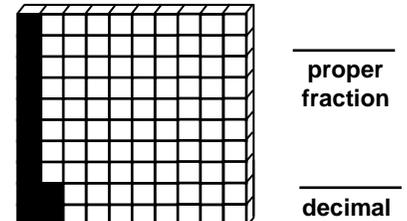
- (A) $P = 2 \times (7 + 7)$
 (B) $P = 5 \times (5 + 7)$
 (C) $P = 2 \times (5 + 7)$
 (D) $P = 7 \times (2 + 5)$



7. Write the **mixed number** and the **decimal** - shaded.



8. Write the **proper fraction** and the **decimal** - shaded.



9. Jack saved 180 dollars by depositing money at his bank. If he saved an equal amount each month for 5 months, how much money did he deposit each month?

\$

10. Yessica can run the 100 meter dash in 10.8 seconds. Ana's fastest time in the 100 meters is 11.04 seconds. How many seconds faster is Yessica's 100 meter time than Ana's?

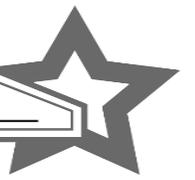
11. If the divisor is 32 and the dividend is equal to 384, compute the quotient.

quotient =

— PART 3: Reflection and Conceptual Understanding —

The *approximate* value of a decimal is easy if the digits AFTER the decimal point are viewed as money. Write **about** how much money (cents - ¢) each decimal number represents.

- 0.074 ⇨ ¢ 0.08 ⇨ ¢ 0.054 ⇨ ¢ 0.28 ⇨ ¢
- 0.7 ⇨ ¢ 0.7223 ⇨ ¢ 0.5991 ⇨ ¢ 0.8 ⇨ ¢



PART 1: Numeracy Development

1. Divide.

61) 854 17) 391

2. Find the proper fraction.

0.503 = _____
0.48 = _____

3. Find the missing number.

_____ x 3 x 5 = 45 _____ - 8 = 9
50 - _____ = 25 _____ + 12 = 30
9 x _____ x 1 = 36 19 - _____ = 5

4. Compute.

9 - 4.5 = _____
3 + 6.21 = _____

5. Complete the whole number multiple strings below. Multiple strings always begin with zero (0).

- a.) Multiples of 12: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____
- b.) Multiples of 15: _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

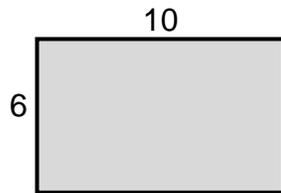
6. Write the whole number in word form.

7,046,605 = _____

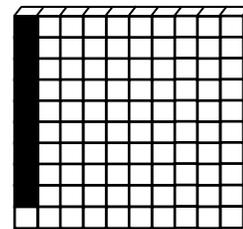
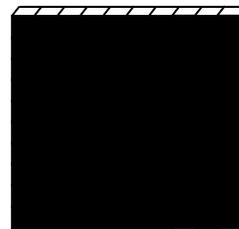
PART 2: Application Practice

7. Jasmine's garden is shown below. What equation is the correct perimeter of her garden?

- (A) P = 6 x (2 + 10)
- (B) P = 2 x (6 + 10)
- (C) P = 10 x (2 + 10)
- (D) P = 2 + (6 x 10)

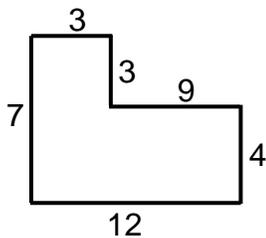


8. Write the mixed number and decimal.



_____ mixed number
_____ decimal

9. What is the area of the hexagon below?



- (A) A = 57
- (B) A = 69
- (C) A = 38
- (D) A = 45

10. Use the table to find the mass of the mouse and cat.

Animal	Mass (kg)
squirrel	13.2
mouse	?
cat	?

a.) The cat's mass is 4.62 kg more than the squirrel's.

_____ kg.

b.) The mouse is 9.87 kg. less than the squirrel's.

_____ kg.

PART 3: Reflection and Conceptual Understanding

The approximate value of a decimal is easy if the digits AFTER the decimal point are viewed as money. Write about how much money (cents - ¢) each decimal number represents.

(0.07)6 ¢ => _____ ¢

0.03 ¢ => _____ ¢

0.096 ¢ => _____ ¢

0.56 ¢ => _____ ¢

0.706 ¢ => _____ ¢

0.4913 ¢ => _____ ¢

0.2222 ¢ => _____ ¢

0.1 ¢ => _____ ¢



PART 1: Numeracy Development

1. Divide.

61 \overline{)1,586}

2. Compute.

3 x (5 - 2) = ___ 8 x (8 ÷ 2) = ___

(6 x 5) - 3 = ___ (6 x 5) ÷ 3 = ___

(3 + 7) x 9 = ___ (3 x 7) - 1 = ___

3. Make 1 Add Up.

0.4 + ___ = 1.0

0.85 + ___ = 1.0

___ + 0.3 = 1.0

4. Compute.

9 - 3.4 = ___

3.5 + 6.21 = ___

5. Round each decimal to the nearest tenth.

0.46 → 0.5 0.85 → ___ 0.86 → ___

0.08 → ___ 0.37 → ___ 0.84 → ___

6. Expand each in decimal form.

3.14 = 3 + 0.1 + 0.04

2.38 = _____

7. Write the whole number in word form.

27,005,940 = _____

PART 2: Application Practice

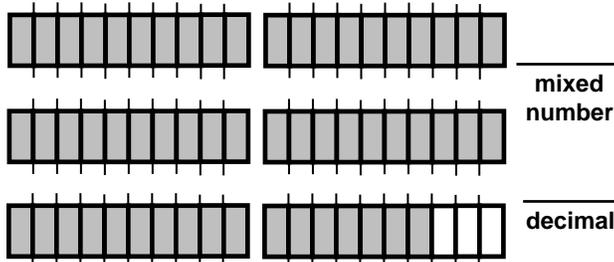
8. Write the correct name of each number.

WORD BANK

factor, dividend, product, divisor, quotient

26 x 8 = 208, 35 ÷ 15 = 525

9. Write the mixed number and decimal.



10. Jim's dad made a large garden in the back yard. The rectangular garden's length was 36 meters and its width was 22 meters. What is the garden's area (A)?

- A) A = 58 B) A = 792 C) A = 116 D) A = 14

11. Phillip placed 32 ears of corn equally in boxes. After he finished, he told his mother he had packed a total of 768 ears of corn in all the boxes. How many boxes did Phillip use?

Empty box for answer

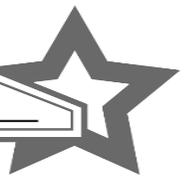
12. Compare (< . > , =) on the line below.

0.089 < 0.7, 0.603 < 0.7

PART 3: Reflection and Conceptual Understanding

Write the whole number that each decimal is closest. For example, 6.324 is closer to 6 than it is to 7. Hint: Think money (i.e. 6.324 is about \$6.32).

- 8.732 → 9, 4.13 → __, 1.096 → __, 4.56 → __, 0.70 → __, 7.4213 → __, 6.2222 → __, 7.1 → __



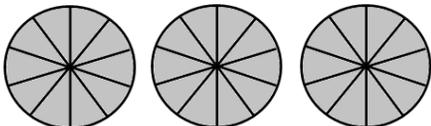
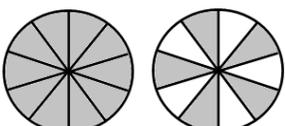
— PART 1: Numeracy Development —

<p>1. Divide.</p> $\begin{array}{r} \underline{\underline{\quad}} \\ 61 \overline{)3,721} \end{array}$	<p>2. Compute.</p> <p>$3 + (5 \times 2) = \underline{\quad}$ $(4 \times 1) + (6 \div 3) = \underline{\quad}$</p> <p>$(4 \times 6) \div 3 = \underline{\quad}$ $(100 - 50) \div 5 = \underline{\quad}$</p> <p>$(9 - 4) \times 9 = \underline{\quad}$ $(9 \times 7) - 3 = \underline{\quad}$</p>	<p>3. Make 1 Add Up.</p> <p>$0.45 + \underline{\quad} = 1.0$</p> <p>$0.85 + \underline{\quad} = 1.0$</p> <p>$\underline{\quad} + 0.65 = 1.0$</p>	<p>4. Compute.</p> <p>$8 - 1.45 = \underline{\quad}$</p> <p>$2.7 + 5.37 = \underline{\quad}$</p>
--	---	--	--

<p>5. Round each decimal to the nearest tenth.</p> <p>$0.06 \rightarrow \underline{\quad}$ $0.95 \rightarrow \underline{\quad}$ $0.94 \rightarrow \underline{\quad}$</p> <p>$0.02 \rightarrow \underline{\quad}$ $0.34 \rightarrow \underline{\quad}$ $0.67 \rightarrow \underline{\quad}$</p>	<p>6. Expand each in decimal form.</p> <p>$5.29 = \underline{5 + 0.2 + 0.09}$</p> <p>$2.4 = \underline{\quad}$</p>
--	---

<p>7. Expand each in fraction form.</p> <p>$5.29 = \underline{5 + \frac{2}{10} + \frac{9}{100}}$ $2.4 = \underline{\quad}$</p>
--

— PART 2: Application Practice —

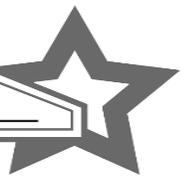
<p>8. Write the correct <u>name</u> of each number.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0; text-align: center;"> <p>WORD BANK</p> <p>dividend, product, quotient, divisor, factor</p> </div> <table style="width: 100%;"> <tr> <td style="width: 50%; padding: 5px;"> $\begin{array}{r} 34 \\ \times 28 \\ \hline 952 \end{array}$ </td> <td style="width: 50%; padding: 5px;"> $\begin{array}{r} 41 \\ 23 \overline{)943} \\ \hline \end{array}$ </td> </tr> </table>	$\begin{array}{r} 34 \\ \times 28 \\ \hline 952 \end{array}$	$\begin{array}{r} 41 \\ 23 \overline{)943} \\ \hline \end{array}$	<p>9. Write the mixed number and decimal.</p> <div style="display: flex; align-items: center; justify-content: space-around;">  <div style="text-align: right; margin-left: 20px;"> <p>_____</p> <p>mixed number</p> </div> </div> <div style="display: flex; align-items: center; justify-content: space-around; margin-top: 20px;">  <div style="text-align: right; margin-left: 20px;"> <p>_____</p> <p>decimal</p> </div> </div>
$\begin{array}{r} 34 \\ \times 28 \\ \hline 952 \end{array}$	$\begin{array}{r} 41 \\ 23 \overline{)943} \\ \hline \end{array}$		

<p>10. Bill measured the sides of his company's square parking lot. Each side is 67 meters in length. Compute the perimeter (T) of the square parking lot?</p> <div style="display: flex; align-items: center;">  <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">67 m</div> </div>	<p>11. Alexis's hometown population had 45,092 people. 62,086 people lived in Sergio's hometown. What is the difference in population between the two towns?</p> <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div>	<p>12. Compare ($<$, $>$, $=$) on the line below.</p> <p style="text-align: center;">0.60 0.059</p> <p style="text-align: center;">0.6 0.6</p> <p>_____</p>
---	---	--

— PART 3: Reflection and Conceptual Understanding —

Write the **whole number** that each decimal is closest. For example, 2.524 is closer to 3 than it is to 2.
 Hint: Think money (i.e. 2.524 is about \$2.52).

$(7.35)6 \Rightarrow \underline{7}$	$14.14 \Rightarrow \underline{\quad}$	$1.028 \Rightarrow \underline{\quad}$	$7.59 \Rightarrow \underline{\quad}$
$0.650 \Rightarrow \underline{\quad}$	$8.6531 \Rightarrow \underline{\quad}$	$9.6666 \Rightarrow \underline{\quad}$	$8.2 \Rightarrow \underline{\quad}$



— PART 1: Numeracy Development —

<p>1. Divide.</p> $\begin{array}{r} \overline{)5\overline{)4,940}} \end{array}$	<p>2. Compute.</p> $(9 \times 5) \div (3 \times 3) = \underline{\quad}$ $(25 + 25) \div 10 = \underline{\quad}$ $(9 - 4) \times (0 + 2) = \underline{\quad}$	<p>3. Make 1 Add Up to next tenth, then to 1.0</p> $0.85 + \underline{\quad} = 1.0 \quad \underline{\quad} + 0.92 = 1.0$ $\underline{\quad} + 0.95 = 1.0 \quad 0.91 + \underline{\quad} = 1.0$ $0.90 + \underline{\quad} = 1.0 \quad \underline{\quad} + 0.89 = 1.0$	<p>4. Multiply.</p> $\begin{array}{r} 37 \\ \times 58 \\ \hline \end{array}$
---	--	---	--

5. Round each decimal to the nearest tenth.

0.76 → _____ 0.07 → _____ 0.944 → _____ 0.304 → _____ 0.672 → _____

6. Expand each both **decimal form** and **fraction form**.

7.125 = 7 + 0.1 + 0.02 + 0.005 3.254 = _____

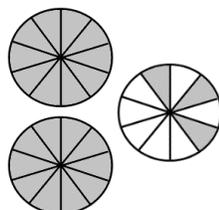
7.125 = 7 + 1/10 + 2/100 + 5/1,000 3.254 = _____

— PART 2: Application Practice —

7. Whole number **estimation**. *Round first*, then add, subtract or multiply.

$\begin{array}{r} 34 \Rightarrow 30 \\ + 75 \Rightarrow 80 \\ \hline 110 \end{array}$	$\begin{array}{r} 85 \Rightarrow \\ - 42 \Rightarrow \end{array}$	$\begin{array}{r} 38 \Rightarrow \\ \times 22 \Rightarrow \end{array}$
---	---	--

8. Determine the mixed number and decimal.



 mixed number

 decimal

9. Jef installed lawn sprinkler spouts in an array on a large yard. His sprinkler spout array had 37 rows and 46 columns. *About* how many sprinkler spouts are in the Jef's lawn array?

(A) 80 (C) 1,500
(B) 1,600 (D) 2,000

10. Luz counted the tickets to the Friday night school dance. She tallied 98 girls in attendance, but only 65 boys. *Estimate* the difference between the number of boys and girls.

(A) 40 (C) 170
(B) 30 (D) 160

11. Adrian's pencil has a mass of 24.2 grams. Jo's designer pen has a mass of 38.54 grams. What is the combined mass of the pen and the pencil?

grams

— PART 3: Reflection and Conceptual Understanding —

Write the **whole number** that each decimal is closest. For example, 12.084 is closer to 12 than it is to 13.
Hint: Think money (i.e. 12.084 is about \$12.08).

(9.178) ⇒ _____	24.582 ⇒ _____	6.034 ⇒ _____	9.49 ⇒ _____
0.524 ⇒ _____	4.0911 ⇒ _____	6.504 ⇒ _____	1.3 ⇒ _____



PART 1: Numeracy Development

1. Multiply.

$$\begin{array}{r} 49 \\ \times 78 \\ \hline \end{array}$$

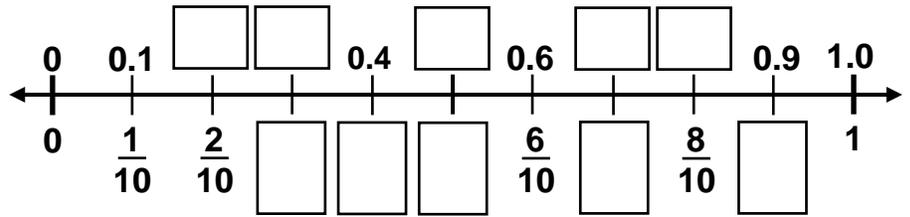
2. Make 1. Add Up.

0.8 + _____ = 1.0

_____ + 0.79 = 1.0

0.81 + _____ = 1.0

3. Complete the number line with correct decimals and fractions.



4. Round each decimal to the nearest hundredth.

0.348 → 0.35 0.073 → _____ 0.945 → _____ 0.307 → _____ 0.651 → _____

5. Expand each number in decimal form and fraction form.

9.236 = _____ 13.045 = 10 + 3 + _____

9.236 = _____ 13.045 = _____

PART 2: Application Practice

6. Whole number estimation: add, subtract or multiply.

$$\begin{array}{r} 58 \Rightarrow \\ + 41 \Rightarrow + \\ \hline \end{array} \quad \begin{array}{r} 94 \Rightarrow \\ - 25 \Rightarrow - \\ \hline \end{array} \quad \begin{array}{r} 67 \Rightarrow \\ \times 9 \Rightarrow \times \\ \hline \end{array}$$

Do NOT round single digits in multiplication.

7. Use the rule to complete table.

$y = x + 10$

x	y
2	
4	14
6	

$y = x - 5$

x	y
5	
10	5
15	

8. Carla and her classmates read 25 chapter books each week. After 34 weeks, how many chapter books will the class read?

- (A) 59 (C) 850
- (B) 9 (D) 830

9. Zach placed coins in a rectangular array of equal rows and columns. He placed 276 coins in the array. If Zach had 23 columns of coins, how many rows of coins are in the array?

- (A) 12 (C) 253
- (B) 299 (D) 14

10. Complete the table below.

How many feet are in:	feet
24 inches	
36 inches	3
48 inches	

Note: 12 inches = 1 foot

PART 3: Reflection and Conceptual Understanding

Complete.

The decimal 2.15 is between what two whole numbers?

_____ and _____

The decimal 3.7 is between what two whole numbers?

_____ and _____

The decimal 2.15 is _____ away from 2.

The decimal 3.7 is _____ away from 4.



— PART 1: Numeracy Development —

1. Make 1.0 by **Adding Up**.

0.79 ⇒ 0.21 0.6 ⇒

0.93 ⇒ 0.65 ⇒

0.81 ⇒ 0.57 ⇒

2. Complete the number line with correct decimals and fractions.

3. **Round** each decimal to the **nearest hundredth**.

0.008 → _____ 0.063 → _____ 0.991 → _____ 0.307 → _____ 0.436 → _____

4. **Expand** each number in decimal form and fraction form.

218.406 = _____ 90.111 = _____

218.406 = _____ 90.111 = _____

— PART 2: Application Practice —

5. Whole number **estimation**: add, subtract or multiply.

$$\begin{array}{r} 258 \\ + 417 \\ \hline \end{array} \Rightarrow \underline{\hspace{2cm}}$$

$$\begin{array}{r} 894 \\ - 550 \\ \hline \end{array} \Rightarrow \underline{\hspace{2cm}}$$

$$\begin{array}{r} 94 \\ \times 6 \\ \hline \end{array} \Rightarrow \underline{\hspace{2cm}}$$

Do **NOT** round single digits in multiplication.

6. Use the rule to complete table.

$y = x + 15$

x	y
10	
13	
16	

$y = x - 7$

x	y
8	
12	
16	

7. At Friday's game, there were 15 sections in the stadium and every seat was occupied. If there were 2,025 people at the game, how many people sat in each section?

(A) 125 (C) 145
(B) 135 (D) 155

8. On Saturday, a week ago, 652 people went to a church meeting. This Saturday, 987 people attended the meeting. About how many more people attended this Saturday's meeting?

(A) 100 (C) 300
(B) 200 (D) 1,700

9. Complete the table below.

How many feet are in:	feet
12 inches	
36 inches	
60 inches	

Note: 12 inches = 1 foot

— PART 3: Reflection and Conceptual Understanding —

Complete.

The decimal 7.92 is **between** what two whole numbers? _____ and _____

The decimal 7.92 is _____ away from 8.

The decimal 13.46 is **between** what two whole numbers? _____ and _____

The decimal 13.46 is _____ away from 13.



— PART 1: Numeracy Development —

1. Make 1.0 **Add Up.**

0.89 ⇒

0.93 ⇒

0.86 ⇒

2. Complete the number line: **decimals** and **mixed numbers.**

The number line has major tick marks at 3.0, 3.1, 3.4, and 4.0. Below the line, there are boxes for mixed numbers: $3\frac{0}{10}$, $3\frac{7}{10}$, and $4\frac{0}{10}$. There are also boxes for other mixed numbers between 3.1 and 3.4, and between 3.4 and 4.0.

3. **Round** each decimal to the **nearest hundredth.**

0.008 → _____ 0.065 → _____ 0.964 → _____

4. Use the rule to complete table.

$y = x + 4$ $y = x - 7$

x	y
16	
21	

x	y
11	
17	

5. **Expand** each number in **decimal form** and **fraction form.**

9,408.675 = _____

9,408.675 = _____

— PART 2: Application Practice —

6. Whole number **estimation**: add, subtract or multiply.

$$\begin{array}{r} 443 \\ + 752 \\ \hline \end{array} \Rightarrow \underline{\hspace{2cm}}$$

$$\begin{array}{r} 934 \\ - 41 \\ \hline \end{array} \Rightarrow \underline{\hspace{2cm}}$$

$$\begin{array}{r} 74 \\ \times 42 \\ \hline \end{array} \Rightarrow \underline{\hspace{2cm}}$$

7. Write the **improper fraction** and **mixed number.**

_____ mixed number

_____ Improper fraction

8. The **regular hexagon** has sides equal to 7 cm. What is the **polygon's perimeter**?

(A) 42 cm (C) 11 cm

(B) 35 cm (D) 49 cm

9. Sally and Alex baked chocolate chip cookies. They placed 8 chocolate chips in each cookie. If they made 65 cookies, **about** how many chocolate chips did they use?

(A) 73 (C) 480

(B) 57 (D) 560

10. Complete the table below.

How many feet are in:	feet
2 yards	
5 yards	
9 yards	
10 yards	

Note: 1 yard = 3 feet

— PART 3: Reflection and Conceptual Understanding —

Complete.

The decimal 56.09 is **between** what two whole numbers?
_____ and _____

The decimal 32.4 is **between** what two whole numbers?
_____ and _____

The decimal 56.09 is _____ away from 57.

The decimal 32.4 is _____ away from 33.



PART 1: Numeracy Development

1. Make 1.0 **Add Up**.

0.75 ⇒

0.78 ⇒

0.69 ⇒

2. Complete the number line with correct decimals and fractions.

Number line labels: $\frac{6}{10}$, 0.7 , 1.0 , $1\frac{3}{10}$, 1.5 , $1\frac{6}{10}$

3. Complete the decimal pattern.

0.53	0.63	0.73		0.93		1.23	
------	------	------	--	------	--	------	--

4. Use the rule to complete table.

$y = x - 20$ $y = x + 15$

x	y	x	y
43		25	
61		35	

5. **Expand** each number in **decimal form** and **fraction form**.

601.032 = _____

601.032 = _____

PART 2: Application Practice

6. **Decimal estimation** to nearest **whole**: add, subtract or multiply.

$2.4 \Rightarrow 2$ $7.32 \Rightarrow 7$ $7.1 \Rightarrow 7$

$3.69 \Rightarrow 4$ $0.9 \Rightarrow 1$ $3.5 \Rightarrow 4$

7. Write the **improper fraction** and **mixed number**.

mixed number: _____

Improper fraction: _____

8. Luis walked for 12.4 kilometers. The path he walked for 3 hours was 21.7 kilometers in length. What is the distance that he has left, and how do you know your answer is reasonable?

(A) 34.1 kilometers; I can estimate $22 + 12 = 34$. Close to 34.1

(B) 21.7 kilometers; I can estimate $22 - 1 = 21$. Close to 21.7

(C) 9.3 kilometers; I can estimate $22 - 12 = 10$. Close to 9.3

(D) 269.08 kilometers. I can estimate $12 \times 22 = 252$. Close to 269

9. Complete the table below.

How many feet are in:	feet
7 yards	
3 yards	
2 yards	
12 yards	

Note: 1 yard = 3 feet

PART 3: Reflection and Conceptual Understanding

A.) Complete.

The decimal 25.34 is **between** what two whole numbers?
_____ and _____

The decimal 25.34 is _____ away from 25.

B.) Write the **whole number** that each decimal is closest.

$(6.53)1 \Rightarrow$ _____ $19.75 \Rightarrow$ _____

$0.787 \Rightarrow$ _____ $7.5003 \Rightarrow$ _____



PART 1: Numeracy Development

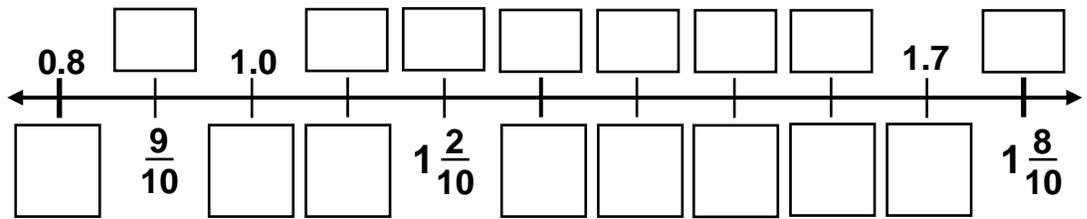
1. Make 1.0

0.64 ⇒

0.4 ⇒

0.57 ⇒

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



3. Complete the decimal pattern.

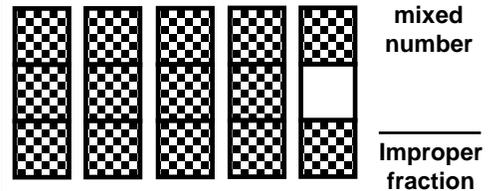
0.87	0.77	0.67			0.37		0.17	
------	------	------	--	--	------	--	------	--

5. Write each decimal in word form. (Use 'and' for the decimal point.)

3.4 = three and four tenths

0.67 = _____

4. Write the **improper fraction** and **mixed number**.



PART 2: Application Practice

6. **Decimal estimation** to nearest **whole**: add, subtract or multiply.

$$\begin{array}{r} 4.51 \Rightarrow \\ + 5.09 \Rightarrow \end{array} \quad \begin{array}{r} 3.17 \Rightarrow \\ - 1.8 \Rightarrow \end{array} \quad \begin{array}{r} 6.81 \Rightarrow \\ \times 2.1 \Rightarrow \end{array}$$

7. Miguel ran 15 kilometers each day. Each day after his run, he drank 1.85 liters (L) of water. Estimate the amount of water Miguel drank for 5 days.

- (A) 12 L
- (B) 7 L
- (C) 10 L
- (D) 6 L

8. Jon threw a shotput 7.2 meters. Billy heaved the shotput 8.9 meters. Compute the combined distance they threw the shotput, and how do you know your answer is reasonable?

- (A) 16.1 meters; I can estimate $7 + 9 = 16$. Close to 16.1
- (B) 1.7 meters; I can estimate $9 - 7 = 2$. Close to 1.7
- (C) 20.9 meters; I can estimate $30 - 10 = 20$. Close to 20.9
- (D) 64.08 meters. I can estimate $7 \times 9 = 63$. Close to 64.08

9. Complete the table below.

How many inches in:	inches
2 feet	
3 feet	
$\frac{1}{2}$ foot	
5 feet	

Note: 1 foot = 12 inches

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 }



PART 1: Numeracy Development

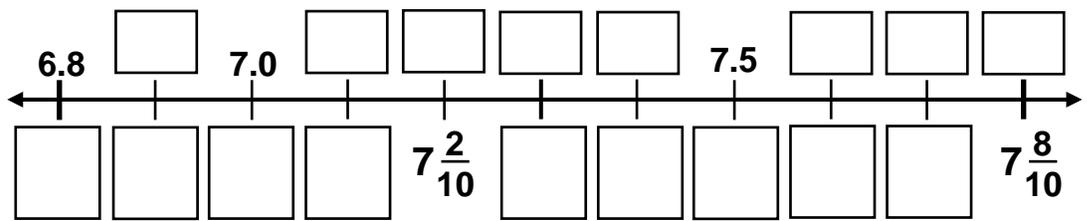
1. Make 1.0

0.1 ⇒

0.01 ⇒

0.05 ⇒

2. Complete the number line: **decimals** and **mixed numbers**.



3. Complete the decimal pattern.

0.03	0.05		0.09		0.15		
------	------	--	------	--	------	--	--

5. Write each decimal in word form. (Use 'and' for the decimal point.)

6.2 = _____

1.35 = _____

4. Shade $10/3$ (improper fraction)

Write the mixed number.

Complete the equality.

PART 2: Application Practice

6. **Decimal estimation** to nearest **whole**: add, subtract or multiply.

$17.09 \Rightarrow$ $27.42 \Rightarrow$ $9.51 \Rightarrow$
 $+ 22.90 \Rightarrow$ $- 12.88 \Rightarrow$ $\times 2.6 \Rightarrow$

7. Dharma and Grace collect buttons. They have a large collection, so they grouped them. They have 45 groups with 67 buttons in each group. How many total buttons do they have?

- (A) 112 (C) 3,685
- (B) 3,015 (D) 3,285

8. Liberty drove 39.7 miles. She still has 90.41 miles to travel until she gets home. Calculate the distance she will drive to get home, and how do you know your answer is reasonable?

- (A) 50.71 meters; I can estimate $90 - 40 = 50$.
- (B) 130.11 meters; I can estimate $40 + 90 = 130$.
- (C) 180.82 meters; I can estimate $90 + 90 = 180$.
- (D) 3,589.3 meters. I can estimate $40 \times 90 = 3600$.

9. Complete the table below.

How many inches in:	inches
3 feet	
5 feet	
$\frac{1}{2}$ foot	
4 feet	

Note: 1 foot = 12 inches

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 12 by filling in the boxes.

$12: \{ 1, 2, _, _, _, _ \}$ \Rightarrow $12: \{ 1, 2, _, _, 6, 12 \}$ \Rightarrow $12: \{ 1, 2, 3, 4, 6, 12 \}$

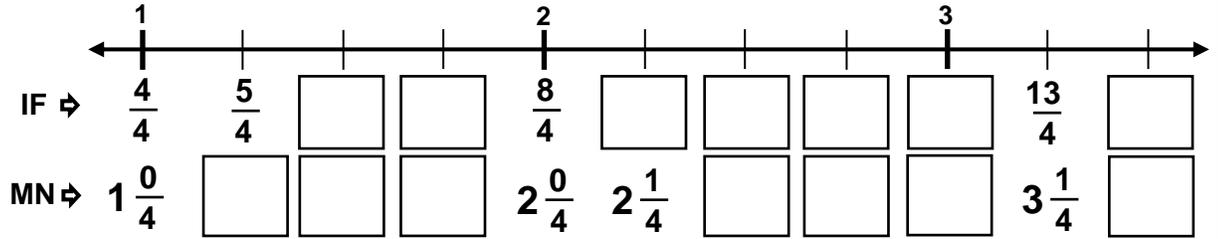


PART 1: Numeracy Development

1. Multiply.

$$\begin{array}{r} 125 \\ \times 31 \\ \hline \end{array}$$

2. Complete the number line: **mixed numbers (MN)** and **improper fractions (IF)**.



3. Complete the decimal pattern.

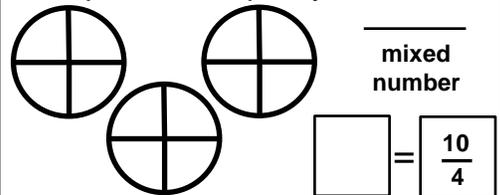
0.27		0.21	0.18			0.09	
------	--	------	------	--	--	------	--

5. Write each decimal in word form. (Use 'and' for the decimal point.)

6.210 = _____
7.05 = _____

4. Shade $10/4$ (improper fraction) Write the mixed number.

Complete the equality.



PART 2: Application Practice

6. Decimal **estimation** to nearest **TEN**: add OR subtract.

$$\begin{array}{r} 57.04 \Rightarrow 60 \\ + 32.50 \Rightarrow \end{array} \quad \begin{array}{r} 65.42 \Rightarrow \\ - 11.2 \Rightarrow \end{array} \quad \begin{array}{r} 88.3 \Rightarrow \\ - 26.98 \Rightarrow \end{array}$$

8. Jasper is 4 feet 2 inches tall. What equation shows Jasper's height (H) in inches?

- (A) $H = (2 \times 12) - 4$
- (B) $H = (2 \times 4) + 12$
- (C) $H = (4 \times 12) \times 4$
- (D) $H = (4 \times 12) + 2$

9. Caleb's teacher wrote 3.56 on the document camera. She asked her class, "Which of the answers below correctly rounds to 3.56 when rounded to the hundredths place?"

- (A) 3.565 (C) 3.555
- (B) 3.459 (D) 3.554

7. One thousand eighty children attended the soccer jamboree. The coaches separated the boys and girls into equal teams of 15. How many children were on each team?

- (A) 71 (C) 70
- (B) 72 (D) 73

10. Complete the table below.

How many feet in:	feet
1 mile	
$\frac{1}{2}$ mile	
2 miles	
3 miles	

Note: 1 mile = 5,280 feet

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 16 by filling in the boxes.

16: { 1, \square , \square , \square } \Rightarrow 16: { 1, 2, \square , 8, 16 } \Rightarrow 16: { 1, 2, 4, 8, 16 }

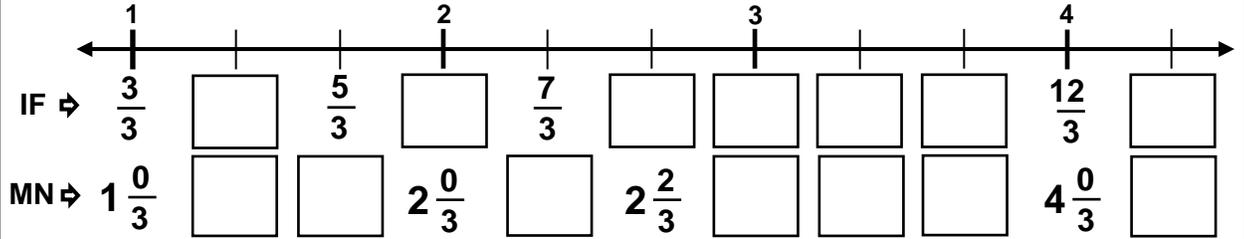


PART 1: Numeracy Development

1. Multiply.

$$\begin{array}{r} 206 \\ \times 43 \\ \hline \end{array}$$

2. Complete the number line: **mixed numbers (MN)** and **improper fractions (IF)**.



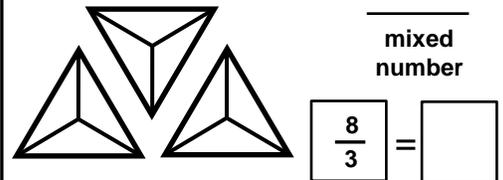
3. **Factor Strings:** List each number's factors.

- 1: { } 3: { , } 5: { , } 7: { , }
 2: { , } 4: { , , } 6: { , , , } 8: { , , , }

4. **Shade $\frac{8}{3}$ (improper fraction)**

Write the **mixed number**.

Complete the equality.



5. Write each decimal in word form. (Use 'and' for the decimal point.)

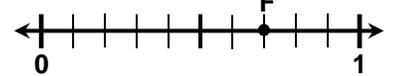
13.049 = _____

PART 2: Application Practice

6. **Estimate** to nearest **TEN**: add, subtract or multiply.

$$\begin{array}{r} 36.74 \Rightarrow \\ + 61.3 \Rightarrow \end{array} \quad \begin{array}{r} 78.91 \Rightarrow \\ - 16.7 \Rightarrow \end{array} \quad \begin{array}{r} 65.3 \Rightarrow \\ \times 21.44 \Rightarrow \end{array}$$

7. On the number line below, what is the correct equality of the *decimal* and *proper fraction* at Point F?



- (A) $\frac{1}{7} = 0.7$ (C) $\frac{7}{10} = 0.7$
 (B) $\frac{1}{6} = 0.6$ (D) $\frac{6}{10} = 0.6$

8. Dan walked a mile and a half. What equation shows Dan's distance (D) in feet?

- (A) $D = 1 + (5,280 \div 2)$
 (B) $D = 5,280 + (5,280 \times 2)$
 (C) $D = 5,280 + (5,280 \div 2)$
 (D) $D = 5,280 + (5,280 + 2)$

9. Sara and Joe baked 133 cupcakes on Monday and 155 cupcakes on Tuesday. The cupcakes were packaged in boxes of 12. How many boxes were filled with cupcakes?

- (A) 636 (C) 24
 (B) 194 (D) 53

10. Complete the table below.

How many feet in:	feet
1 mile	
$\frac{1}{2}$ mile	
$\frac{1}{4}$ mile**	
$1\frac{1}{2}$ mile	

** Divide by 4

Note: 1 mile = 5,280 feet

PART 3: Reflection and Conceptual Understanding

Circle the **proper fractions**.

Underline the **improper fractions**.

Box the **mixed numbers**.

$2\frac{4}{5}$

$\frac{8}{5}$

$1\frac{1}{3}$

$\frac{1}{10}$

$4\frac{4}{7}$

$\frac{7}{3}$

$5\frac{0}{8}$

$\frac{9}{2}$

$\frac{6}{6}$

$\frac{1}{3}$

$9\frac{3}{4}$

$\frac{4}{5}$

$10\frac{1}{8}$

$\frac{8}{8}$

$\frac{2}{5}$

$\frac{3}{1}$

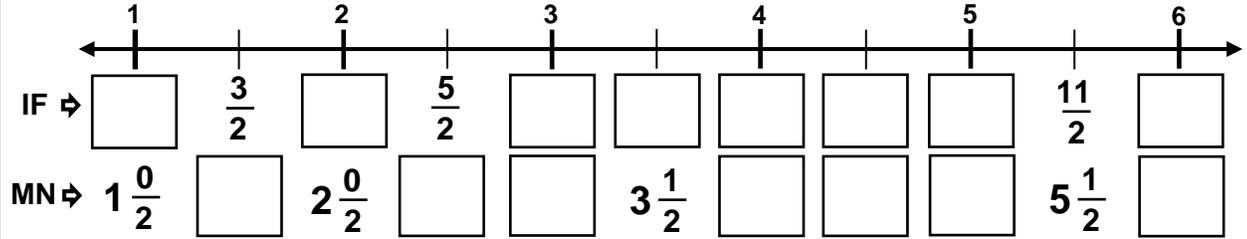
$\frac{6}{8}$

PART 1: Numeracy Development

1. Multiply.

$$\begin{array}{r} 719 \\ \times 65 \\ \hline \end{array}$$

2. Complete the number line: **mixed numbers (MN)** and **improper fractions (IF)**.



3. **Factor Strings:** List each number's factors.

- 1: { } 3: { , } 5: { , } 7: { , }
- 2: { , } 4: { , , } 6: { , , } 8: { , , , }

4. Shade $\frac{9}{2}$ (improper fraction)

Write the **mixed number**.

Complete the equality.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	mixed number
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

= $\frac{9}{2}$

5. Write each decimal in word form. (Use 'and' for the decimal point.)

21.40 = _____

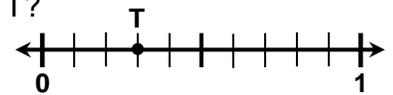
PART 2: Application Practice

6. **Complete.** Select the answer describing the decimal pattern.



- (A) The decimals are increasing by $\frac{4}{100}$ toward the right.
- (B) The decimals are increasing by $\frac{4}{10}$ toward the right.

7. On the number line below, what is the correct equality of the *decimal* and *proper fraction* at Point T?



- (A) $\frac{1}{3} = 0.3$ (C) $\frac{4}{10} = 0.4$
- (B) $\frac{3}{10} = 0.3$ (D) $\frac{2}{10} = 0.2$

8. Chloe has 23 boxes of toys. If there are 145 toys in each box, what equation (t) shows the total number of toys?

- (A) $t = 23 + 145$
- (B) $t = 145 - 23$
- (C) $t = 145 \div 23$
- (D) $t = 145 \times 23$

9. Dylan works at the GAP clothing store. He placed 156 shirts in 12 equal stacks on a shelf so customers can purchase them. How many shirts are in the fourth stack? (Think!)

- (A) 12 jeans (C) 142 jeans
- (B) 13 jeans (D) 1,872 jeans

10. Complete the table below.

How many pounds in:	lbs.
16 ounces	
48 ounces	
32 ounces	
80 ounces	

Note: 16 dry ounces = 1 pound (lb.)

PART 3: Reflection and Conceptual Understanding

Circle the **proper fractions**.

$\frac{1}{9}$

$7\frac{3}{5}$

$\frac{5}{10}$

$\frac{5}{5}$

$37\frac{8}{10}$

$\frac{9}{1}$

$4\frac{0}{5}$

$\frac{1}{2}$

Underline the **improper fractions**.

$\frac{2}{2}$

$\frac{6}{9}$

$14\frac{1}{4}$

$\frac{3}{6}$

$26\frac{5}{8}$

$\frac{7}{2}$

$\frac{2}{6}$

$\frac{8}{9}$

$\frac{4}{1}$

Box the **mixed numbers**.

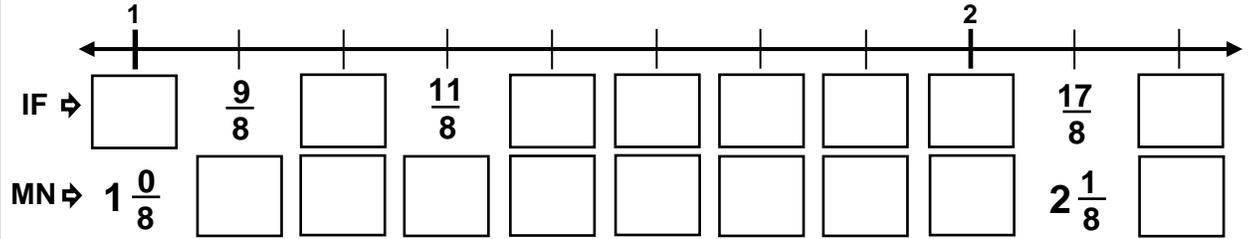


PART 1: Numeracy Development

1. Multiply.

$$\begin{array}{r} 417 \\ \times 61 \\ \hline \end{array}$$

2. Complete the number line: **mixed numbers (MN)** and **improper fractions (IF)**.



3. **Factor Strings:** List each number's factors.

- 4: { , } 8: { , , } 12: { , , , }
- 5: { } 9: { , } 13: { }
- 6: { , , } 10: { , , } 14: { , , }
- 7: { } 11: { } 15: { , , }

4. Simplify each expression.

$4(2 + 3) = \square$ $2(9 - 6) = \square$

5. Write: Prime (P) or Composite (C)

- 7: **P** 5: 14: 15:
- 4: **C** 9: 13: 6:

PART 2: Application Practice

6. Complete. Select the answer describing the decimal pattern.



- (A) The decimals are decreasing by $\frac{1}{100}$ toward the right.
- (B) The decimals are decreasing by $\frac{1}{10}$ toward the right.

7. What is the correct equality of the *decimal* and *proper fraction*?



- (A) $\frac{1}{6} = 0.6$ (C) $\frac{6}{10} = \frac{1}{6}$
- (B) $0.5 = \frac{5}{10}$ (D) $\frac{6}{10} = 0.6$

8. Rodney spent \$4.15 on chips and \$7.99 on chicken. If he paid with a 20-dollar bill, what is the amount of change that he received?

- (A) \$ 7.86 (C) \$ 6.86
- (B) \$ 5.85 (D) \$ 7.76

9. Eric and Gail walked a total of 239.5 kilometers during the summer. Their goal next summer is to walk 75 kilometers farther than they did this summer. Compute their distance goal.

- (A) 247 km. (C) 164.5 km.
- (B) 314.5 km. (D) 75 km.

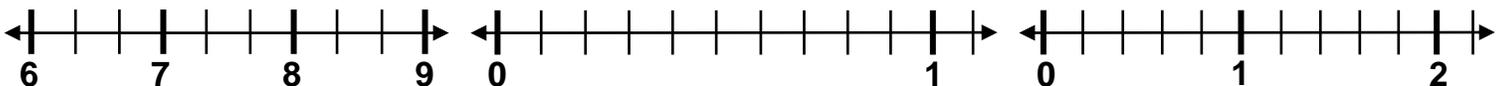
10. Complete the table below.

How many pounds in:	lbs.
32 ounces	
64 ounces	
80 ounces	
48 ounces	

Note: 16 dry ounces = 1 pound (lb.)

PART 3: Reflection and Conceptual Understanding

Write the **denominator** for each *number line* on the line provided.



a.) _____

b.) _____

c.) _____

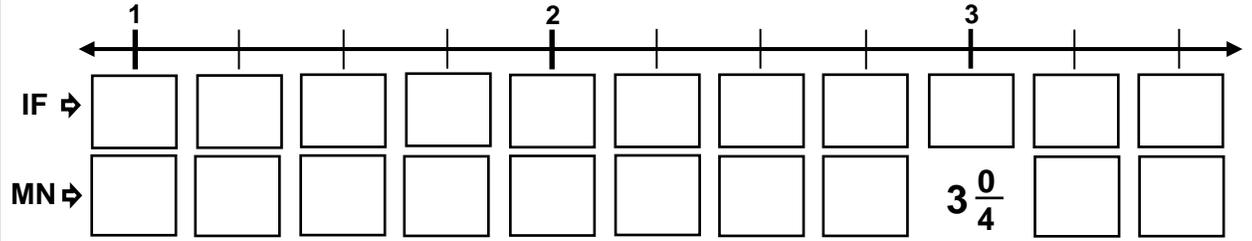


PART 1: Numeracy Development

1. Multiply.

$$\begin{array}{r} 444 \\ \times 22 \\ \hline \end{array}$$

2. Complete the number line: *mixed numbers* (MN) and *improper fractions* (IF).



3. Factor Strings: List each number's factors.

8: { , , , } 12: { , , , , } 16: { , , , , }

9: { , , } 13: { , } 17: { , }

10: { , , , } 14: { , , , } 18: { , , , , }

11: { , } 15: { , , , } 19: { , }

4. Simplify each expression.

$8(12 \div 3) = \square$ $4(5 \times 2) = \square$

5. Write: Prime (P) or Composite (C)

7: ___ 8: ___ 17: ___ 18: ___

9: ___ 2: ___ 14: ___ 19: ___

PART 2: Application Practice

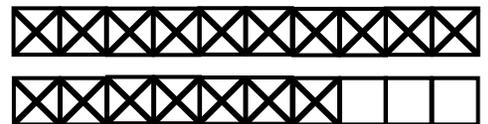
6. Divide with *Remainders*. **Check** quotient by multiplication.

$$5 \overline{)26}^R$$

$$5 \overline{)267}^R$$

$$5 \overline{)2,678}^R$$

7. What is the correct equality of the *decimal* and *mixed number*?



- (A) $17/6 = 1.6$ (C) $1\frac{7}{10} = 1\frac{1}{7}$
- (B) $1.7 = 7/10$ (D) $1\frac{7}{10} = 1.7$

8. Diego's 2nd grade class is going on a field trip. There are 26 students in Diego's class. If only 5 students can ride in a car, what is the least number of cars needed to transport all 26 students?

- (A) 4 cars (C) 6 cars
- (B) 5 cars (D) 7 cars

9. Jessica is rock climbing. She has a 150 yard rope. What is the rope's length in feet? (1 yard = 3 feet).

- (A) 30 feet (C) 50 feet
- (B) 450 feet (D) 75 feet

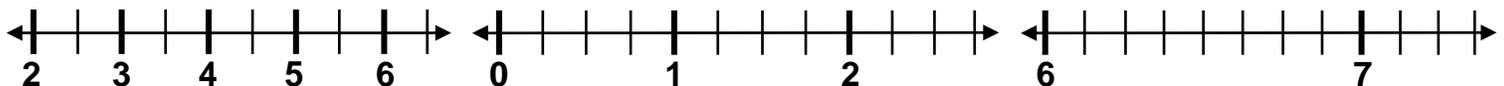
10. Complete the table below.

How many ounces in:	ounces
2 pounds (lbs.)	
5 pounds (lbs.)	
3 pounds (lbs.)	
10 pounds (lbs.)	

Note: 16 dry ounces = 1 pound (lb.)

PART 3: Reflection and Conceptual Understanding

Write the **denominator** for each *number line* on the line provided.



a.) _____

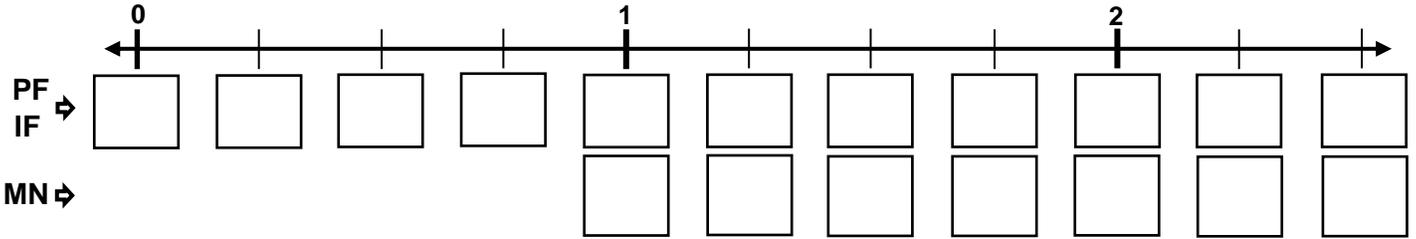
b.) _____

c.) _____



PART 1: Numeracy Development

1. Write the mixed numbers (MN), proper fractions (PF) and improper fractions (IF).



2. Factor Strings: List each number's factors.

- 8: { , , , } 12: { , , , , } 16: { , , , , }
- 9: { , , } 13: { , } 17: { , }
- 10: { , , , } 14: { , , , } 18: { , , , , , }
- 11: { , } 15: { , , , } 19: { , }

3. Simplify each expression.

$5(15 \div 3) = \square$ $2(5 \times 6) = \square$

4. Write: Prime (P) or Composite (C)

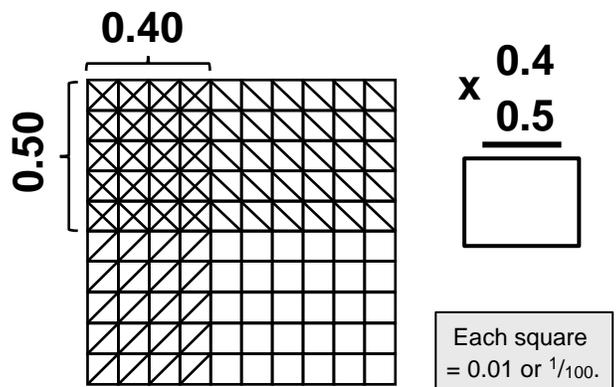
- 3: _____ 9: _____ 19: _____ 16: _____
- 5: _____ 8: _____ 13: _____ 18: _____

PART 2: Application Practice

5. Divide with Remainders.

$6 \overline{)26}^R$ $6 \overline{)269}^R$ $6 \overline{)2,695}^R$

6. Determine the decimal product.



7. Jesus has 26 toy cars. He can put six toy cars in a box. What is the least number of boxes he needs to put all 26 cars in boxes?

- (A) 5 boxes (C) 7 boxes
- (B) 6 boxes (D) 9 boxes

8. What is the area of the parallelogram if its length is 6 feet and width is 4 feet?



_____ square feet

9. Complete the table.

How many pounds in:	pounds
2 tons	
5 tons	

Note: 1 ton = 2,000 pounds (lbs.)

PART 3: Reflection and Conceptual Understanding

DIVISIBILITY: A number is divisible:

- by 2 IF the number is even.
- by 5 IF the last digit ends in 5 or 0.
- by 10 IF the last digit ends in 0.

Write if the number is divisible by 2, 5 and/or 10.

- 8: 2 10: _____ 12: _____
- 20: 2, 5, 10 6: _____ 50: _____
- 15: _____ 25: _____ 36: _____



PART 1: Numeracy Development

1. Write a decimal equivalent.

5 = 5.0 15 = _____

7 = 7.00 1 = _____

9 = _____ 34 = _____

2. Prime (P) or Composite (C)?

2: _____ 21: _____ 25: _____

9: _____ 16: _____ 30: _____

4: _____ 23: _____ 55: _____

3. Compute the decimal quotient.

$7 \overline{)2.1}$ $5 \overline{)1.0}$ $5 \overline{)5.05}$

4. List the factors.

20: { _____, _____, _____, _____ }

21: { _____, _____, _____ }

22: { _____, _____, _____ }

23: { _____, _____ }

5. Write each equivalent expression.

8 plus 3, then x 5 = _____ (_____ + _____)

5 times 3, then add 6 = _____ + (_____ x _____)

9 minus 2, then x 12 = _____ x (_____ - _____)

6. Compare (<, >, =)

0.251 ○ 0.26

5.2 ○ 5.200

0.46 ○ 0.6

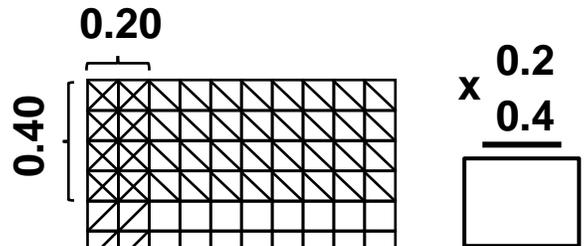
PART 2: Application Practice

7. Divide with *Remainders*. Check by multiplying.

$20 \overline{)153}^R$

$62 \overline{)465}^R$

8. Determine the *decimal product*.

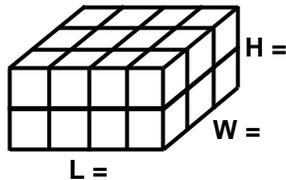


Each square = 0.01 or 1/100.

9. Al placed 2 tons in the bed of his truck. Jim put 3 more tons than Al in his truck. What is the combined weight in pounds in both vehicles?

- (A) 10,000 (C) 5,000
- (B) 14,000 (D) 7,000

10. What is **Volume** of the prism below? (Volume = L x W x H)



_____ cubic units

11. Complete the table.

How many pounds in:	pounds
7 tons	
10 tons	

Note: 1 ton = 2,000 pounds (lbs.)

PART 3: Reflection and Conceptual Understanding

DIVISIBILITY: A number is divisible:

- by 2 IF the number is even.
- by 5 IF the last digit ends in 5 or 0.
- by 10 IF the last digit ends in 0.

Write if the number is divisible by 2, 5 and/or 10.

- 12: _____ 70: _____ 36: _____
- 60: _____ 88: _____ 120: _____
- 18: _____ 55: _____ 75: _____

PART 1: Numeracy Development

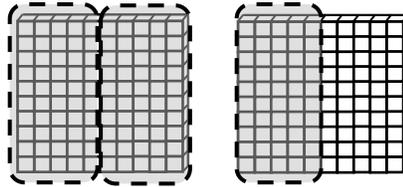
1. Make **10.0** – Add up.

8.6 = 1.4 7.0 = _____

8.9 = _____ 6.9 = _____

7.5 = _____ 8.5 = _____

2. Determine the quotient.



1.50 ÷ 3 = _____

3. Compute the decimal quotient.

$3 \overline{)1.50}$ $2 \overline{)0.8}$ $4 \overline{)24.8}$

4. List the factors.

20: { _____ }

21: { _____ }

22: { _____ }

23: { _____ }

5. Write each equivalent expression.

4 times 9, then minus 7 = (_____ x _____) – _____

12 divided by 3, times 6 = (_____ ÷ _____) x _____

11 plus 5, then x 12 = _____ (_____ + _____)

6. Compare (<, >, =)

0.02 ○ 0.006

1.20 ○ 1.1

0.7 ○ 0.700

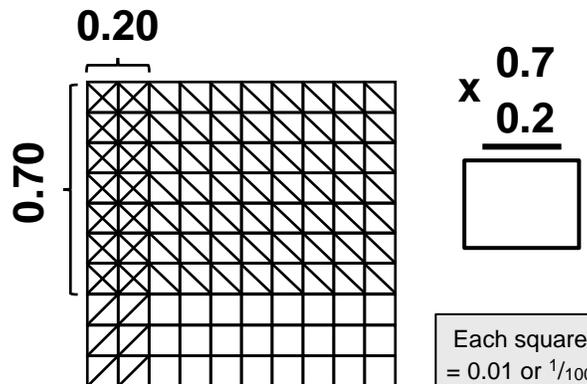
PART 2: Application Practice

7. Divide with *Remainders*. Check by multiplying.

$10 \overline{)146}^R$

$45 \overline{)475}^R$

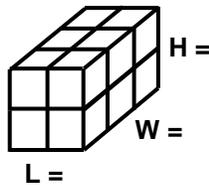
8. Determine the *decimal product*.



9. The Elm Elementary librarian tried to stack 873 books in 25 equal groups. How many books was she unable to place in an equal group of 25 books?

- (A) 34 (C) 24
- (B) 23 (D) 33

10. What is **Volume** of the prism below?
(Volume = L x W x H)



_____ cubic units

11. Complete the table.

How many feet in:	feet
2 miles	
3 miles	

Note: 1 mile = 5,280 feet

PART 3: Reflection and Conceptual Understanding

DIVISIBILITY: A number is divisible:

- by **3** IF the sum of the digits is divisible by 3.
- by **6** IF the number is even AND divisible by 3.
- by **9** IF the sum of the digits is divisible by 9.

Write if the number is divisible by 3, 6 and/or 9.

18: 3, 6, 9 45: _____ 36: _____

66: _____ 33: _____ 81: _____

15: _____ 27: _____ 72: _____



PART 1: Numeracy Development

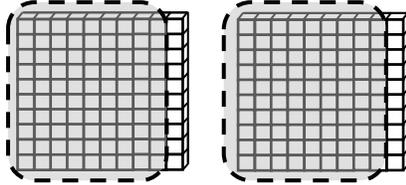
1. Make 10.0 – Add up.

5.9 = _____ 3.0 = _____

9.0 = _____ 7.3 = _____

7.8 = _____ 6.5 = _____

2. Determine the quotient.



1.80 ÷ 2 = _____

3. Compute the decimal quotient.

2)1.80 3)0.9 5)35.5

4. List the factors.

24: { _____ }

25: { _____ }

27: { _____ }

28: { _____ }

5. Complete.

y = x + 12

x	y
5	
8	

6. Calculate.

3 + [2(4 + 0)] =

9 - [3(9 - 7)] =

[5(1 + 1)] - 5 =

7. Compare (<, >, =)

6.07 ○ 6.009

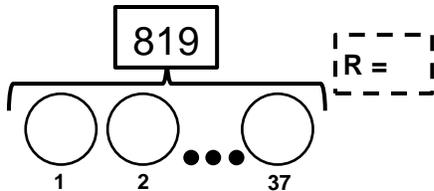
0.201 ○ 0.3

4.1 ○ 4.100

PART 2: Application Practice

8. Divide. Check by multiplying. Complete diagram.

37)819 R



9. Cross-shade and calculate the product.

0.50

x 0.5

0.5

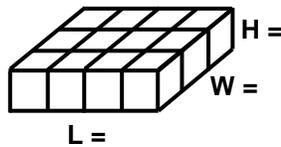
Each square = 0.01 or 1/100.

10. Dan has 3 brothers. Dan's mom separated \$12.40 into equal groups for her four sons. How much money did each brother receive?

(A) \$ 49.20 (C) \$ 4.10

(B) \$ 4.92 (D) \$ 3.10

11. What is Volume of the prism below? (Volume = L x W x H)



_____ cubic units

12. Complete the table.

How many inches in:	inches
5 feet	
8 feet	

Note: 1 foot = 12 inches

PART 3: Reflection and Conceptual Understanding

DIVISIBILITY: A number is divisible:

- by 3 IF the sum of the digits is divisible by 3.
- by 6 IF the number is even AND divisible by 3.
- by 9 IF the sum of the digits is divisible by 9.

Write if the number is divisible by 3, 6 and/or 9.

12: 3, 6 66: _____ 36: _____

99: _____ 51: _____ 27: _____

63: _____ 60: _____ 18: _____



PART 1: Numeracy Development

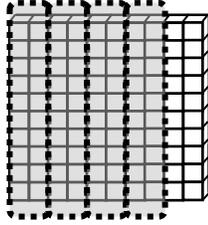
1. Make 10.0 – Add up.

3.9 = _____ 4.6 = _____

2.5 = _____ 5.7 = _____

1.8 = _____ 0.5 = _____

2. Choose the division equation.



- (A) $0.80 \div 3 = 0.20$
- (B) $0.60 \div 3 = 1.80$
- (C) $0.60 \div 3 = 0.20$
- (D) $0.80 \div 4 = 0.20$

3. Find the decimal quotients.

$2 \overline{)0.86}$

$9 \overline{)27.9}$

4. List the factors.

24: { _____ }

25: { _____ }

27: { _____ }

28: { _____ }

5. Complete.

$y = 3(x + 4)$

x	y
0	
1	

6. Calculate.

$(5 \times 2) \times (4 + 0) = \square$

$4 + [7(2 + 1)] = \square$

$[6(2 + 2)] \div 3 = \square$

7. Compare (<, >, =)

$0.429 \bigcirc 0.5$

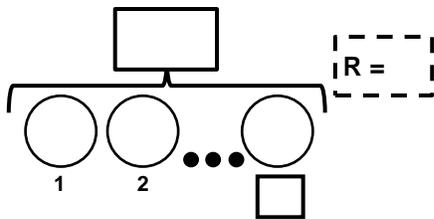
$0.2 \bigcirc 0.391$

$0.1 \bigcirc 0.100$

PART 2: Application Practice

8. Divide. Check by multiplying. Complete diagram.

$51 \overline{)847}^R$



9. Cross-shade and calculate the product.

0.80

$\begin{array}{r} 0.30 \\ \times 0.8 \\ \hline \end{array}$

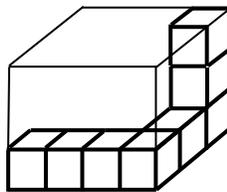
Each square = 0.01 or $\frac{1}{100}$.

10. Jo saved her \$2.50 weekly allowance for 5 weeks. At the store, Jo spent \$4.75 on gum and soda. How much money does she have left after her purchases?

- (A) \$ 12.50 (C) \$ 7.75
- (B) \$ 12.25 (D) \$ 7.25

11. What is Volume of the prism below?

$(Volume = L \times W \times H)$



_____ cubic units

12. Complete the table.

How many feet in:	feet
36 inches	
2 yards	

Note: 1 foot = 12 inches and 1 yard = 3 feet

PART 3: Reflection and Conceptual Understanding

Decimal Multiplication: Count the decimal places and correctly place the decimal point in the product.

$\begin{array}{r} 0.5 \rightarrow 1 \\ \times 0.5 \rightarrow 1 \\ \hline 0.25 \end{array}$ (2)

Move decimal 2 places.

$\begin{array}{r} 0.5 \rightarrow 1 \\ \times 3 \rightarrow 0 \\ \hline 1.5 \end{array}$ (1)

Move decimal 1 place.

$\begin{array}{r} 2.5 \rightarrow 1 \\ \times 4 \rightarrow 0 \\ \hline 100 \end{array}$ (0)

$\begin{array}{r} 0.5 \rightarrow 1 \\ \times 0.7 \rightarrow 1 \\ \hline 035 \end{array}$ (0)

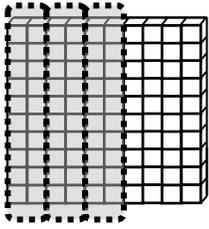
$\begin{array}{r} 0.53 \rightarrow 2 \\ \times 0.4 \rightarrow 1 \\ \hline 0212 \end{array}$ (0)

Note: 3 = 3.



PART 1: Numeracy Development

1. Choose the division equation.



- (A) $0.80 \div 3 = 0.20$
- (B) $0.60 \div 3 = 1.80$
- (C) $0.60 \div 3 = 0.20$
- (D) $0.60 \div 4 = 0.15$

2. Multiply – Find the product.

$$\begin{array}{r} 2.3 \\ \times 0.7 \\ \hline \end{array} \quad \begin{array}{r} 6.1 \\ \times 6 \\ \hline \end{array} \quad \begin{array}{r} 0.4 \\ \times 0.5 \\ \hline \end{array}$$

3. Divide – Find the quotient.

$$3 \overline{)0.18} \quad 9 \overline{)37.8}$$

4. List the factors.

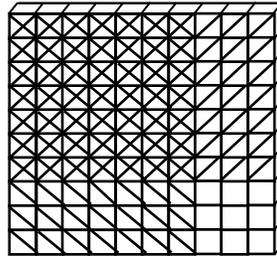
30: { _____ }

32: { _____ }

33: { _____ }

36: { _____ }

5. Choose the multiplication equation.



- (A) $0.6 \times 0.7 = 0.42$
- (B) $0.6 \times 0.8 = 0.48$
- (C) $0.7 \times 0.7 = 0.49$
- (D) $0.6 \times 0.6 = 0.36$

6. Complete.

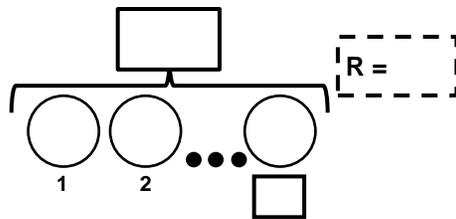
$y = 7(x - 4)$

x	y
9	
11	

PART 2: Application Practice

7. Divide. Check by multiplying. Complete diagram.

$9 \overline{)852}^R$



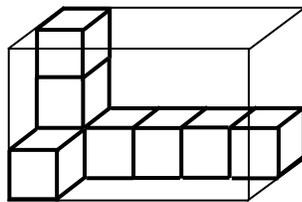
8. Kendall walks 3.7 miles to school each morning. How many miles does Kendall walk in 5 mornings?

- (A) 185 miles
- (B) 18.5 miles
- (C) 137 miles
- (D) 13.7 miles

9. Jettra's teacher asked her and Kim to choose a decimal less than 1 whole. Jettra chose 0.4, and Kim picked 0.9. What is the product of their decimals?

- (A) 3.6
- (B) 1.3
- (C) 0.36
- (D) 0.13

10. What is Volume of the prism below? (Volume = L x W x H)



_____ cubic units

11. Complete the table.

How many feet in:	feet
60 inches	
6 inches	
2 miles	
5 yards	

Note: 1 foot = 12 inches 1 yard = 3 feet 1 mile = 5,280 feet

PART 3: Reflection and Conceptual Understanding

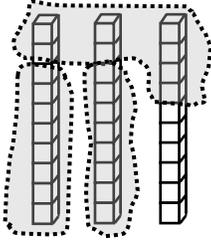
Decimal Multiplication: Count the decimal places and correctly place the decimal point in the product.

$\begin{array}{r} 0.65 \rightarrow 2 \\ \times 0.4 \rightarrow 1 \\ \hline 0.962 \end{array}$ (3)	$\begin{array}{r} 9.5 \rightarrow \square \\ \times 2 \rightarrow \square \\ \hline 190 \end{array}$ ○	$\begin{array}{r} 5.1 \rightarrow \square \\ \times 1.2 \rightarrow \square \\ \hline 612 \end{array}$ ○	$\begin{array}{r} 0.15 \rightarrow \square \\ \times 0.3 \rightarrow \square \\ \hline 0045 \end{array}$ ○	$\begin{array}{r} 6.52 \rightarrow \square \\ \times 0.7 \rightarrow \square \\ \hline 4564 \end{array}$ ○	$\begin{array}{r} 0.53 \rightarrow \square \\ \times 4 \rightarrow \square \\ \hline 212 \end{array}$ ○
---	--	--	--	--	---



PART 1: Numeracy Development

1. Choose the division equation.



- (A) $2.4 \div 4 = 0.6$
- (B) $2.4 \div 3 = 0.8$
- (C) $2.4 \div 8 = 0.3$
- (D) $2.4 \div 6 = 0.4$

2. Multiply – Find the product.

$$\begin{array}{r} 2.3 \\ \times 1.7 \\ \hline \end{array} \quad \begin{array}{r} 4.1 \\ \times 3 \\ \hline \end{array} \quad \begin{array}{r} 0.8 \\ \times 0.2 \\ \hline \end{array}$$

3. Divide – Find the quotient.

$$3 \overline{)0.6} \qquad 4 \overline{)1.28}$$

4. List the factors.

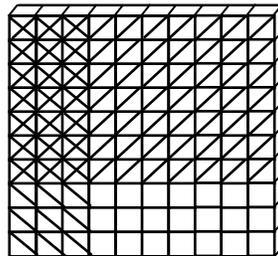
30: { _____ }

32: { _____ }

33: { _____ }

36: { _____ }

5. Choose the multiplication equation.



- (A) $0.4 \times 0.7 = 0.28$
- (B) $0.6 \times 0.4 = 0.24$
- (C) $0.7 \times 0.3 = 0.21$
- (D) $0.4 \times 0.8 = 0.32$

6. Complete.

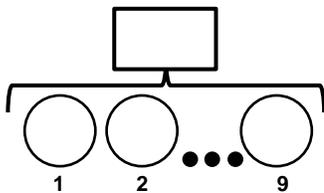
$y = (x - 4) \times 5$

x	y
7	
9	

PART 2: Application Practice

7. Multiply. Complete diagram.

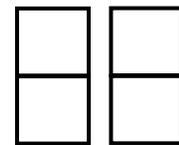
$$\begin{array}{r} 5.3 \\ \times 9 \\ \hline \end{array}$$



8. Betty poured 6 bottles of vinegar in a large beaker. If each bottle contained 0.87 liters, how much vinegar did she use?

- (A) 5.22 liters
- (B) 522 liters
- (C) 52.2 liters
- (D) 0.522 liters

9. Shade the improper fraction $\frac{3}{2}$. Write its mixed number equivalent.

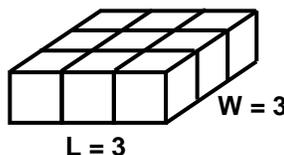


_____ mixed number

10. Angela picked 4.5 kg. of berries. She placed the berries equally in 9 jars. What is the mass (kg.) of berries in each jar?

- (A) 0.9 kg.
- (B) 0.5 kg.
- (C) 40.5 kg.
- (D) 13.5 kg.

11. The volume of a prism is 18 cubic units. If its base is shown below, what is the height of the prism? ($Volume = L \times W \times H$)



_____ height of prism

12. Complete the table.

How many ounces in:	ounces
2 pints	
2 gallons	
3 quarts	
4 cups	

Note: 1 cup = 8 ounces
1 quart = 32 ounces

1 pint = 16 ounces
1 gallon = 128 ounces

PART 3: Reflection and Conceptual Understanding

Decimal Multiplication: Count the decimal places and correctly place the decimal point in the product.

$$\begin{array}{r} 3.65 \rightarrow 2 \\ \times 0.4 \rightarrow 1 \\ \hline 1.460 \end{array} \quad \text{(3)}$$

$$\begin{array}{r} 0.8 \rightarrow \square \\ \times 2 \rightarrow \square \\ \hline 16 \end{array} \quad \text{O}$$

$$\begin{array}{r} 3.2 \rightarrow \square \\ \times 2.1 \rightarrow \square \\ \hline 672 \end{array} \quad \text{O}$$

$$\begin{array}{r} 0.25 \rightarrow \square \\ \times 0.9 \rightarrow \square \\ \hline 0225 \end{array} \quad \text{O}$$

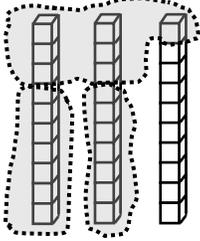
$$\begin{array}{r} 5.07 \rightarrow \square \\ \times 1.6 \rightarrow \square \\ \hline 8112 \end{array} \quad \text{O}$$

$$\begin{array}{r} 0.44 \rightarrow \square \\ \times 4 \rightarrow \square \\ \hline 176 \end{array} \quad \text{O}$$



PART 1: Numeracy Development

1. Choose the division equation.



- (A) $2.1 \div 7 = 0.3$
- (B) $1.8 \div 3 = 0.6$
- (C) $2.1 \div 3 = 0.7$
- (D) $2.5 \div 5 = 0.5$

2. Multiply – Find the product.

$$\begin{array}{r} 3.8 \\ \times 1.2 \\ \hline \end{array} \quad \begin{array}{r} 8.4 \\ \times 3 \\ \hline \end{array} \quad \begin{array}{r} 0.3 \\ \times 0.4 \\ \hline \end{array}$$

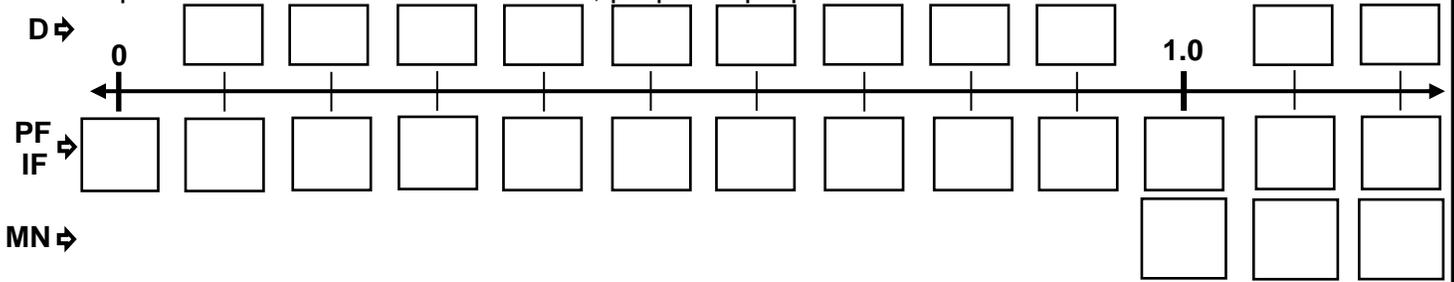
3. Match with an arrow.

$1.0 \times 3 = ?$ Product = 1

$1.0 \times 0.7 = ?$ Product > 1

$1.0 \times 1 = ?$ Product < 1

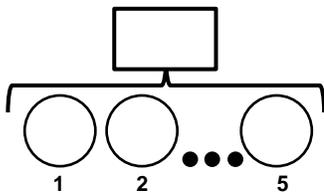
4. Complete the number line: decimals **D**, proper/improper fractions **PF/IF** and mixed numbers **MN**.



PART 2: Application Practice

5. Multiply. Complete diagram.

$$\begin{array}{r} 8.2 \\ \times 5 \\ \hline \end{array}$$



6. Jesus drank 2.5 liters of water each day for 7 days. How much water did Jesus drink in the last week?

- (A) 9.5 liters (C) 3.5 liters
- (B) 5.5 liters (D) 17.5 liters

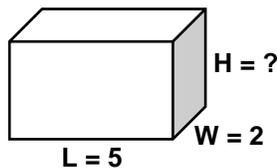
7. Shade the improper fraction $\frac{7}{3}$. Write its mixed number equivalent.

8. Andrea ran the 100 meter dash in 10.2 seconds. Luz crossed the finished line in 10.16 seconds. How much faster is Luz than Andrea racing 100 meters?

- (A) 0.06 s. (C) 0.18 s.
- (B) 0.04 s. (D) 20.36 s.

9. The volume of the prism shown below is 30 cubic units. What is the height of the prism?

$(Volume = L \times W \times H)$



Height (H) = _____

10. Complete the table.

How many ounces in:	ounces
5 pints	
3 gallons	
2 quarts	
3 cups	

Note: 1 cup = 8 ounces 1 pint = 16 ounces
 1 quart = 32 ounces 1 gallon = 128 ounces

PART 3: Reflection and Conceptual Understanding

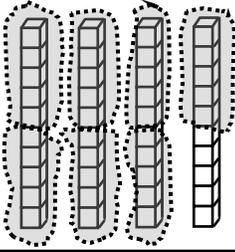
Estimating Division: Round the divisor. Dividend *changed* to math fact compatible number.

$62 \overline{)588}$	$7 \overline{)543}$	Estimate the division equations to find the quotients.	$31 \overline{)253}$	$6 \overline{)341}$	$46 \overline{)147}$	$3 \overline{)208}$
↓	↓		↓	↓	↓	↓
$60 \overline{)540}$	$7 \overline{)560}$		$30 \overline{)240}$	$6 \overline{)360}$	$\overline{) \quad \quad}$	$\overline{) \quad \quad}$



PART 1: Numeracy Development

1. Choose the division equation.



- (A) $3.5 \div 5 = 0.7$
- (B) $3.5 \div 7 = 0.5$
- (C) $3.5 \div 8 = 0.5$
- (D) $3.5 \div 7 = 0.9$

2. Find equivalent Improper fractions.

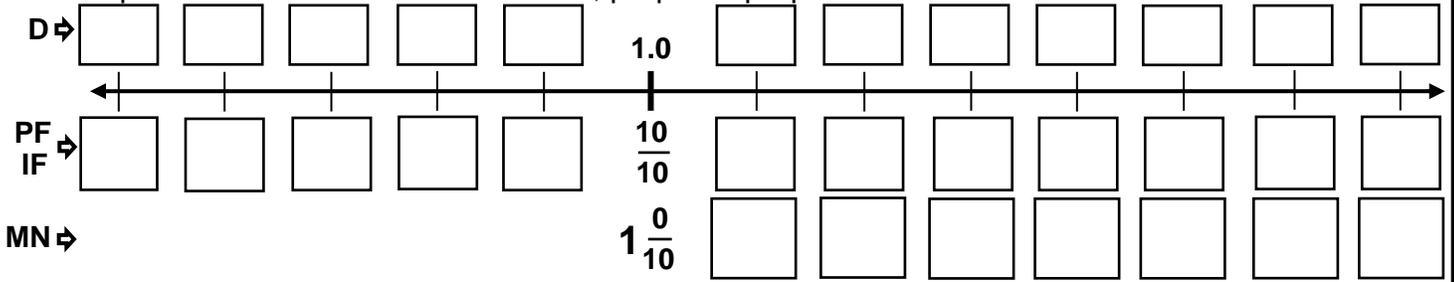
$$1 \frac{1}{10} = \frac{11}{10} \quad 1 \frac{7}{10} = \frac{\quad}{\quad}$$

$$1 \frac{6}{10} = \frac{\quad}{\quad} \quad 1 \frac{0}{10} = \frac{\quad}{\quad}$$

3. Match with an arrow.

- $5.0 \times 1 = ?$ Product < 5
- $5.0 \times 0.6 = ?$ Product $= 5$
- $5.0 \times 3 = ?$ Product > 5

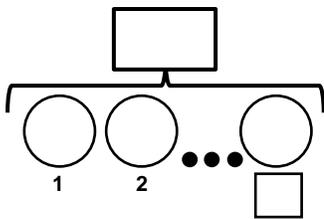
4. Complete the number line: decimals **D**, proper/improper fractions **PF/IF** and mixed numbers **MN**.



PART 2: Application Practice

5. Multiply. Complete diagram.

$$\begin{array}{r} 6.9 \\ \times 12 \\ \hline \end{array}$$

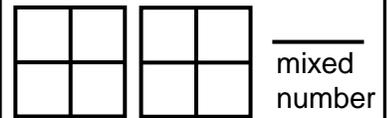


6. Refer to the number line in problem 4 above to answer the following question. Is this mathematical statement true?

$$1 \frac{7}{10} = \frac{17}{10} = 1.7$$

- Yes
- No

7. Shade the improper fraction $\frac{7}{4}$. Write its mixed number equivalent.

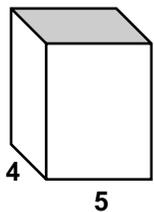


8. The Chicago water tower is 49.85 meters tall. The Los Angeles water tower is 71.2 meters tall. How much taller is the Los Angeles water tower than the Chicago's?

- (A) 120.7 m (C) 42.73 m
- (B) 21.35 m (D) 30.27 m

9. The volume of the prism shown below is 120 cubic units. What is the **height** of the prism?

$$(Volume = L \times W \times H)$$



H = ?

Height (H) = _____

10. Complete the table.

How many quarts in:	quarts
4 pints	
3 gallons	
32 ounces	
8 cups	

Note: 4 cups = 1 quart
1 quart = 32 ounces

2 pints = 1 quart
1 gallon = 4 quarts

PART 3: Reflection and Conceptual Understanding

Estimating Division: Round the divisor. Dividend changed to math fact compatible number.

$$\begin{array}{r} 77 \overline{)588} \\ \underline{770} \\ 118 \\ \underline{110} \\ 80 \\ \underline{80} \\ 0 \end{array}$$

$$\begin{array}{r} 4 \overline{)849} \\ \underline{800} \\ 49 \\ \underline{48} \\ 10 \\ \underline{10} \\ 0 \end{array}$$

Estimate the division equations to find the quotients.

$$\begin{array}{r} 28 \overline{)141} \\ \underline{280} \\ 141 \\ \underline{140} \\ 1 \end{array}$$

$$\begin{array}{r} 6 \overline{)631} \\ \underline{600} \\ 31 \\ \underline{30} \\ 1 \end{array}$$

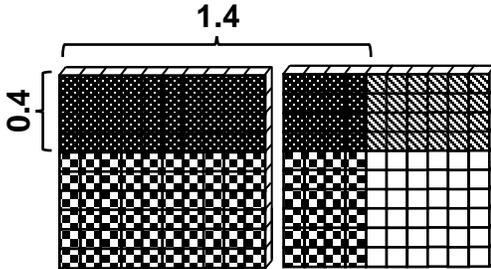
$$\begin{array}{r} 16 \overline{)178} \\ \underline{160} \\ 18 \\ \underline{16} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

$$\begin{array}{r} 5 \overline{)246} \\ \underline{100} \\ 146 \\ \underline{140} \\ 60 \\ \underline{60} \\ 0 \end{array}$$



PART 1: Numeracy Development

1. Decimal product understanding.



- a.) Write the total number of double shaded blocks. _____
- b.) Will the product be greater or less than 1.4? _____
- c.) Compute the product. _____

2. Find the improper fraction.

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

$$3\frac{1}{10} = \frac{\quad}{\quad} \quad 3\frac{0}{8} = \frac{\quad}{\quad}$$

3. Match with an arrow.

$8 \times 0.9 = ?$ Product > 8

$8 \times 1 = ?$ Product < 8

$8 \times 1.1 = ?$ Product $= 8$

4. Find and shade equivalent fractions.

$$\frac{1}{2} \stackrel{\times 2}{=} \frac{\square}{4} \quad \frac{3}{4} \stackrel{\times 2}{=} \frac{\square}{8}$$

$$= \frac{\square}{\square} \quad \frac{\square}{\square} = \frac{\square}{\square}$$

5. Use the rule.

$$y = 4(x)$$

x	y
5	
7	

PART 2: Application Practice

6. Find the fraction of prime numbers that are written on the cards.

7 6 3 4 5 11 8

- (A) $\frac{3}{7}$ (C) $\frac{5}{7}$
- (B) $\frac{4}{7}$ (D) $\frac{6}{7}$

7. Phil placed 1,620 coins in 45 equal stacks. How many coins did Phil place in the 5th stack?

- (A) 37 (C) 35
- (B) 36 (D) 34

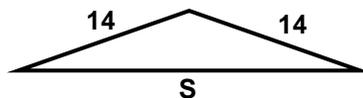
8. Britney assembled a rectangular prism out of interlocking blocks. She had 3 rows of 5 blocks by 4 blocks. What is the total number of blocks in Britney's prism?

_____ blocks

9. Josh has 432 meters of chain. If he cuts the chain in 6 equal pieces, what is the estimated length of each chain segment?

- (A) 50 m (C) 70 m
- (B) 60 m (D) 80 m

10. The perimeter of an *isosceles triangle* is 47 meters. What is the equation, S to determine the unknown side?



- (A) $S = 47 - (2 \times 14)$ (C) $S = 47 - (47 \times 2)$
- (B) $S = 47 + (2 \times 14)$ (D) $S = 47 + (2 + 14)$

11. Complete the table.

Find the meters in:	meters
250 centimeters	
2 kilometers	
105 centimeters	
2.5 kilometers	

Note: 1 meter = 100 centimeters
1,000 meters = 1 kilometer

PART 3: Reflection and Conceptual Understanding

Fill in the boxes of the equality below so improper fractions are mathematically correct.

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

Complete:

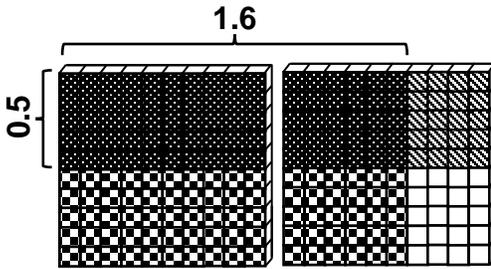
$7 \times 1 = \square$

$7 \times \frac{2}{2} = \square$



PART 1: Numeracy Development

1. Decimal product understanding.



- a.) Write the total number of double shaded blocks. _____
- b.) Will the product be greater or less than 1.6? _____
- c.) Compute the product. _____

2. Find: improper fractions.

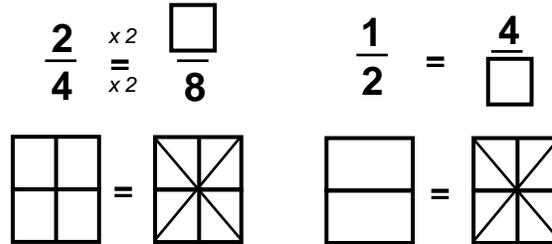
$$5 \frac{1}{4} = \square \quad 4 \frac{3}{10} = \square$$

$$1 \frac{3}{5} = \square \quad 7 \frac{0}{9} = \square$$

3. Common multiples: 2 and 3.

- 2: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18
- 3: 0, 3, 6, 9, 12, 15, 18, 21, 24, 27
- Circle all common multiples.
- What is the Lowest Common Multiple (LCM) of 2 and 3? _____

4. Find and shade equivalent fractions.



5. Use the rule.

$$y = 3(x)$$

x	y
3	
7	

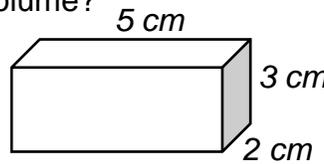
PART 2: Application Practice

6. Find the fraction of composite numbers that are written on the cards.



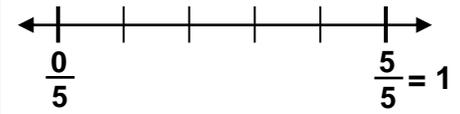
- (A) $\frac{3}{6}$ (C) $\frac{5}{6}$
- (B) $\frac{4}{6}$ (D) $\frac{6}{6}$

7. What is the prism's volume?



Volume = _____ cm³

8. Jim ate $\frac{2}{5}$ of a candy bar. He gave $\frac{1}{5}$ of the bar to a friend. What fraction remains? (Use the number line, as needed.)

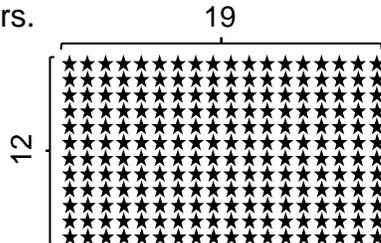


Fraction of the bar left =

9. Cal ran a 5 kilometer (km) race. Jef jogged 7.4 km. Pho ran 1,200 meters. How much farther did Cal run than Pho?

- (A) 12.4 km (C) 3.8 km
- (B) 6.2 km (D) 7.2 km

10. Ron drew the following star array on the computer. Sally wanted to know how many stars Ron drew. Calculate the total number of stars.



_____ stars

11. Complete the table.

Find the meters in:	meters
500 centimeters	
270 centimeters	
1.5 kilometers	

Note: 1 meter = 100 centimeters
1,000 meters = 1 kilometer

PART 3: Reflection and Conceptual Understanding

Complete:

$6 \times 1 = \square$

$\frac{2}{5} \times 1 = \square$

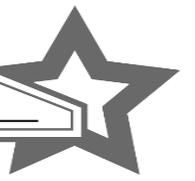
$\frac{6}{8} \div 1 = \square$

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

$\frac{2}{5} \times \frac{3}{3} = \square$

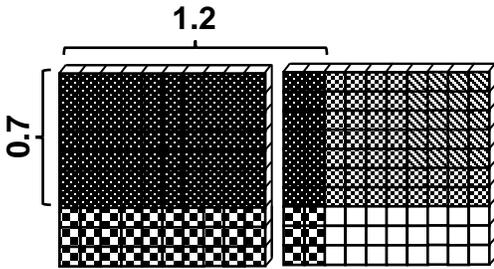
$\frac{6}{8} \div \frac{2}{2} = \square$

What **whole number** is **multiplied** or **divided** when calculating **equivalent fractions**? _____



PART 1: Numeracy Development

1. Decimal product understanding.



- a.) Write the total number of double shaded blocks. _____
- b.) Will the product be greater or less than 1.2? _____
- c.) Compute the product. _____

2. Find: improper fractions.

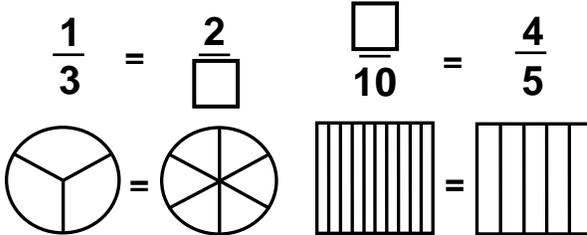
$$3 = \square \quad 1\frac{9}{10} = \square$$

$$7\frac{2}{5} = \square \quad 3\frac{2}{8} = \square$$

3. Common multiples: 2 and 4.

- 2: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18...
- 4: 0, 4, 8, 12, 16, 20, 24, 28, 32...
- Circle all common multiples.
- What is the Lowest Common Multiple (LCM) of 2 and 4? _____

4. Find and shade equivalent fractions.



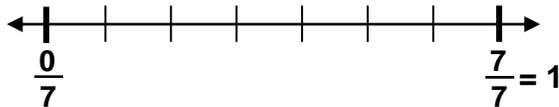
5. Find the rule.

$y = \square(x)$

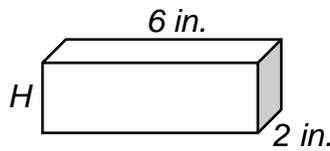
x	y
3	21
11	77

PART 2: Application Practice

6. Kim ran $\frac{3}{7}$ of a mile and rested. She then ran another $\frac{2}{7}$ of a mile. What is the total distance she ran? Label and show the solution on the number line.

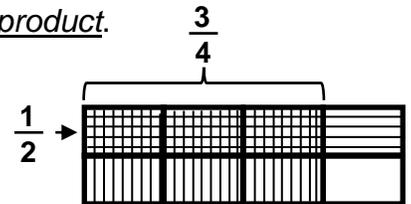


7. The volume is 36 in^3 . Find the height (H).



The height = _____ inches

8. Caleb multiplied $\frac{3}{4}$ by $\frac{1}{2}$. Use the diagram to find the product.

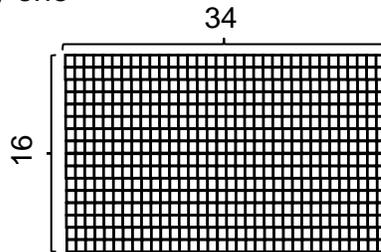


$\frac{3}{4} \times \frac{1}{2} = \square$

9. Daniel drank $\frac{5}{8}$ of a can of soda. Sara finished her can of soda. How much more soda did Sara drink than Daniel?

- (A) $\frac{4}{8}$ (C) $\frac{3}{8}$
- (B) $\frac{5}{8}$ (D) $\frac{1}{2}$

10. Dharma planned a stage production of *The Lion King*. She divided the stage in one-foot by one-foot squares. What is the area of the stage?



_____ ft²

11. Complete the table.

How many cm. in:	cm.
2 meters	
30 millimeters	
15 millimeters	

Note: 1 meter = 100 centimeters (cm)
10 millimeters = 1 centimeter (cm)

PART 3: Reflection and Conceptual Understanding

Complete:

$\frac{7}{2} \times 1 = \square$

$\frac{8}{8} \times 1 = \square$

$\frac{12}{3} \div 1 = \square$

$\frac{7}{2} \times \frac{4}{4} = \square$

$\frac{8}{8} \times \frac{2}{2} = \square$

$\frac{12}{3} \div \frac{3}{3} = \square$

What **whole number** is **multiplied** or **divided** when calculating **equivalent fractions**? _____



PART 1: Numeracy Development

1. Find equivalent fractions.

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

$$\frac{8}{6} = \frac{\square}{3}$$

$$\frac{1}{5} = \frac{5}{\square}$$

$$\frac{8}{4} = \frac{\square}{2}$$

2. Find: improper fractions.

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

$$2\frac{0}{10} = \frac{\square}{\square}$$

$$5\frac{4}{5} = \frac{\square}{\square}$$

$$2\frac{6}{8} = \frac{\square}{\square}$$

3. Common **multiples**: 3 and 4.

3: 0, 3, 6, 9, 12, 15, 18, 21, 24, 27...

4: 0, 4, 8, 12, 16, 20, 24, 28, 32...

• Circle all common multiples.

• What is the Lowest Common Multiple (LCM) of 3 and 4? _____

4. Multiply the fractions.

$$\frac{1}{3} \times \frac{2}{4} = \frac{\square}{\square}$$

$$\frac{8}{3} \times \frac{1}{2} = \frac{\square}{\square}$$

$$\frac{2}{5} \times \frac{1}{2} = \frac{\square}{\square}$$

$$\frac{7}{1} \times \frac{1}{4} = \frac{\square}{\square}$$

5. Divide to find quotients.

$$\overline{)1,484}$$

$$\overline{)0.84}$$

$$\overline{)27.6}$$

6. Find the rule.

$$y = \square(x)$$

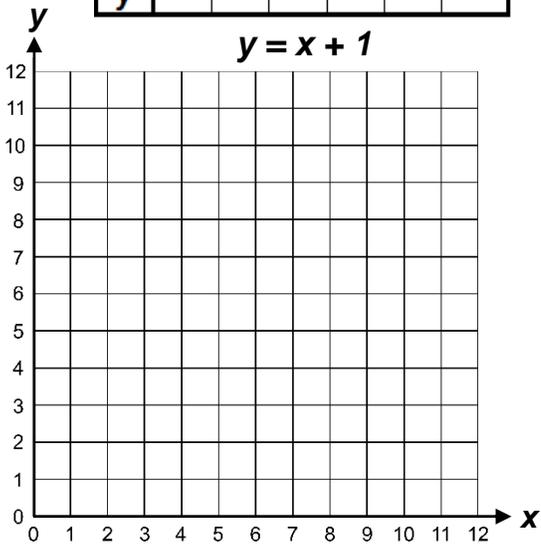
x	y
6	24
8	32

PART 2: Application Practice

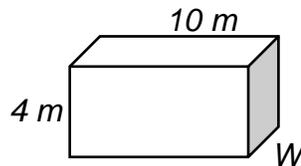
7. Complete the table. Graph and connect the points to form a line.

x	0	2	4	5	8	10
y						

$$y = x + 1$$

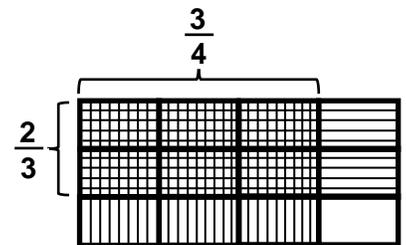


8. The volume is 80 m^3 . Find the width (W).



The width = _____ meters

9. Use the diagram to help find the product of $\frac{3}{4}$ and $\frac{2}{3}$.



$$\frac{3}{4} \times \frac{2}{3} = \frac{\square}{\square}$$

10. Lizzy climbed a rock wall. She scaled $\frac{4}{9}$ of the wall and rested. Then, she climbed $\frac{2}{9}$ more. What fraction remains until she reaches the top of the wall?



11. Complete the table.

How many cm. in:	cm.
6 meters	
48 millimeters	

Note: 1 meter = 100 centimeters (cm)
10 millimeters = 1 centimeter (cm)

PART 3: Reflection and Conceptual Understanding

A. Fraction Reminder: Circle all the improper fractions that are equal or greater than 1 whole.

$$\frac{8}{9}$$

$$\frac{6}{5}$$

$$\frac{5}{10}$$

$$\frac{5}{5}$$

$$\frac{11}{10}$$

$$\frac{9}{1}$$

$$\frac{0}{5}$$

$$\frac{9}{4}$$

B. Understanding the relationship of $\frac{1}{2}$ - the **numerator** is always **HALF** of the **denominator**. Complete.

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



PART 1: Numeracy Development

1. Find equivalent fractions.

$$\frac{1}{2} = \frac{5}{\square} \quad \frac{9}{9} = \frac{\square}{3}$$

$$\frac{3}{5} = \frac{15}{\square} \quad \frac{10}{8} = \frac{\square}{4}$$

2. Find: improper fractions.

$$8 = \frac{\square}{\square} \quad 8\frac{1}{10} = \frac{\square}{\square}$$

$$2\frac{2}{3} = \frac{\square}{\square} \quad 4\frac{5}{8} = \frac{\square}{\square}$$

3. Make 1.0

$$0.4 \Rightarrow \frac{\square}{\square}$$

$$0.45 \Rightarrow \frac{\square}{\square}$$

$$0.05 \Rightarrow \frac{\square}{\square}$$

4. LCM of 4 and 6.

4	6
0	
	6
16	
	36
LCM =	

5. Multiply the fractions.

$$\frac{1}{5} \times \frac{4}{2} = \frac{\square}{\square} \quad \frac{8}{3} \times \frac{1}{2} = \frac{\square}{\square}$$

$$\frac{3}{7} \times \frac{2}{3} = \frac{\square}{\square} \quad \frac{5}{1} \times \frac{3}{4} = \frac{\square}{\square}$$

6. Divide to find quotients.

$$21 \overline{)2,205} \quad 2 \overline{)1.0} \quad 4 \overline{)1.00}$$

PART 2: Application Practice

7. Complete the table. Graph and connect the points to form a line.

x	2	4	6	7	9	11
y						

$y = x - 2$

8. Compute the **sum** of $\frac{2}{9}$ and $\frac{6}{9}$.

(A) $\frac{8}{18}$ (C) $\frac{9}{8}$
 (B) $\frac{8}{9}$ (D) $\frac{4}{9}$

10. Josh owns $\frac{1}{8}$ of a piece of land. Kim owns $\frac{5}{8}$ of the same land. Bo owns the rest of the land. What fraction of land does Bo own? (Completely label and use the number line to solve the problem.)

9. Use the diagram to find the product of $\frac{2}{4}$ and $\frac{1}{3}$.

$\frac{2}{4} \times \frac{1}{3} = \frac{\square}{\square}$

11. Complete the table.

How many cm. in:	cm.
3.25 meters	
12 millimeters	

Note: 1 meter = 100 centimeters (cm)
10 millimeters = 1 centimeter (cm)

PART 3: Reflection and Conceptual Understanding

Change the **improper fractions** to equivalent **mixed numbers** by *dividing*. The fraction changes to a division problem. Remember: "Roll the fraction to the Right!" Complete.

$$\frac{7}{5} \curvearrowright 5 \overline{)7} \Rightarrow 5 \overline{)7} \frac{2}{5} \quad \boxed{\frac{7}{5} = 1\frac{2}{5}} \quad \text{---}$$

$$\frac{9}{2} \curvearrowright \overline{)9} \Rightarrow \overline{)9} \text{---} \quad \boxed{\frac{9}{2} =}$$



PART 1: Numeracy Development

1. Find equivalent fractions.

3/7 = 12/□ □/6 = 1/2

2. Find: improper fractions.

4 = □ 2 5/8 = □

3. Use (<, >, =).

0.601 ○ 0.7
0.05 ○ 0.5

4. LCM of 4 and 5.

4 5

5. Is the fraction closest to 0, 1/2 or 1 Whole? Write 0, 1/2 or 1 on the line.

1/10 → _____ 6/13 → _____ 30/1,000 → _____ 26/50 → _____ 5/6 → _____

6. Multiply.

6/1 x 8/2 = □

3/4 x 1/3 = □

7. Find quotients.

4)1.00 5)1.0 2)1.0 8)1.000

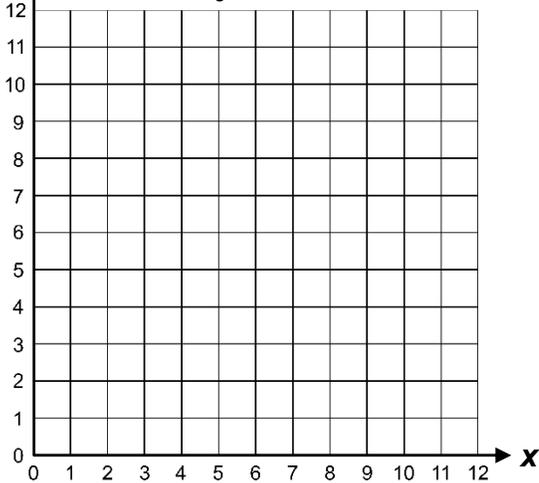
LCM = □

PART 2: Application Practice

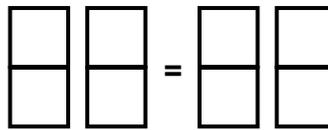
8. Complete the table. Graph and connect the points to form a line.

Table with x and y columns and values 0, 2, 5, 6, 8, 10

y = x + 2



9. Shade so 3/2 = 1 1/2 .



3/2 = 1 1/2

11. Jesus can place a maximum of 5 birds in each bird cage at the pet store. If he has 28 birds, how many cages will he need?

- (A) 5 cages (B) 6 cages (C) 7 cages (D) 8 cages

10. Multiply the mixed numbers by changing them to improper fractions.

3 1/2 x 4 = □

□ x □ = □

12. Complete the table.

Table with conversion units: mm, centimeters, m

Note: 10 millimeters = 1 centimeter (cm)

PART 3: Reflection and Conceptual Understanding

Change the improper fractions to equivalent mixed numbers by dividing. The fraction changes to a division problem. Remember. "Roll the fraction to the Right!" Complete.

3/2 → □ = □

8/5 → □ = □

PART 1: Numeracy Development

1. Convert **Improper fractions** to **mixed numbers** by dividing.

$$\frac{9}{2} \rightarrow \frac{\quad}{\quad} \frac{\quad}{\quad} = \boxed{\frac{9}{2} =}$$

$$\frac{5}{3} \rightarrow \frac{\quad}{\quad} \frac{\quad}{\quad} = \boxed{\frac{5}{3} =}$$

2. Multiply.

$$\begin{array}{r} 419 \\ \times 51 \\ \hline \end{array}$$

3. Find quotients.

$$5 \overline{)1.0}$$

$$2 \overline{)1.0}$$

$$8 \overline{)1.000}$$

4. Is the **decimal** closest to **0**, $\frac{1}{2}$ or **1 Whole**? Write **0**, $\frac{1}{2}$ or **1** on the line.

0.08 → _____ 0.91 → _____ 0.4 → _____ 0.823 → _____ 0.013 → _____

5. Is the **proper fraction** closer to **0**, $\frac{1}{2}$ or **1 whole**? **Circle** your answer!

$$\frac{2}{10} \quad \begin{array}{l} 0 \\ \frac{1}{2} \\ 1 \end{array}$$

$$\frac{11}{13} \quad \begin{array}{l} 0 \\ \frac{1}{2} \\ 1 \end{array}$$

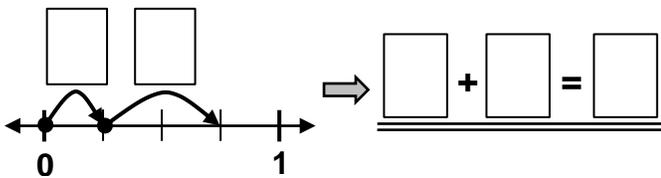
$$\frac{43}{100} \quad \begin{array}{l} 0 \\ \frac{1}{2} \\ 1 \end{array}$$

$$\frac{8}{10} \quad \begin{array}{l} 0 \\ \frac{1}{2} \\ 1 \end{array}$$

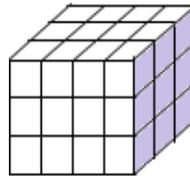
$$\frac{56}{1,000} \quad \begin{array}{l} 0 \\ \frac{1}{2} \\ 1 \end{array}$$

PART 2: Application Practice

6. Write the fractional addition equation.



7. Find the prism's **volume**.



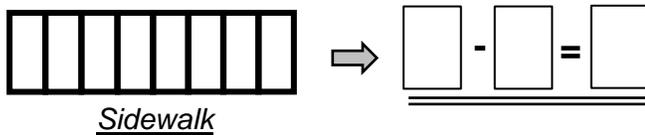
V = _____ units³

8. **Multiply** the **mixed numbers** by changing them to **improper fractions**.

$$5\frac{2}{3} \times 2 = \boxed{\quad}$$

$$\frac{\quad}{\quad} \times \frac{\quad}{\quad} = \boxed{\quad}$$

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



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

10. Meat cost \$3.15 per pound. What is the cost of four pounds of meat?

\$ _____

11. Complete the table.

How many Liters in:	Liters
9 kiloliters (kl)	
3.6 kiloliters (kl)	
5.42 kiloliters (kl)	

Note: 1,000 Liters = 1 kiloliter (kl)

PART 3: Reflection and Conceptual Understanding

Box the **x,y coordinates** that are a multiplicative pattern. X-out **x,y coordinates** that are an additive pattern.

x	y
3	5
7	9

x	y
2	6
4	12

x	y
5	10
7	12

x	y
6	18
9	27

x	y
4	8
9	13



PART 1: Numeracy Development

1. Convert **Improper fractions** to **mixed numbers** by dividing.

$$\frac{7}{3} = 2 \frac{1}{3}$$

$$\frac{9}{5} = \square \frac{\square}{\square}$$

$$\frac{11}{2} = \square \frac{\square}{\square}$$

2. Multiply.

$$\begin{array}{r} 0.7 \\ \times 0.5 \\ \hline \end{array}$$

3. Find quotients.

$$10 \overline{)1.0}$$

$$4 \overline{)1.00}$$

4. Is the **decimal** closest to **0**, $\frac{1}{2}$ or **1 Whole**? Write **0**, $\frac{1}{2}$ or **1** on the line.

0.4 → _____ 0.18 → _____ 0.04 → _____ 0.952 → _____ 1.001 → _____

5. Is the **proper fraction** closer to **0**, $\frac{1}{2}$ or **1 whole**? **Circle** your answer!

$$\frac{5}{100} \quad \begin{array}{l} 0 \\ \frac{1}{2} \\ 1 \end{array}$$

$$\frac{26}{31} \quad \begin{array}{l} 0 \\ \frac{1}{2} \\ 1 \end{array}$$

$$\frac{79}{100} \quad \begin{array}{l} 0 \\ \frac{1}{2} \\ 1 \end{array}$$

$$\frac{5}{9} \quad \begin{array}{l} 0 \\ \frac{1}{2} \\ 1 \end{array}$$

$$\frac{450}{1,000} \quad \begin{array}{l} 0 \\ \frac{1}{2} \\ 1 \end{array}$$

6. Find the **LCM** of 2 and 4.

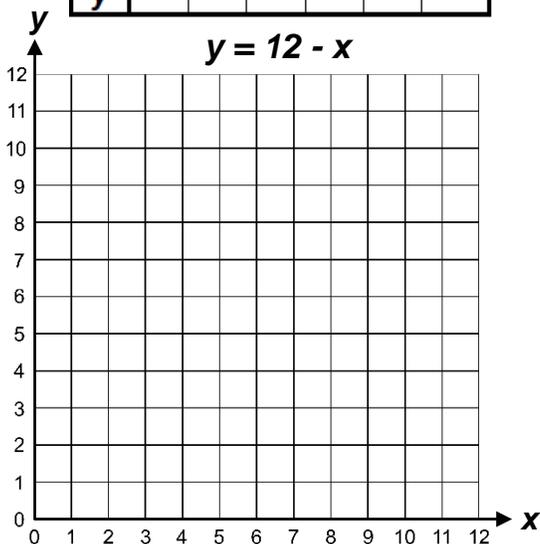
LCM = _____

PART 2: Application Practice

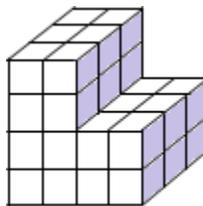
7. Complete the table. Graph and connect the points to form a line.

x	0	2	5	6	8	10
y						

$$y = 12 - x$$



8. Find the prism's **volume**.



V = _____ units³

9. Multiply the **mixed numbers** by changing them to **improper fractions**.

$$3 \frac{2}{3} \times 2 \frac{1}{4} = \square$$

$$\frac{\square}{\square} \times \frac{\square}{\square} = \square$$

10. The distance between New York and Chicago is 1,146.8 kilometers (km). What is half this distance?

_____ km

11. Complete the table.

How many Liters in:	Liters
7.5 kiloliters (kl)	
2 kiloliters (kl)	
9.14 kiloliters (kl)	

Note: 1,000 Liters = 1 kiloliter (kl)

PART 3: Reflection and Conceptual Understanding

Box the **x,y coordinates** that are a multiplicative pattern. X-out **x,y coordinates** that are an additive pattern.

x	y
4	16
6	24

x	y
7	14
8	15

x	y
12	24
15	27

x	y
7	21
10	30

x	y
8	8
10	10



PART 1: Numeracy Development

1. Find equivalent mixed numbers by dividing.

9/8 = [] []/[]

17/7 = [] []/[]

2. Multiply.

3.7 x 5

3. Multiply.

3/5 x 4/3 = []

4. Find quotients.

5) 1.0

8) 1.000

5. Write the whole number that the decimal is closest on the line.

2.4 -> 2 6.53 -> ___ 9.295 -> ___ 1.931 -> ___ 6.099 -> ___

6. Is the proper fraction closer to 0, 1/2 or 1 whole? Circle your answer!

61/100 0, 1/2, 1

30/66 0, 1/2, 1

22/100 0, 1/2, 1

7/15 0, 1/2, 1

120/1,000 0, 1/2, 1

7. Find the LCM of 2 and 3.

LCM = ___

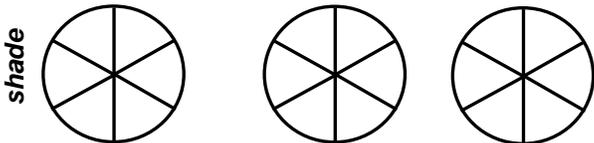
PART 2: Application Practice

8. Add the proper fractions with unlike denominators.

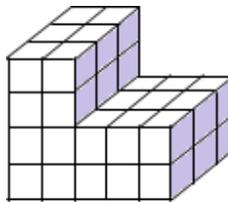
1/2 + 1/3 = []/[] LCM or LCD = ___

(1/2 = []/[]) + (1/3 = []/[]) = []/[]

[]/[] + []/[] = []/[]



9. Find the prism's volume.



V = ___ units^3

10. Jackson's military unit drinks 250.5 Liters of water per day. What is the total water in kiloliters (kl) that was consumed by the unit over a 10 day period?

- A) 250.5 kl C) 2.505 kl
B) 25.05 kl D) 0.2505 kl

11. Josh walked 10.67 miles. Paul jogged 22.1 miles. How much farther did Paul jog than Josh walk?

___ miles

12. Complete the table.

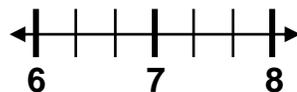
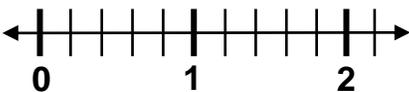
Table with 2 columns: How many kl in: and kiloliters. Rows: 8,000 Liters (L), 2,500 Liters (L), 10,100 Liters (L)

Note: 1,000 Liters = 1 kiloliter (kl)

PART 3: Reflection and Conceptual Understanding

A. What is the denominator of each number line?

Write the answer on the line below each number line.



1. _____

2. _____

B. Write the equivalent proper fraction or mixed number to each decimal. (Use a '1', if needed.)

1. 0.03 = []/[]

2. 4.7 = [] []/[]



PART 1: Numeracy Development

1. Find equivalent mixed numbers.

7/2 = [] []/ [] 13/8 = [] []/ []

2. Compare fractions (<, >, =) using LCD.

[]/ [] = 1/3 ○ 1/4 = []/ [] LCD = 12

3. Find: Quotient.

4)3.00

4. Write the whole number that the decimal is closest.

2.75 -> [] 6.069 -> [] 9.8 -> [] 1.376 -> []

5. Multiply the mixed numbers.

2 1/5 x 1 2/3 = []

[]/ [] x []/ [] = []

6. Write the whole number that the mixed number is closest.

4 81/100 -> 5 7 1/4 -> [] 5 42/100 -> [] 3 7/9 -> []

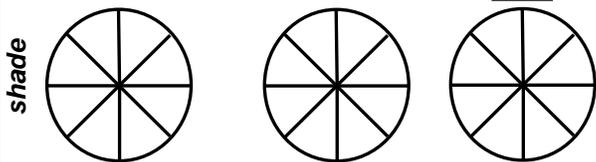
PART 2: Application Practice

7. Add the proper fractions with unlike denominators.

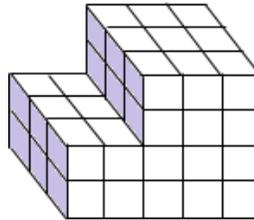
1/2 + 1/8 = []/ [] LCD = []

(1/2 = []/ []) + (1/8 = []/ []) = []/ []

[]/ [] + []/ [] = []/ []



8. Find the prism's volume.



V = [] units³

9. Emily and David went to the store. Emily purchased a 1.5 L bottle of soda and a 1.3 L of water. David bought 2.58 L of apple juice. How many liters (L) of fluids did Emily and David buy at the grocery store?

- A) 5.38 liters C) 2.68 liters
B) 2.86 liters D) 0.538 liters

10. Simplify and solve.

T = [4 x 3] - 2

P = 10 - 3(2 + 1)

T = [] P = []

T + P = []

11. Complete the table.

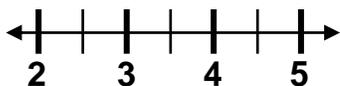
Table with 2 columns: How many kl in: and kiloliters. Rows: 1,250 Liters (L), 3,900 Liters (L), 15,000 Liters (L)

Note: 1,000 Liters = 1 kiloliter (kl)

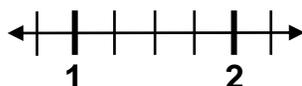
PART 3: Reflection and Conceptual Understanding

A. What is the denominator of each number line?

Write the answer on the line below each number line.



1. []



2. []

B. Write the equivalent proper fraction or mixed number to each decimal. (Use a '1', if needed.)

1) 0.509 = []/ [] 2) 9.06 = [] []/ []



PART 1: Numeracy Development

1. Find: **Mixed Number**.

$$\frac{16}{8} = \square \frac{\square}{\square}$$

2. Compare fractions (<, >, =).

$$\frac{\square}{\square} = \frac{2}{3} \bigcirc \frac{3}{4} = \frac{\square}{\square}$$

3. Compute quotients.

$$10 \overline{)9.0} \quad 4 \overline{)10.0} \quad 4 \overline{)3.00}$$

4. Write the closest **whole number**.

$$9.95 \rightarrow \underline{\quad} \quad 8.439 \rightarrow \underline{\quad} \quad 2.3 \rightarrow \underline{\quad}$$

5. Simplify.

$$7(9 - 5) - 2 = \square$$

$$3(2 \times 5) + 10 = \square$$

$$(6 + 5) \times (9 - 3) = \square$$

6. **Multiply**.

$$2\frac{1}{5} \times 8 = \square$$

$$\frac{\square}{\square} \times \frac{\square}{\square} = \square$$

7. Write the closest **whole number**.

$$3\frac{9}{20} \rightarrow \underline{\quad} \quad 5\frac{3}{8} \rightarrow \underline{\quad} \quad 8\frac{52}{100} \rightarrow \underline{\quad}$$

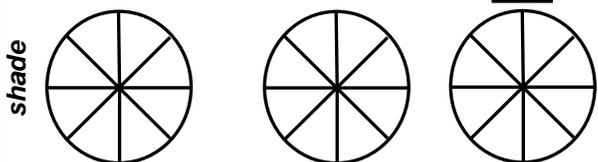
PART 2: Application Practice

8. Subtract the proper fractions with **unlike denominators**.

$$\frac{3}{4} - \frac{1}{8} = \frac{\square}{\square} \quad \text{LCD} = \square$$

$$\left(\frac{3}{4} = \frac{\square}{\square} \right) - \left(\frac{1}{8} = \frac{\square}{\square} \right) = \frac{\square}{\square}$$

$$\frac{\square}{\square} - \frac{\square}{\square} = \frac{\square}{\square}$$



9. Complete.

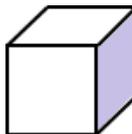
$$y = 4(x)$$

x	y
6.5	
9	

Is this an Additive **Yes** Pattern? **No**

11. The base area (L x W) of the prism is 20 feet². If the Height is 5 feet, what is the **Volume** of the prism?

$$V = \underline{\quad} \text{ ft}^3$$



10. Jasper measured the width of his tree fort. It was 11 feet 6 inches long. What equation (W) gives his tree fort's width only in inches?

- (A) $W = (6 \times 11) + 12$
- (B) $W = 12 + (6 \times 11)$
- (C) $W = 6 + (6 \times 12)$
- (D) $W = (11 \times 12) + 6$

12. Complete the table.

How many Liters in:	Liters
500 milliliters (ml)	
1,500 milliliters (ml)	
4,000 milliliters (ml)	

Note: 1,000 milliliters = 1 Liter (L)

PART 3: Reflection and Conceptual Understanding

A fraction represents **part of a group** or a **division equation** (*Roll Right*). Show the fraction meaning of either representation.

$\frac{1}{2}$ → Division equation $2 \overline{)1.0}$ ✓
 $\frac{1}{2}$ → Part of a group ✓

$\frac{1}{10}$ → Division equation $10 \overline{)1.0}$ ✓
 $\frac{1}{10}$ → Part of a group ✓

$\frac{2}{4}$ → Division equation $4 \overline{)2.0}$ ✓
 $\frac{2}{4}$ → Part of a group ✓

$\frac{1}{5}$ → Division equation $5 \overline{)1.0}$ ✓
 $\frac{1}{5}$ → Part of a group ✓



PART 1: Numeracy Development

1. Find: Mixed Number.

23/7 = [] []/[]

2. Compare fractions (<, >, =).

[]/[] = 3/5 ○ 4/6 = []/[]

3. Divide.

52) 1,768

4. Multiply.

2 1/2 x 5 2/3 = [] []/[]
[]/[] x []/[] = [] []/[]

5. Write the closest whole number.

4 17/30 -> [] 1 5/8 -> [] 3 42/100 -> [] 2 2/3 -> []

7. Complete: Base 10 - fraction place value

2.358 = (2 x 1) + (3 x 1/10) + ([]) + ([])

0.405 = ([]) + ([]) + ([])

6. Multiply. Use the model to find 2/3 of 6.

2/3 x 6 = 2/3 x 6/1 = []/[] = []
Model with 6 groups of 3 dots, 2 groups shaded.
2 -> Select 2 groups
3 -> 3 Equal groups
How many dots selected? []

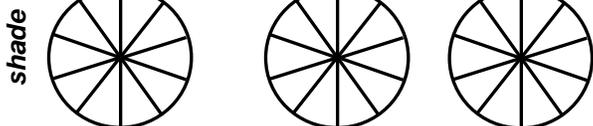
PART 2: Application Practice

8. Subtract the proper fractions with unlike denominators.

3/5 - 1/2 = []/[] LCD = []

(3/5 = []/[]) - (1/2 = []/[]) = []/[]

[]/[] - []/[] = []/[]



9. Move decimal to match.

- 81.5 x 1,000 8,150
81.5 x 10 815
81.5 ÷ 10 81,500
81.5 x 100 0.815
81.5 ÷ 100 8.15

10. Angela drank 2.46 liters of water per day for 3 days. She drank 3.14 liters on the 4th day. Which equation, D, computes her water intake?

- A D = (2.46 x 3.14) + 3
B D = 3.14 + (3 x 2.46)
C D = 2.46 + (3 x 3.14)
D D = (3.14 x 4) + 2.46

11. The base area (L x W) of the prism is 10 meter^2. If the Height is 6 meter, what is the Volume? (V = B x H)

V = [] meter^3

12. Complete the table.

Table with 2 columns: How many Liters in:, Liters. Rows: 750 milliliters (ml), 2,300 milliliters (ml), 8,500 milliliters (ml)

Note: 1,000 milliliters = 1 Liter (L)

PART 3: Reflection and Conceptual Understanding

A fraction represents part of a group or a division equation (Roll Right). Show the fraction meaning of either representation.

1/2 Part of a group (square with diagonal)
1/2 Division equation (2) 1.0)

4/10 Part of a group (circle with 10 sectors, 4 shaded)
4/10 Division equation (10) 4.0)

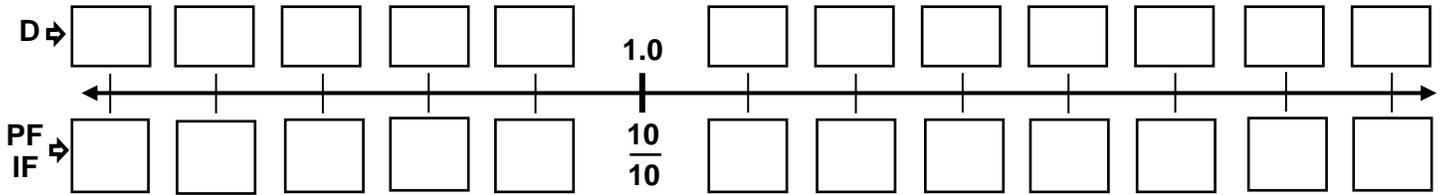
3/4 Part of a group (square divided into 4)
3/4 Division equation (4) 3.00)

3/5 Part of a group (circle with 5 sectors, 3 shaded)
3/5 Division equation (5) 3.0)



PART 1: Numeracy Development

1. Complete: Write the decimals **D**, proper fractions **PF**, and improper fractions **IF**.



2. Complete: Base 10 - fraction place value.

12.79 = () + () + () + ()

234.5 = () + () + () + ()

0.701 = () + () + ()

3. Multiply. Use the model to find $\frac{1}{2}$ of 4.

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



1 → ✓ Select 1 group
2 → 2 Equal groups

How many dots selected?

PART 2: Application Practice

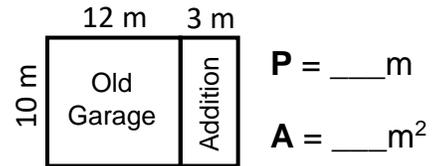
4. Latrese ate $\frac{2}{3}$ of a pizza. Sam consumed $\frac{1}{4}$ of the same pizza pie. What equation, **E**, represents the fraction of pizza that was eaten?

- (A) $E = \frac{2}{7} + \frac{1}{7}$ (C) $E = \frac{2}{7} - \frac{1}{7}$
(B) $E = \frac{8}{12} + \frac{3}{12}$ (D) $E = \frac{4}{12} + \frac{3}{12}$

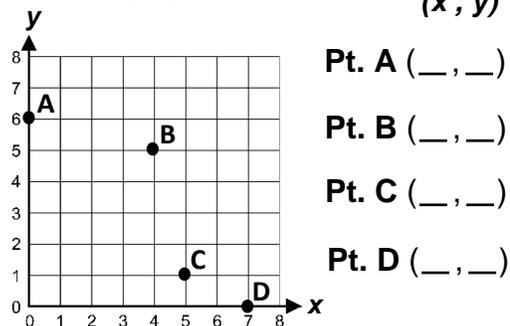
5. Match: Move the decimal.

- 7.09 x 100 **7,090**
7.09 x 1,000 **709**
7.09 ÷ 10 **0.709**
7.09 x 10 **70.9**

6. Jack wants to build a 3 meter addition (see below) on to his old garage. What will be the **Perimeter** and **Area** of his new garage when finished?



7. Write the (x, y) coordinates of Points A, B, C and D.



8. Jim ran $\frac{3}{4}$ of a mile on Tuesday. On Wednesday, he ran $\frac{5}{6}$ of a mile. Which day did he run more? Use LCD and compare with (<, >, =)

$\frac{3}{4} \bigcirc \frac{5}{6}$

9. Complete the table.

How many ml in:	milliliters
2 Liters (L)	
0.5 Liter (L)	
3.2 Liters (L)	

Note: 1,000 milliliters = 1 Liter (L)

PART 3: Reflection and Conceptual Understanding

A fraction represents **part of a group** or a **division equation** (*Roll Right*). Show the fraction meaning of either representation.

$\frac{4}{5}$ → Part of a group
→ Division equation $5 \overline{)4.0}$

$\frac{5}{10}$ → Part of a group
→ Division equation $\overline{) \quad .}$

$\frac{1}{4}$ → Part of a group
→ Division equation $\overline{) \quad .}$

$\frac{2}{5}$ → Part of a group
→ Division equation $\overline{) \quad .}$

— PART 1: Numeracy Development —

1. Write the decimals **D**, proper fractions **PF** and improper fractions **IF**. (Determine the number line denominator)

2. Complete: Base 10 - fraction place value.

46.8 = () + () + ()

74.59 = () + () + () + ()

3.456 = () + () + () + ()

3. Multiply. Use the model to find $\frac{1}{3}$ of 9.

$\frac{1}{3} \times 9 = \frac{1}{3} \times \frac{9}{1} = \frac{\square}{\square} = \square$

$\frac{1}{3} \rightarrow$ ✓ Select 1 group
 $\frac{1}{3} \rightarrow$ 3 Equal groups

How many dots selected?

— PART 2: Application Practice —

4. Jose scaled the rock face of El Capitan. The first day he climbed $\frac{2}{5}$ of the mountain. The next day, $\frac{1}{3}$. What fraction has Jose climbed?

(A) $\frac{11}{15}$ (C) $\frac{1}{15}$
 (B) $\frac{3}{8}$ (D) $\frac{13}{15}$

5. Match: Move the decimal.

12.3 x 100	123.0
12.3 ÷ 10	1,230
12.3 x 10	0.123
12.3 ÷ 100	1.23

6. Betty stacked boxes and formed a rectangular prism. How many boxes did she stack?

(A) 12 boxes (C) 18 boxes
 (B) 24 boxes (D) 15 boxes

7. Write the (x, y) coordinates of Points R, A, M and E.

Pt. R (,)
 Pt. A (,)
 Pt. M (,)
 Pt. E (,)

8. Callie was making berry jam. She filled each jar with 5.1 ounces of jam. She filled 7.7 jars. What is the total amount of jam she made?

(A) 12.8 oz. (C) 39.27 oz.
 (B) 38.27 oz. (D) 7.14 oz.

9. Complete the table.

How many ml in:	milliliters
5 Liters (L)	
0.750 Liter (L)	
8.6 Liters (L)	

Note: 1,000 milliliters = 1 Liter (L)

— PART 3: Reflection and Conceptual Understanding —

A fraction represents **part of a group** or a **division equation** (*Roll Right*). Show the fraction meaning of either representation.

$\frac{1}{5}$ <p>Part of a group </p> <p>Division equation </p>	$\frac{7}{10}$ <p>Part of a group </p> <p>Division equation </p>	$\frac{1}{4}$ <p>Part of a group </p> <p>Division equation </p>	$\frac{5}{5}$ <p>Part of a group </p> <p>Division equation </p>
---	--	---	---

— PART 1: Numeracy Development —

1. Write the decimals **D**, proper fractions **PF** and improper fractions **IF**. (Determine the number line denominator)

D → 0 [] [] [] 1.0 [] [] [] 2.0 [] [] [] 3.0

PF
IF → [] [] [] [] [] [] [] [] [] [] [] [] [] [] []

2. Find the **whole number**.

$$\frac{1}{4} \times \frac{8}{1} = \frac{\square}{\square} = \square$$

$$\frac{1}{5} \times 10 = \frac{\square}{\square} = \square$$

3. Multiply.

$$\frac{2}{5} \times \frac{3}{6} = \square$$

$$\frac{5}{2} \times \frac{1}{9} = \square$$

4. Add/Subtract.

$$\frac{1}{5} + \frac{2}{5} = \square$$

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

5. Match with an arrow.

7 x 1 = ? Product < 7

7 x $\frac{3}{4}$ = ? Product > 7

7 x 3 = ? Product = 7

— PART 2: Application Practice —

6. Katie finished a 5-mile race in $\frac{7}{10}$ of an hour. Liberty ran the same race but crossed the finish line in $\frac{4}{5}$ hour. How much faster was Katie's time?

(A) $\frac{11}{15}$ hour (C) $\frac{1}{10}$ hour
 (B) $\frac{3}{5}$ hour (D) $\frac{15}{10}$ hour

7. Match: Move the decimal.

56.7 x 100	5.67
56.7 ÷ 10	567
56.7 x 10	0.567
56.7 ÷ 100	5,670

8. Jettra mailed four packages to Seattle. Each package had a mass of 4.25 kg. The mailing cost was 3 dollars per kilogram (kg). How much money did it cost her to mail her four packages to Seattle?

(A) \$ 7.25 (C) \$ 12.75
 (B) \$ 51.00 (D) \$ 60.00

9. Write the (x, y) coordinates of Points E, A, S and Y.

(x, y)

Pt. E (__, __)
 Pt. A (__, __)
 Pt. S (__, __)
 Pt. Y (__, __)

10. Isaac bought 10 apples for \$4.99 at the store. He gave $\frac{1}{5}$ of the apples to his mother. How many apples did he give his mother?

(A) 1 apple (C) 3 apples
 (B) 2 apples (D) 4 apples

11. Complete the table.

How many grams in:	grams
5 kilograms (kg)	
0.5 kilograms (kg)	
50 kilograms (kg)	

Note: 1,000 grams = 1 kilogram (kg)

— PART 3: Reflection and Conceptual Understanding —

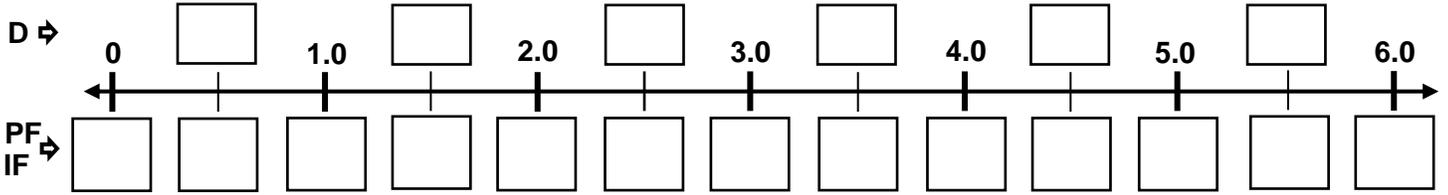
A fraction represents **part of a group** or a **division equation** (*Roll Right*). Show the fraction meaning of either representation.

$\frac{3}{5}$ <p>Part of a group </p> <p>Division equation</p>	$\frac{9}{10}$ <p>Part of a group </p> <p>Division equation</p>	$\frac{3}{4}$ <p>Part of a group </p> <p>Division equation</p>	$\frac{1}{8}$ <p>Part of a group </p> <p>Division equation $8 \overline{)1.000}$</p>
--	---	--	---



PART 1: Numeracy Development

1. Write the decimals D, proper fractions PF and improper fractions IF. (Determine the number line denominator)



2. Find the whole number.

3/4 x 8 = [] = []

2/5 x 15 = [] = []

3. Multiply.

5/3 x 1/2 = []

6/7 x 4/3 = []

4. Add/Subtract.

3/6 + 5/6 = []

5/8 - 2/4 = []

5. Match with an arrow.

9 x 1 = ? Product < 9

9 x 1/4 = ? Product > 9

9 x 2 = ? Product = 9

PART 2: Application Practice

6. Adding or subtracting mixed numbers - Change the mixed numbers to improper fractions.

Complete

1 1/2 + 2 1/3 = []

[] + [] = []

LCD = _____

(3/2 = []/[]) + (7/3 = []/[]) = []/[]

7. Match: Move the decimal.

809 x 100 = 8.09

809 ÷ 10 = 8,090

809 x 10 = 80,900

809 ÷ 100 = 80.9

8. Ron's Boy Scout troop went camping for the weekend. If 179 people attended the trip and only four people could ride in a vehicle, how many cars were needed for the trip?

(A) 43 cars (C) 45 cars

(B) 44 cars (D) 46 cars

9. Skyway is a small movie theatre. It seats only 25 children. The theatre is 4/5 full. How many kids are sitting in the Skyway theatre?

(A) 10 (C) 20

(B) 15 (D) 5

10. Complete the table.

How many grams in:	grams
3.2 kilograms (kg)	
0.75 kilograms (kg)	
10 kilograms (kg)	

Note: 1,000 grams = 1 kilogram (kg)

PART 3: Reflection and Conceptual Understanding

Convert proper fractions PF to a decimals D and improper fractions IF to a mixed number MN by dividing - "Roll to the Right."

PF to Decimal

PF to Decimal

IF to MN

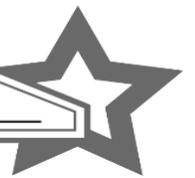
IF to MN

2/5 → []

4/10 → []

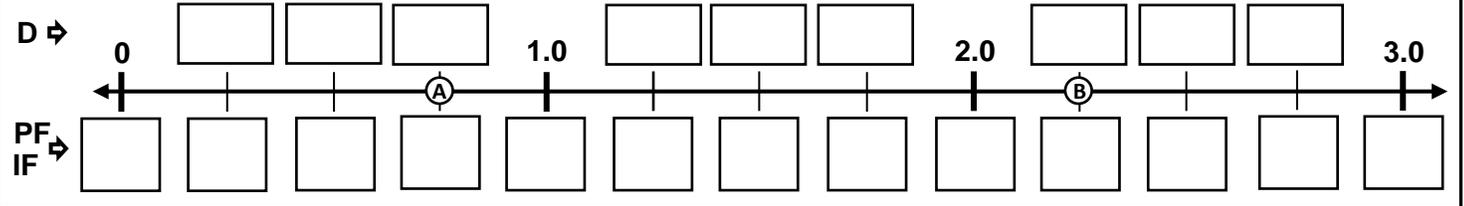
8/5 → []

5/2 → []



PART 1: Numeracy Development

1. Write the decimals D, proper fractions PF and improper fractions IF. (Determine the number line denominator)



2. Find the whole number.

$$\frac{1}{2} \times 16 = \frac{\square}{\square} = \square$$

$$\frac{2}{7} \times 21 = \frac{\square}{\square} = \square$$

3. Multiply.

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

$$\frac{\square}{\square} \times \frac{\square}{\square} = \square$$

4. Add/Subtract.

$$3.4 + 5 = \square$$

$$\frac{8}{9} - \frac{2}{3} = \square$$

5. Complete the equalities for Pt. A and Pt. B on 1.) above.

Pt. A $\Rightarrow \square = \square$

Pt. B $\Rightarrow \square = \square$

PART 2: Application Practice

6. Adding or subtracting mixed numbers – Change the mixed numbers to improper fractions.

Complete

$$3\frac{1}{3} + 4\frac{0}{4} = \frac{\square}{\square}$$

$$\frac{\square}{\square} + \frac{\square}{\square} = \frac{\square}{\square}$$

LCD = _____

$$\left(\frac{\square}{\square} = \frac{\square}{\square}\right) + \left(\frac{\square}{\square} = \frac{\square}{\square}\right) = \frac{\square}{\square}$$

7. What is the fraction of composite numbers?

(15) (25) (2) (16)

(17) (21) (33)

(A) $\frac{3}{7}$ (C) $\frac{5}{7}$

(B) $\frac{4}{7}$ (D) $\frac{6}{7}$

8. Martha canned beets. She was able to put 14.8 ounces (oz.) in each of 8 cans. She also put 4.6 oz. in each of 5 smaller cans. What is the total amount of beets Martha canned in ounces?

(A) 141.4 oz. (C) 126.8 oz.

(B) 118.4 oz. (D) 116.4 oz.

9. Angel used $\frac{9}{16}$ lbs. of sugar to bake muffins. He used $\frac{1}{2}$ pound of sugar to make tarts. How much more sugar did Angel use making muffins than tarts?

(A) $\frac{10}{18}$ (C) $\frac{1}{16}$

(B) $\frac{8}{16}$ (D) $\frac{17}{16}$

10. Complete the table.

How many grams in:	grams
7 kilograms (kg)	
0.25 kilograms (kg)	
9.342 kilograms (kg)	

Note: 1,000 grams = 1 kilogram (kg)

PART 3: Reflection and Conceptual Understanding

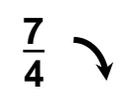
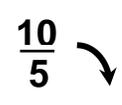
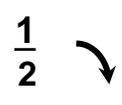
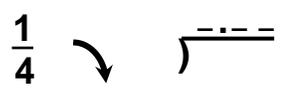
Convert proper fractions PF to a decimals D and improper fractions IF to a mixed number MN by dividing – "Roll to the Right."

PF to Decimal

PF to Decimal

IF to MN

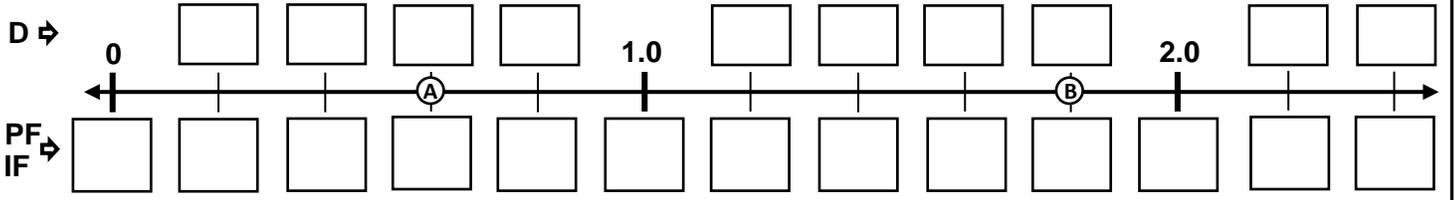
IF to MN





PART 1: Numeracy Development

1. Write the decimals D, proper fractions PF and improper fractions IF. (Determine the number line denominator)



2. Find the whole number.

3/7 x 14 = [] = []

2/9 x 45 = [] = []

3. Make 10.0

8.3 => []

4.5 => []

9.8 => []

4. Solve.

3(9 - 7) = []

25 - (3 x 7) = []

8(10 ÷ 2) - 15 = []

5. Complete the equalities for Pt. A and Pt. B on 1.) above.

Pt. A => [] = []

Pt. B => [] = []

PART 2: Application Practice

6. Adding or subtracting mixed numbers - Change the mixed numbers to improper fractions.

Complete

2 2/4 + 5 1/6 = []

[] + [] = []

LCD = _____

([]/[] = []/[]) + ([]/[] = []/[]) = []/[]

7. Find the product of 32 and 45.

[]

Is the product a composite or prime number?

9. The market sold 10 apples for 2 dollars. Jeff bought 30 apples. He gave 2/3 of the apples to his teacher and kept the rest. How many apples did he keep?

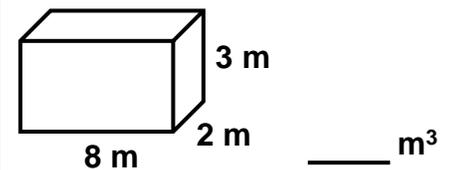
(A) 20 (C) 15

(B) 10 (D) 12

8. The distance from Miami to Atlanta is 663.9 miles. The distance from Atlanta to St. Louis is 554.92 miles. The distance from St. Louis to Chicago is 297 miles. What is the mileage distance from Miami to Chicago through Atlanta and St. Louis?

[] miles

10. How many cubic meters (m³) in the prism below?



PART 3: Reflection and Conceptual Understanding

Convert proper fractions PF to a decimals D and improper fractions IF to a mixed number MN by dividing - "Roll to the Right."

PF to Decimal

2/4 ->

PF to Decimal

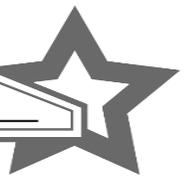
4/5 ->

IF to MN

17/7 ->

IF to MN

7/7 ->



FALL STAAR WALK - Learning Opportunity 70

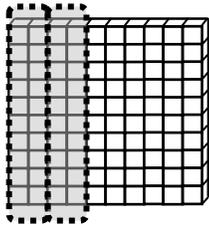
for TEKS/STAAR

"Journey of Knowledge"

Name: _____

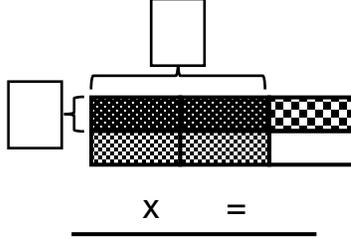
PART 1: Numeracy Development

1. Choose the division equation.



- (A) $0.40 \div 2 = 0.10$
- (B) $0.40 \div 2 = 0.20$
- (C) $0.40 \div 2 = 0.15$
- (D) $0.40 \div 4 = 0.10$

2. Write the equation.



3. Make 10.0

1.9 \Rightarrow

7.8 \Rightarrow

4.1 \Rightarrow

4. Divide.

$41 \overline{)4,305}$

5. Add using an LCD.

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

6. List factors. Circle C or P?

20: { , , , , } C P

21: { , , , } C P

23: { , } C P

7. Expand each in decimal form.

$3.42 = 3 + 0.4 + 0.02$

$8.095 =$ _____

$2,032.4 =$ _____

PART 2: Application Practice

8. Solve Ms. Mabel's 5th grade math computation puzzles.

Sum 12 and 6. Double. Divide by 9 = _____

Halve 30. Times 4. Divide by 5 = _____

Subtract $\frac{1}{4}$ from $\frac{3}{4}$. Times 2 = _____

9. Find the difference of 1,234 and 509.

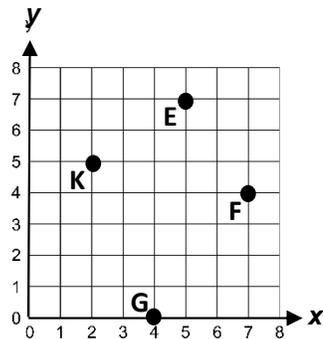


Is the difference a composite or prime number? _____

10. Cameron is constructing a door that matches the size of the window. The window has a perimeter of $3 \frac{1}{5}$ feet. The door is $1 \frac{1}{2}$ times as big as the window. What is the perimeter of the door?

- (A) $\frac{48}{7}$
- (B) $\frac{48}{10}$
- (C) $\frac{17}{10}$
- (D) $\frac{47}{10}$

11. What are the x,y coordinates located 2 spaces above Pt. F?

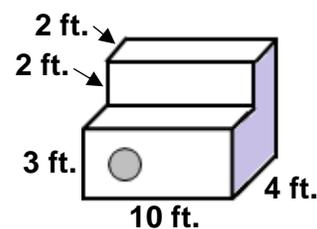


- (A) (7, 7)
- (B) (6, 7)
- (C) (7, 6)
- (D) (7, 5)

12. Six-tenths of the cast are ready to go on stage. The other $\frac{4}{10}$ of the cast are not. If there are a total of 20 cast members, how many actors are prepared?

- (A) 10
- (B) 15
- (C) 8
- (D) 12

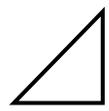
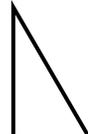
13. Mr. Gomez built an L-shaped home for his ferret farm. Find the volume of the ferret's home.

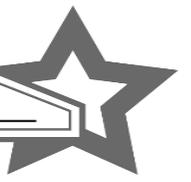


- (A) 120 ft³
- (B) 400 ft³
- (C) 160 ft³
- (D) 200 ft³

PART 3: Reflection and Conceptual Understanding

Identify by writing the letters of each triangle: Equilateral Triangle (ET), Isosceles Triangle (IT) and Scalene Triangles (ST). (all sides equal) (2 sides equal) (no sides equal)





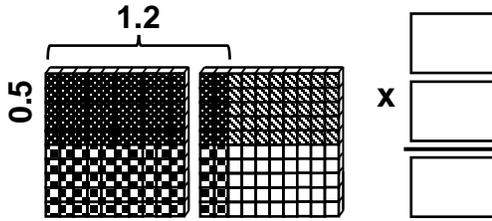
PART 1: Numeracy Development

1. Add/Subtract with LCD.

1 2/3 + 2 1/2 =

3 1/5 - 1 2/3 =

2. Use the model to find the product.



3. Make 10.0

5.2 =>

9.3 =>

3.6 =>

4. Multiply.

354 x 12

5. List factors. Circle C or P?

12: { , , , , , } C P

13: { , } C P

15: { , , , } C P

6. Expand each in fraction form.

42.42 = 40 + 2 + 4/10 + 2/100

4.302 =

535.7 =

PART 2: Application Practice

7. Can you solve Grade 5 challenging math computation instructions?

Divide 45 by 15. Times by 0.5 =

Halve 120. Divide by 5. Add 10.1 =

Subtract 1/2 from 1. Times 4 =

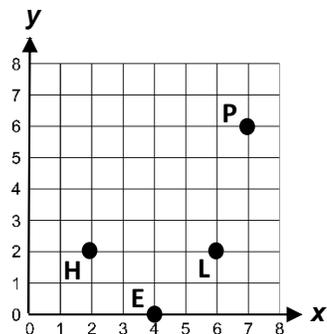
8. Which decimal rounded to nearest hundredth is equal to 48/100?

(A) 0.474 (C) 0.484

(B) 0.485 (D) 0.492

9. Victor is making pancakes at his guesthouse in Michigan. The recipe calls for 3 1/4 cups flour, 2 eggs and 4 1/2 cups of blueberries. However, he must triple the recipe to account for all the guests. How many cups of berries will he need if the recipe is tripled?

10. What are the x,y coordinates located 3 spaces above and one space to the left of Pt. L.



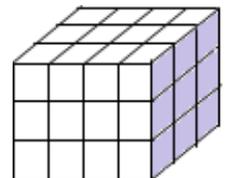
- (A) (6, 5)
(B) (5, 6)
(C) (5, 5)
(D) (6, 6)

11. Kim wanted her father to give her a challenging math problem. Her father said, "Find the sum of (2/3 of 6) and (1/2 of 10)." What answer should Kim give her father?

- (A) 1 (C) 10
(B) 9 (D) 20

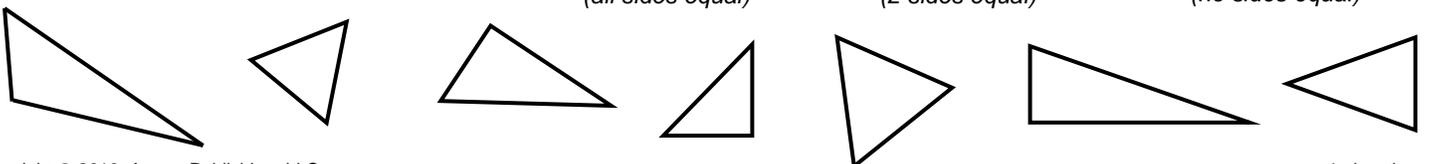
12. The manager told Luis to stack boxes in the storeroom. Luis stacked the 1 m^3 boxes into the prism shown below. How many boxes did Luis stack?

- (A) 24 boxes
(B) 20 boxes
(C) 30 boxes
(D) 36 boxes



PART 3: Reflection and Conceptual Understanding

Identify by writing the letters of each triangle: Equilateral Triangle (ET), Isosceles Triangle (IT) and Scalene Triangle (ST). (all sides equal) (2 sides equal) (no sides equal)





PART 1: Numeracy Development

1. Find the missing number - equivalent fractions.

$$\frac{5}{3} = \frac{10}{\square}$$

$$\frac{3}{\square} = \frac{21}{28}$$

$$\frac{1}{3} = \frac{6}{\square}$$

$$\frac{1}{2} = \frac{6}{\square}$$

$$\frac{6}{\square} = \frac{18}{36}$$

$$\frac{4}{\square} = \frac{40}{50}$$

2. Round to underlined digit.

 $0.\underline{0}86 \rightarrow \underline{\hspace{1cm}}$
 $0.\underline{4}44 \rightarrow \underline{\hspace{1cm}}$
 $0.\underline{6}09 \rightarrow \underline{\hspace{1cm}}$
 $0.\underline{4}54 \rightarrow \underline{\hspace{1cm}}$
 $0.\underline{5}42 \rightarrow \underline{\hspace{1cm}}$
 $0.\underline{3}79 \rightarrow \underline{\hspace{1cm}}$

3. Multiply.

$$\begin{array}{r} 54 \\ \times 32 \\ \hline \end{array}$$

4. Make 1.00

 $0.74 \Rightarrow \square$
 $0.3 \Rightarrow \square$
 $0.67 \Rightarrow \square$

5. List factors. Circle C or P?

18: { , , , , } C P

19: { , } C P

14: { , , , } C P

6. Expand in Base 10 fraction form.

 $8.42 = (8 \times 1) + (4 \times \frac{1}{10}) + (2 \times \frac{1}{100})$
 $15.3 = \underline{\hspace{2cm}}$
 $0.795 = \underline{\hspace{2cm}}$

PART 2: Application Practice

7. Complete the table. Graph the points. Connect the points forming a straight line.

x	0	2	4	5	7	9
y						

$y = x + 3$

8. On the graph $y = x + 3$ line in problem 7, the **y axis** represents the amount of money (\$) earned for mowing lawns, and the **x axis** represents the hours worked.

a.) How many dollars would a person make if they worked 8 hours mowing lawns? dollars

b.) If a person earned 6 dollars mowing lawns, how many hours did they work? hours

9. Use the table to answer and solve the questions.

Person	Mass (kg)
Mr. Gordo	147.75
Mr. Hulk	120
Mr. Thin	?
Mr. Athletic	94.5

Mr. Thin's mass is the sum of Mr. Gordo and Mr. Hulk's mass divided by 3. What is Mr. Thin's mass?

How much more mass is Mr. Hulk than Mr. Athletic?

PART 3: Reflection and Conceptual Understanding

A. Match with an arrow : The triangle and its description.

Equilateral Triangle

Two sides equal

Isosceles Triangle

All sides not equal

Scalene Triangle

All sides equal

B. Circle 'True' or 'False' to the statements below.

- Triangles may have perpendicular sides.

True False

- Triangles may have parallel sides.

True False



— PART 1: Numeracy Development —

1. Find the missing number - equivalent fractions.

$$\frac{25}{10} = \frac{5}{\square}$$

$$\frac{8}{\square} = \frac{24}{27}$$

$$\frac{3}{\square} = \frac{33}{77}$$

$$\frac{3}{2} = \frac{9}{\square}$$

$$\frac{2}{\square} = \frac{12}{18}$$

$$\frac{1}{5} = \frac{6}{\square}$$

2. Find equivalencies.

$$0.5 = \frac{\square}{\square}$$

$$8.4 = \square \frac{\square}{\square}$$

$$0.307 = \frac{\square}{\square}$$

3. Multiply.

$$\begin{array}{r} 5.4 \\ \times 0.2 \\ \hline \end{array}$$

4. Make 1.00

$$0.17 \Rightarrow \square$$

$$0.8 \Rightarrow \square$$

$$0.02 \Rightarrow \square$$

5. Convert to Mixed Numbers.

$$\frac{9}{5} = \square \frac{\square}{\square}$$

$$\frac{7}{2} = \square \frac{\square}{\square}$$

6. Expand in Base 10 fraction form.

$$3.09 = (3 \times 1) + (0 \times \frac{1}{10}) + (\quad)$$

$$57.1 = (\quad) + (\quad) + (\quad)$$

$$0.098 = \underline{\hspace{2cm}}$$

— PART 2: Application Practice —

7. Complete the table. Graph the points. Connect the points forming a straight line.

x	0	2	3	4	5
y					

$y = (2)x$

8. On the graph $y = 2(x)$ line in problem 7, the **y axis** represents the dollars spent for a gallon of gas, and the **x axis** represents the gallons he used.

a.) How much money would Jef spend if uses 1 gallon?
___ dollars

b.) If Jef spends 12 dollars, how many gallons will he get?
___ gallons

9. Circle letter for Multiplicative (M) or Additive (A) pattern.

Pattern 1		Pattern 2		Pattern 3		Pattern 4	
x	y	x	y	x	y	x	y
0	3	4	4	10	20	15	28
2	5	6	6	15	30	20	33
4	7	10	10	21	42	46	59
M	A	M	A	M	A	M	A

— PART 3: Reflection and Conceptual Understanding —

A. Identify as a parallelogram, square, rectangle or rhombus.



B. Circle 'True' or 'False' to the statements below.

- All of the polygons in Part A are quadrilaterals.
True False
- All of the polygons in Part A are parallelograms.
True False



PART 1: Numeracy Development

1. Find the missing numbers - *equivalent fractions*.

$$\frac{5}{10} \div 5 = \frac{\square}{\square}$$

$$\frac{3}{15} \div 3 = \frac{\square}{\square}$$

$$\frac{4}{16} \div 4 = \frac{\square}{\square}$$

$$\frac{6}{9} \div 3 = \frac{\square}{\square}$$

$$\frac{2}{12} \div 2 = \frac{\square}{\square}$$

$$\frac{6}{18} \div 3 = \frac{\square}{\square}$$

2. Find equivalencies.

$$0.25 = \frac{\square}{\square} \quad 8.4 = \frac{\square}{\square}$$

$$4.318 = \frac{\square}{\square}$$

3. Divide.

$$9 \overline{)36.9}$$

4. Make 1.00

$$0.31 \Rightarrow \square$$

$$0.05 \Rightarrow \square$$

5. Convert to Mixed Numbers.

$$\frac{11}{3} = \square \frac{\square}{\square} \quad \frac{9}{8} = \square \frac{\square}{\square}$$

6. Multiply.

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

$$\frac{1}{2} \times 8 = \frac{\square}{\square} = \square$$

7. Add/Subtract.

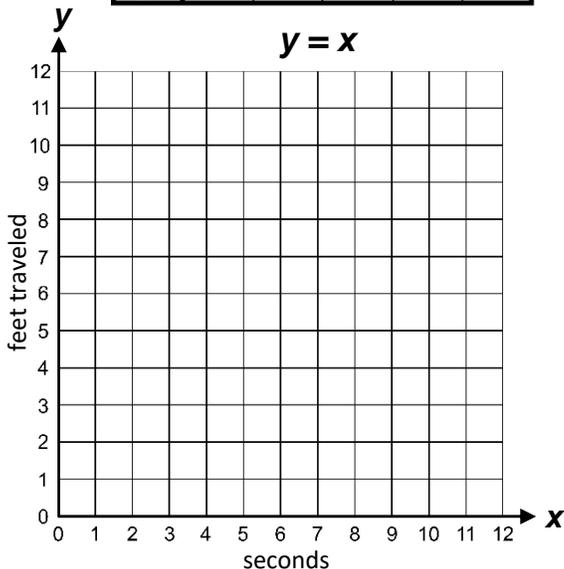
$$\frac{1}{4} + \frac{2}{4} = \square$$

$$\frac{5}{8} - \frac{1}{2} = \square$$

PART 2: Application Practice

8. Complete the table. Graph the points. Connect the points forming a straight line.

x	0	2	3	4	5
y					



9. On the graph $y = x$ in problem 7, the **y axis** represents the feet a tossed marble has traveled. The **x axis** is the time in seconds after the marble was thrown.

a.) How many feet has the marble traveled in 8 seconds? _____ feet

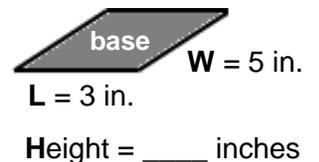
b.) How many seconds has it taken the marble to travel a distance of 6 feet? _____ seconds

10. An architect designed an isosceles triangular garden. If the perimeter is 90 feet, what is the length of a missing side, **N**?



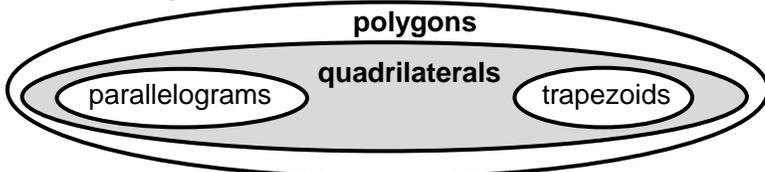
- (A) $N = 10$ feet (C) $N = 20$ feet
 (B) $N = 15$ feet (D) $N = 25$ feet

11. The base of a prism is shown below. If the **Volume** is 30 cubic inches, what is the prism's **Height**?



PART 3: Reflection and Conceptual Understanding

Use the diagram to answer the math "truthfulness" of the statements to the right. Circle 'True' or 'False'.



- All trapezoids are quadrilaterals. True False
- All parallelograms are trapezoids. True False
- All quadrilaterals are polygons. True False



PART 1: Numeracy Development

1. Find the missing numbers - equivalent fractions.

$$\frac{15}{25} \div 5 = \frac{\square}{\square}$$

$$\frac{14}{21} \div 7 = \frac{\square}{\square}$$

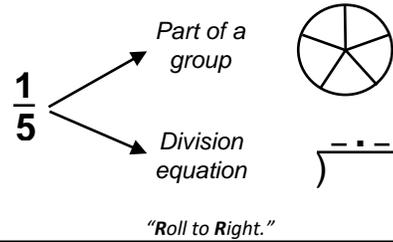
$$\frac{4}{24} \div 4 = \frac{\square}{\square}$$

$$\frac{9}{18} \div 9 = \frac{\square}{\square}$$

$$\frac{8}{16} \div 2 = \frac{\square}{\square}$$

$$\frac{8}{48} \div 8 = \frac{\square}{\square}$$

2. A fraction is 2 things. Complete.



3. Divide.

$$7 \overline{)22.4}$$

4. Find Rule.

$$y = \square(x)$$

$$x = 4; y = 12$$

$$x = 7; y = 21$$

5. Find equivalent mixed numbers.

$$\frac{11}{5} \rightarrow \square \frac{\square}{\square}$$

$$\frac{17}{16} \rightarrow \square \frac{\square}{\square}$$

"Roll to Right."

"Roll to Right."

6. Multiply.

$$\frac{9}{3} \times \frac{5}{7} = \square$$

$$\frac{3}{4} \times 8 = \frac{\square}{\square} = \square$$

7. Add/Subtract.

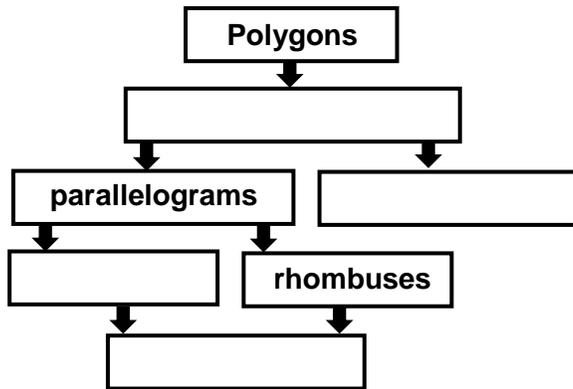
$$\frac{1}{2} + \frac{1}{3} = \square$$

$$\frac{4}{9} - \frac{1}{3} = \square$$

PART 2: Application Practice

8. Complete. Use the Word Bank.

scalene **Word Bank** circles
 isosceles squares trapezoids
 rectangles quadrilateral equilateral



A triangle with 3 equal sides is called an _____.

A triangle with 2 equal sides is an _____.

9. John's friends asked him to buy some items at the store. John bought candy for \$ 3.56 and some toys for \$ 4.18. John and his 2 friends split the cost equally. How much did each of the 3 boys pay?

\$ _____

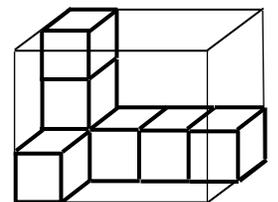
10. Jane bought $5 \frac{3}{4}$ feet of ribbon to make bows for holiday presents. If she used $1 \frac{1}{2}$ feet, how much ribbon is left?

- (A) $17/4$ (C) $18/4$
- (B) $29/4$ (D) $16/4$

11. Laura ate $7/16$ of a pizza. Jim consumed $5/8$ of a pizza. How much total pizza was eaten, and who ate more?

- (A) $3/16$ and Laura ate more
- (B) $3/16$ and Jim ate more
- (C) $1 \frac{1}{16}$ and Laura ate more
- (D) $1 \frac{1}{16}$ and Jim ate more

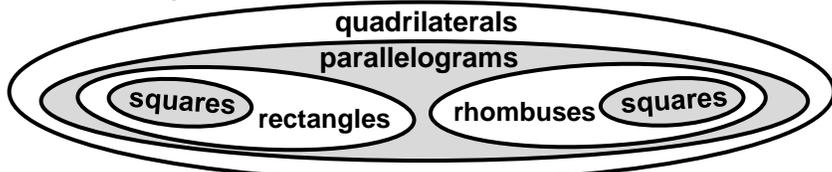
12. Find the Volume of the prism below.



$$V = \square \text{ units}^3$$

PART 3: Reflection and Conceptual Understanding

Use the diagram to answer the math "truthfulness" of the statements to the right. Circle 'True' or 'False'.

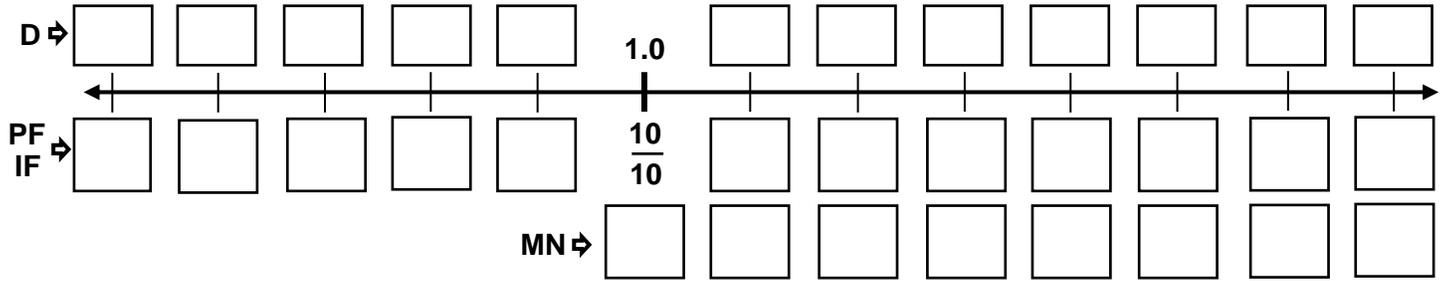


- Squares are rhombuses. True False
- Squares are rectangles. True False
- Rhombuses are rectangles. True False
- Rectangles are squares. True False



PART 1: Numeracy Development

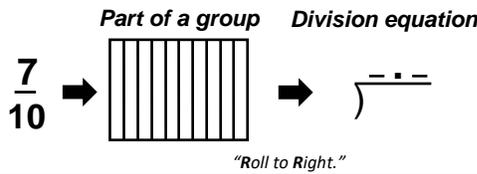
1. Complete: Write the decimals D, proper PF and improper fractions IF, and mixed numbers MN.



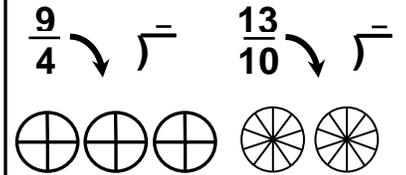
2. Find - equivalent fractions.

21/35 ÷ 7, 12/24 ÷ 6, and their equivalent fractions.

3. A fraction is 2 things. Complete.



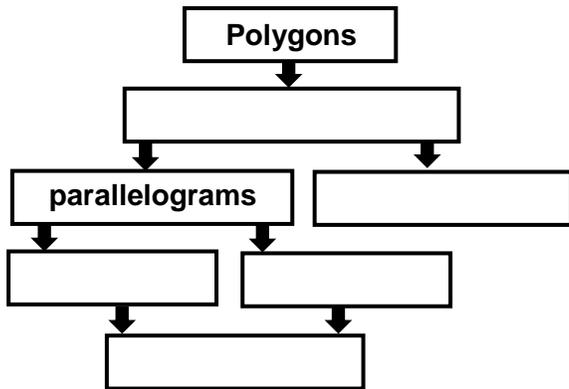
4. Find mixed numbers.



PART 2: Application Practice

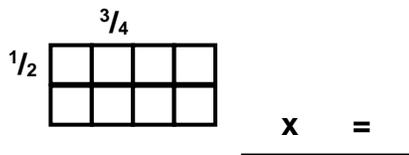
5. Complete. Use the Word Bank.

- Word Bank: scalene, rhombuses, isosceles, squares, trapezoids, rectangles, quadrilateral, equilateral.



A polygon with 3 unequal sides is called a _____ triangle. A polygon with 2 equal sides is called an _____ triangle.

6. Luis is making a recipe for lasagna. The recipe calls for 3/4 cup of cheese. But, he only wants to make 1/2 of the lasagna recipe. Shade the diagram and write the equation for amount of cheese he will need.



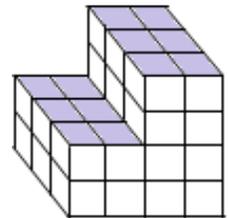
7. Janet had 3 (x, y) coordinates. They are (4, 5); (6, 7); (9, 10). What is the rule that relates the three x, y coordinates?

- Options: A) y = 3x, B) y = 4x, C) y = x - 1, D) y = x + 1

8. The teacher said, "Pick the number that is between 2,089,043 and 1,984,745."

- Options: A) 1,982,444, B) 1,999,999, C) 2,807,007, D) 2,090,752

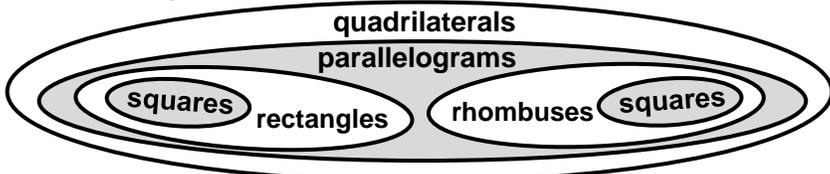
9. Find the Volume of the prism below.



V = _____ units³

PART 3: Reflection and Conceptual Understanding

Use the diagram to answer the math "truthfulness" of the statements to the right. Circle 'True' or 'False'.



- Parallelograms are quadrilaterals. True False
• 'Quad' means 4 - (as in 4 sides). True False
• A square can be classified as a rectangle True or rhombus because it has 4 equal sides. False



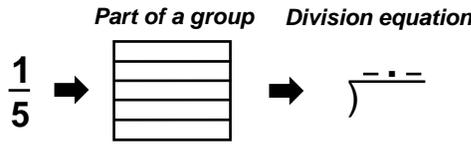
PART 1: Numeracy Development

1. Find - *equivalent fractions*.

21/36 = []/[] 8/16 = []/[]

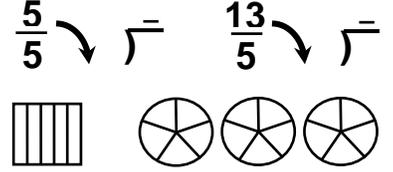
Divide by 1 = 3/3 Divide by 1 = 2/2

2. A fraction is 2 things. *Complete*.

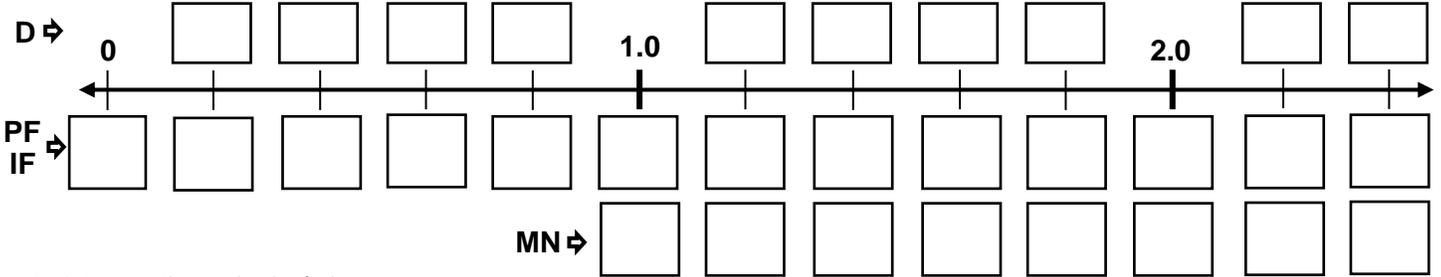


"Roll to Right."

3. Find mixed numbers.



4. Complete: Write the decimals **D**, proper **PF** and improper fractions **IF**, and mixed numbers **MN**.

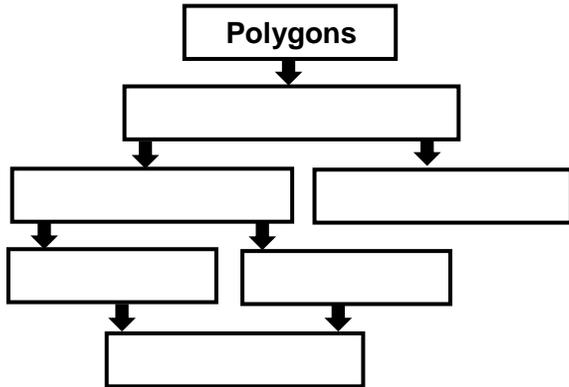


Hint: Determine the number line's denominator.

PART 2: Application Practice

5. Complete.

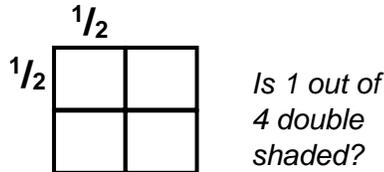
scalene rhombuses parallelograms
isosceles squares trapezoids
rectangles quadrilaterals equilateral



A triangle with: 1.) all equal sides is an
2.) two equal sides is an
3.) all sides unequal is called a

6. Blaine was confused.

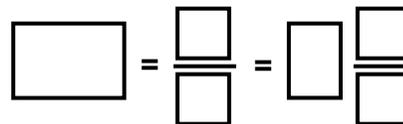
How could 1/2 x 1/2 = 1/4? It did not make sense that multiplying two halves gives a product equal to one-fourth. Prove that 1/2 x 1/2 = 1/4 by shading the diagram.



7. Mona had 3 ~ x, y coordinates. They are (3, 6) ; (5, 10) ; (7, 14). What is the rule that relates the three x, y coordinates?

- A y = 2x C y = x - 3
B y = 3x D y = x + 3

8. From the number line in problem 4, select a point and show that (D = IF = MN).



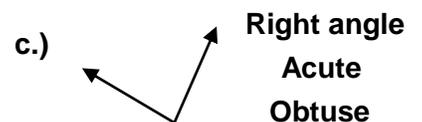
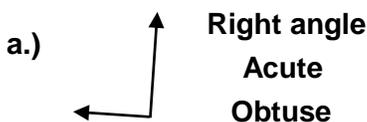
9. Combine the two fractions - Use the LCD.



- A 4/24 C 12/24
B 20/24 D 8/24

PART 3: Reflection and Conceptual Understanding

Angle Review: Is the angle a right, obtuse or acute? Place a piece of paper's corner 'edge' 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.





PART 1: Numeracy Development

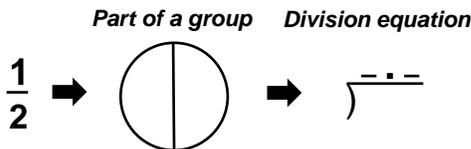
1. Find *equivalent fractions*.

$$\frac{24}{36} = \frac{\square}{\square} \quad \frac{10}{20} = \frac{\square}{\square}$$

Divide by 1 = $\frac{12}{12}$

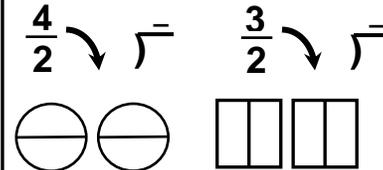
Divide by 1 = $\frac{10}{10}$

2. A fraction is 2 things. *Complete.*

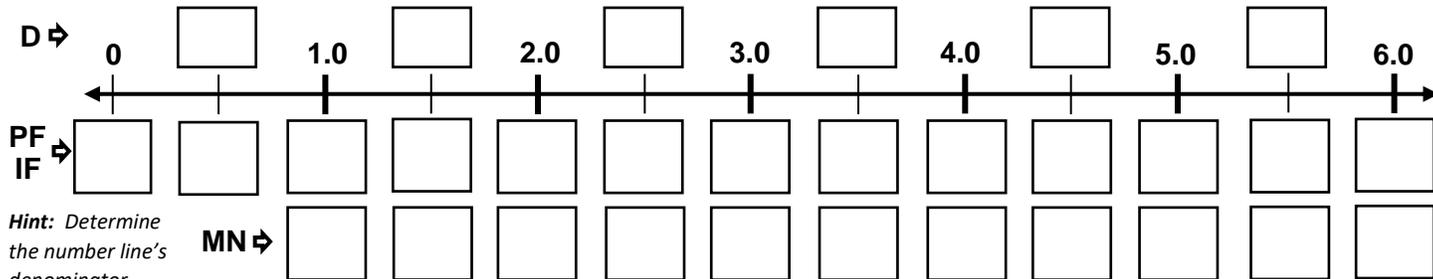


"Roll to Right."

3. Find mixed numbers.



4. Complete: Write the decimals **D**, proper **PF** and improper fractions **IF**, and mixed numbers **MN**.



PART 2: Application Practice

5. Match with an arrow.

- | | |
|-----------------------------|---------------------------------|
| polygon | • not a polygon |
| circle | • |
| quadrilateral | • Closed, straight sided figure |
| isosceles triangle | • |
| scalene triangle | • |
| equilateral triangle | • |
| | |
| rectangle | • |
| parallelogram | • |
| rhombus | • |
| trapezoid | • |
| obtuse angle | • |
| acute angle | • |
| right angle | • |

6. Chuck's fish aquarium can hold $2 \frac{3}{4}$ liters of water. His friend, Kim, has a fish tank that can hold $1 \frac{1}{2}$ times as much water. How much water does Kim's fish tank hold?

- (A) $\frac{33}{8}$ (C) $\frac{11}{4}$
 (B) $\frac{3}{2}$ (D) $\frac{66}{16}$

7. Mona had 3 ~ **x, y coordinates**. They are (3, 1) ; (5, 3) ; (7, 5). What is the rule that relates the three **x, y coordinates**?

- (A) $y = 2x$ (C) $y = x - 2$
 (B) $y = 3x$ (D) $y = x + 2$

8. From the number line in problem 4, *select a point and show that (D = IF = MN).*

$$\square = \frac{\square}{\square} = \square \frac{\square}{\square}$$

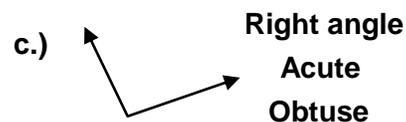
9. Combine the two fractions – Use the LCD.



- (A) $\frac{4}{24}$ (C) $\frac{12}{24}$
 (B) $\frac{20}{24}$ (D) $\frac{8}{24}$

PART 3: Reflection and Conceptual Understanding

Angle Review: *Is the angle a right, obtuse or acute?* Place a piece of paper's corner 'edge' 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.



PART 1: Numeracy Development

1. Draw the missing ray of a/an:

Obtuse Angle

Right Angle

Acute Angle

2. A fraction is 2 things. Complete.

Part of a group Division equation

$\frac{3}{4} \rightarrow$
 \rightarrow

"Roll to Right."

3. Find mixed numbers.

$\frac{4}{4} \rightarrow$

$\frac{5}{4} \rightarrow$

4. Complete: Write the decimals **D**, proper **PF** and improper fractions **IF**, and mixed numbers **MN**.

	0				1.00				2.00				3.00
D →													
PF IF →													
MN →													

Hint: Determine the number line's denominator.

PART 2: Application Practice

5. Complete the diagrams.

scalene parallelograms rhombuses
 isosceles squares trapezoids
 rectangles quadrilateral equilateral

Polygons

↓

Polygons – Triangles by Sides

(all sides =)
(2 sides =)
(No sides =)

6. Amara's fish aquarium can hold $1\frac{3}{4}$ liters of water. Her friend, Karla, has a fish tank that can hold $4\frac{1}{2}$ liters of water. How much larger is Karla's aquarium than Amara's?

A $\frac{2}{2}$ C $\frac{126}{4}$
 B $\frac{11}{4}$ D $\frac{25}{4}$

7. Mona had 3 ~ **x, y coordinates**. They are (7, 5) ; (10, 8) ; (13, 11). What is the rule that relates the three **x, y coordinates**?

A $y = 2x$ C $y = x - 2$
 B $y = 3x$ D $y = x + 2$

8. From the number line in problem 4, select a point and show that (D = IF = MN).

$=$ $=$

9. Find the product.

x

A $\frac{10}{32}$ C $\frac{7}{12}$
 B $\frac{32}{10}$ D $\frac{9}{8}$

PART 3: Reflection and Conceptual Understanding

Triangles by their Angles: If all the triangle's angles are acute, it is an ACUTE triangle. If the triangle has a right angle, it is a RIGHT triangle. If the triangle has an obtuse angle, it is an OBTUSE triangle. Circle the triangle name.

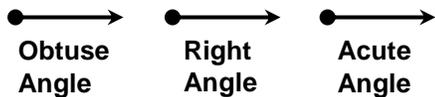
Acute Triangle
 Right Triangle
 Obtuse Triangle

Acute Triangle
 Right Triangle
 Obtuse Triangle

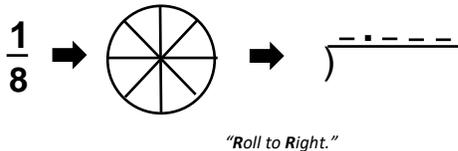
Acute Triangle
 Right Triangle
 Obtuse Triangle

PART 1: Numeracy Development

1. Draw the missing ray of a/an:

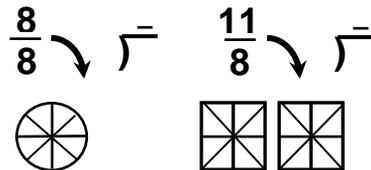


2. A fraction is 2 things. Complete.
Part of a group Division equation

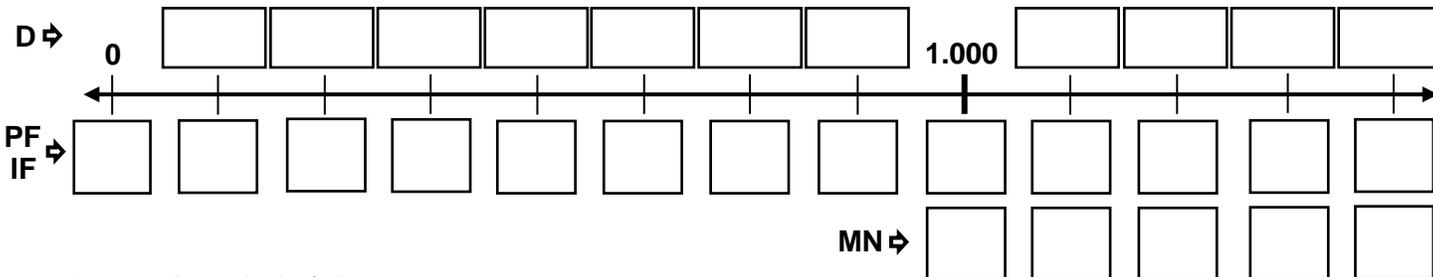


"Roll to Right."

3. Find mixed numbers.



4. Complete: Write the decimals **D**, proper **PF** and improper fractions **IF**, and mixed numbers **MN**.



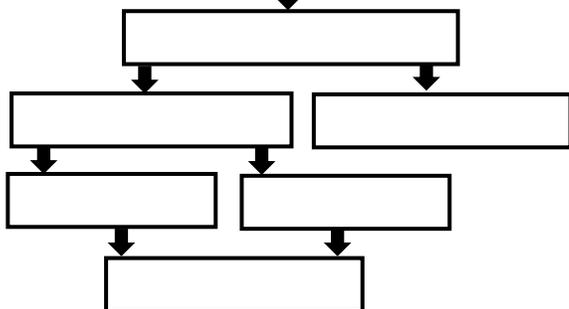
Hint: Determine the number line's denominator.

PART 2: Application Practice

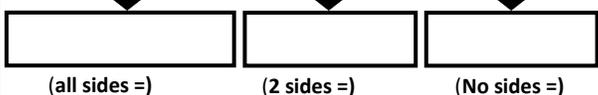
5. Complete the diagrams.

scalene parallelograms rhombuses
isosceles squares trapezoids
rectangles quadrilateral equilateral

Polygons



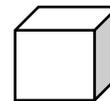
Polygons - Triangles by Sides



6. Aaron has a blanket that is 5 feet long and 6 feet wide. Bill's blanket is 3 feet long and 8 feet wide. What equation, K, computes the difference in the area of the blankets?

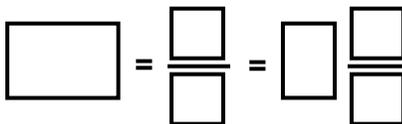
- (A) $K = (5 + 6) - (3 \times 8)$
- (B) $K = (5 + 6) + (3 \times 8)$
- (C) $K = (5 \times 6) - (3 \times 8)$
- (D) $K = (5 \times 6) + (3 \times 8)$

7. What is the volume of a cube with a side equal to 4 feet?



- (A) 12 ft^3 (C) 48 ft^3
- (B) 36 ft^3 (D) 64 ft^3

8. From the number line in problem 4, select a point and show that (D = IF = MN).

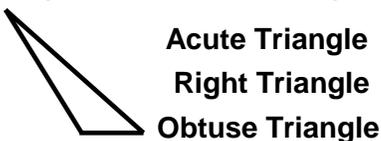


9. Keisha jumped 9 feet. Mary jumped 0.4 feet farther than Keisha. Carla hopped 0.56 feet farther than Mary. What is sum of all three girls' jumps?

_____ feet

PART 3: Reflection and Conceptual Understanding

Triangles by their Angles: If all the triangle's angles are acute, it is an ACUTE triangle. If the triangle has a right angle, it is a RIGHT triangle. If the triangle has an obtuse angle, it is an OBTUSE triangle. Circle the triangle name.



Grade 5

ANSWER KEY

80 Daily Learning Opportunities

Mathematics

Fall Semester





Learning Opportunity 01

Part 1 – Numeracy Development – Focus on vocabulary (<u>Write sum, difference, addend, etc.</u> on the word wall and repeatedly stress)				TEKS
1. a.) 47	b.) 82	c.) 109	d.) 112	4.4A
2. a.) 35	b.) 28	c.) 40	d.) 46	4.4A
3. a.) 20	b.) 50	c.) 10	d.) 30	4.4A
4. a.) even	b.) odd	c.) even	d.) even	2.7A
5. a.) Given	b.) $8,000 + 0 + 20 + 9$	c.) $10,000 + 3,000 + 0 + 80 + 0$	d.) $20,000 + 9,000 + 700 + 0 + 5$	4.2B
6. Given; $6 + 5 = 11$;	Given; $11 - 5 = 6$			2.4A
Part 2 – Application Practice				
7. D - 73 (i.e. 73 is the only 2 digit number that is both odd and greater than 41.)				2.7A
8. D - 29 (i.e. $91 - 62 = 29$)				4.1A; 4.4A
9. Place Value is thousands ; Value is 0				4.2B
10. 32 (i.e. $19 + 13 = 32$)				4.1A; 4.4A
Part 3 – Reflection and Conceptual Understanding				
Student Answer: a.) $8 - 2 = 6$	b.) $10 - 4 = 6$	c.) $6 + 1 = 7$		5.4E

Learning Opportunity 02

Part 1 – Numeracy Development – Focus on vocabulary (<u>Write sum, difference, addend, etc.</u> on the word wall and repeatedly stress)				TEKS
1. a.) 82	b.) 108	c.) 1,069	d.) 1,201	4.4A
2. a.) 91	b.) 27	c.) 164	d.) 516	4.4A
3. a.) 60	b.) 40	c.) 70	d.) 90	4.4A
4. a.) odd	b.) odd	c.) even	d.) even	2.7A
5. a.) $60,000 + 4,000 + 400 + 70 + 0$	b.) $40,000 + 8,000 + 0 + 0 + 2$	c.) $10,000 + 7,000 + 0 + 0 + 0$	d.) $80,000 + 0 + 300 + 0 + 1$	4.2B
6. Given; $9 + 3 = 12$;	$12 - 3 = 9$;	$12 - 9 = 3$		2.4A
Part 2 – Application Practice				
7. C - 996 (i.e. 996 is the only 3-digit number that is even.)				2.7A
8. A - 204 (i.e. $450 - 246 = 204$)				4.1A; 4.4A
9. Place Value is ten thousands ; Value is 50,000				4.2B
10. Pat = 10 ; Luis = 4 (i.e. Half of 20 is 10 ; $10 - 6 = 4$)				2.4A; 4.1A
Part 3 – Reflection and Conceptual Understanding				
Student Answer: a.) $15 - 6 = 9$	b.) $12 - 5 = 7$	c.) $10 + 7 = 17$		5.4E

Learning Opportunity 03

Part 1 – Numeracy Development – Focus on vocabulary (<u>Write sum, difference, addend, etc.</u> on the word wall and repeatedly stress)				TEKS
1. a.) 1,069	b.) 765			4.4A
2. a.) 681	b.) 257			4.4A
3. a.) 50	b.) 80			4.4A
4. a.) odd	b.) even			2.7A
5. a.) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	b.) 10, 20, 30, 40, 50, 60, 70, 80, 90, 100			3.4I; 3.4E
6. a.) $90,000 + 0 + 0 + 80 + 2$	b.) $60,000 + 1,000 + 300 + 20 + 0$	c.) $30,000 + 4,000 + 0 + 0 + 0$		4.2B
7. $8 + 4 = 12$;	$4 + 8 = 12$;	$12 - 4 = 8$;	$12 - 8 = 4$	2.4A
Part 2 – Application Practice				
8. B - 200 (i.e. 200 is the number that is between 150 and 200, and is even.)				2.7A
9. A - 764 (i.e. $382 + 382 = 764$ or $382 \times 2 = 764$)				4.1A; 4.4A
10. 70,243 NOTE: Stress the vocabulary meaning of math place value term, 'standard form'.				4.2B
11. Jeff = 24 ; (Double: 12×2 or $12 + 12 = 24$)				2.4A; 4.1A
Part 3 – Reflection and Conceptual Understanding				
Student Answer: a.) $6 - 5 = 1$	b.) $12 + 5 = 17$	c.) $10 - 5 = 5$		5.4E



Learning Opportunity 04

Part 1 – Numeracy DevelopmentTEKS

- | | | |
|--|---|------------|
| 1. a.) 1,519 | b.) 1,738 | 4.4A |
| 2. a.) 406 | b.) 213 | 4.4A |
| 3. a.) 5 | b.) 15 | 4.4A |
| 4. a.) even | b.) odd | 2.7A |
| 5. a.) 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 | b.) 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100 | 3.4I; 3.4E |
| 6. a.) $100,000 + 30,000 + 0 + 0 + 80 + 2$ | b.) $300,000 + 20,000 + 1,000 + 600 + 0 + 5$ c.) $400,000 + 0 + 9,000 + 100 + 90 + 0$ | 4.2B |

Part 2 – Application Practice

- | | | | | |
|---|--|----------------|--------------|------------|
| 7. $6 + 9 = 15$; | $9 + 6 = 15$; | $15 - 9 = 6$; | $15 - 6 = 9$ | 2.4A |
| 8. a.) 34 ounces (i.e. $19 + 15 = 34$) | b.) 18 ounces (i.e. $21 + 19 = 40$; $15 + 7 = 22$; $40 - 22 = 18$) | | | 4.1A; 4.4A |
| 9. 395,020 | NOTE: Stress the vocabulary meaning of math place value term, 'standard form'. | | | 4.2B |

Part 3 – Reflection and Conceptual Understanding

- | | | | | |
|------------------------|------------|------------|-------------|------|
| Student Answer: Given; | 5, 10, 15; | 5, 40, 45; | 5, Given, 5 | 4.4A |
|------------------------|------------|------------|-------------|------|

Learning Opportunity 05

Part 1 – Numeracy DevelopmentTEKS

- | | | |
|--|--|------------|
| 1. a.) 17,658 | b.) 3,443 | 4.4A |
| 2. First Column: Given; 5 | Second Column: 3; 1 | 2.4A |
| 3. a.) 25 | b.) 35 | 4.4A |
| 4. a.) even | b.) even | 2.7A |
| 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, 60, 90, 120, 150, 180, 210, 240, 270, 300 | |
| 6. $700,000 + 60,000 + 0 + 0 + 40 + 1$ | | 4.2B |

Part 2 – Application Practice

- | | | | | |
|---|--|-----------------|----------------|------------|
| 7. 6 and 8 = addends; 14 = sum; | 9 = minuend | 7 = subtrahend; | 1 = difference | Vocab. |
| 8. a.) Fourth Grade (i.e. $69 + 71 = 140 - 4^{\text{th}}$ graders; $58 + 75 = 133 - \text{fifth graders}$) | b.) 19 (i.e. $146 \text{ Girls} - 127 \text{ Boys} = 19$) | | | 4.1A; 4.4A |
| 9. hundred thousand; 600,000 | | | | 4.2B |

Part 3 – Reflection and Conceptual Understanding

- | | | | | |
|----------------------------|------------|------------|-----------|------|
| Student Answer: 5, 60, 65; | 5, 80, 85; | 5, 40, 45; | 5, 50, 55 | 4.4A |
|----------------------------|------------|------------|-----------|------|

Learning Opportunity 06

Part 1 – Numeracy DevelopmentTEKS

- | | | |
|--|--|------------|
| 1. a.) 11,282 | b.) 3,975 | 4.4A |
| 2. First Column: 6; 2 | Second Column: 5; 3 | 2.4A |
| 3. a.) 65 | b.) 75 | 4.4A |
| 4. First Column: Given; 40 | Second Column: 40; 10 | 2.4A |
| 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, 60, 90, 120, 150, 180, 210, 240, 270, 300 | |
| 6. $2,000,000 + 300,000 + 0 + 6,000 + 800 + 0 + 8$ | | 4.2B |

Part 2 – Application Practice

- | | | | | |
|--|-----------------------------------|-----------------|----------------|------------|
| 7. 9 and 7 = addends; 16 = sum; | 5 = minuend | 3 = subtrahend; | 2 = difference | Vocab. |
| 8. a.) 1,644 (i.e. $789 + 855 = 1,644$) | b.) 276 (i.e. $855 - 579 = 276$) | | | 4.1A; 4.4A |
| 9. millions; 3,000,000 | | | | 4.2B |

Part 3 – Reflection and Conceptual Understanding

- | | | | | |
|----------------------------|------------|------------|-----------|------|
| Student Answer: 5, 90, 95; | 5, 70, 75; | 5, 50, 55; | 5, 20, 25 | 4.4A |
|----------------------------|------------|------------|-----------|------|

Learning Opportunity 07

Part 1 – Numeracy Development **TEKS**

1. 32,774 **NOTE:** Provide 1 to 2 problems – addition and subtraction – until students' master skill. **4.4A**
2. First column: 8; 10; Second column: 7; 9; **4.4A**
3. 90; 255; 56 **4.4B**
4. First column: 70; 50; Second column: 60; 0; Third column: 10; 10; **3.4B**
5. a.) 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30 b.) 0, 30, 60, 90, 120, 150, 180, 210, 240, 270, 300 **3.4I; 3.4E**
 c.) 0, 4, 8, 12, 16, 20, 24, 28, 32, 36, 40 d.) 0, 40, 80, 120, 160, 200, 240, 280, 320, 360, 400
6. 40,000,000 + 3,000,000 + 0 + 50,000 + 7,000 + 900 + 50 + 0 **4.2B**

Part 2 – Application Practice

7. 6: Minuend; 1: Subtrahend; 5: Difference; 8 and 3: Addends; 11: Sum **Vocab.**
8. **C - 288** (i.e. $32 \times 9 = 288$) **NOTE:** Stress 9 equal groups of 32 – the multiplication model. **4.1A; 4.4B**
9. 76,040,953 **4.2B**
10. **D – Both A and C** (i.e. $5 \times 3 = 3 \times 5$) **NOTE:** Stress commutative property of multiplication – and array model. **4.4C**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Student should show 4 equal jumps of 10 each, and the last arrow point should terminate on 40. **4.4C**

Learning Opportunity 08

Part 1 – Numeracy Development **TEKS**

1. 27,267 **NOTE:** Provide 1 to 2 problems – addition and subtraction – until students' master skill. **4.4A**
2. First column: 10; 15; Second column: 25; 50; **4.4A**
3. 140; 222; 340 **4.4B**
4. First column: 80; 30; Second column: 100; 10; Third column: 0; 70; **3.4B**
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
6. 200,000,000 + 0 + 7,000,000 + 600,000 + 0 + 8,000 + 700 + 30 + 0 **4.2B**

Part 2 – Application Practice

7. 12: Minuend; 4 or 8: Subtrahend; 4 or 8: Difference; 6 and 3: Addends; 9: Sum **Vocab.**
8. **C – M = (3 x 2) + 1;** **NOTE:** Show 3 by 2 dot array with 1 dot to the side – physical model. **4.1A; 4.4B**
9. 920,005,000 **4.2B**
10. **D – R = 6 x 4;** **NOTE:** Stress multiplication array model physical meaning. **4.4C**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Student should show 3 equal jumps of 15 each, and the last arrow point should terminate on 45. **4.4C**

Learning Opportunity 09

Part 1 – Numeracy Development **TEKS**

1. 77,182 **NOTE:** Provide 1 to 2 problems – addition and subtraction – until students' master skill. **4.4A**
2. First column: 45; 75; Second column: 85; 80; **4.4A**
3. 560; 354; 150 **4.4B**
4. First column: 200; 100; Second column: 100; 0; Third column: 200; 400; **3.4B**
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
6. 400,000,000 + 80,000,000 + 0 + 700,000 + 0 + 2,000 + 500 + 0 + 6 **4.2B**

Part 2 – Application Practice

7. Given; T = (3 x 2) + 2; H = (4 x 4) + 3; K = 2 + (2 x 5); **5.4E**
8. 500,200,532 **4.2B**
9. 2,005 dollars; (i.e. $1680 + 325 = \$ 2,005$) **4.1A; 4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Student should show 5 equal jumps of 30 each, and the last arrow point should terminate on 150. **4.4C**



Learning Opportunity 10

Part 1 – Numeracy Development**TEKS**

- 40,156 **NOTE:** Provide 1 to 2 problems – addition and subtraction – until students' master skill. 4.4A
- First column: 25; 65; Second column: 95; 75; 4.4A
- 1,610; 944 5.3B
- First column: 200; 300; 500; Second column: 600; 400; 100; Third column: 0; 500; 400; 4.2D
- 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 **NOTE:** Practice sheets in skill support.

Part 2 – Application Practice

- $S = (3 \times 7) + 5$; $N = (3 \times 5) + 4$; $A = 2 + (4 \times 2)$; $K = 4 + (5 \times 6)$; 5.4E
- \$ 480; **NOTE:** Stress 40 equal groups of 12 – the multiplication group model. 4.1A; 5.3B
- B** – \$ 13,074 (i.e. $18,464 - 5,390 = 13,074$ dollars) 4.4A

Part 3 – Reflection and Conceptual Understanding

Student Answer: $9 \times 50 = 450$ **NOTE:** Stress EQUAL groups. 4.4B

Learning Opportunity 11

Part 1 – Numeracy Development**TEKS**

- First column: Given; 0.50; 0.80; Second column: 0.40; 0.10; 0.30 4.4A
- 3,876; 744 5.3B
- First column: 500; 800; 0; Second column: 100; 1,000; 900; 4.2D
- 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 **NOTE:** Practice sheets in skill support.

Part 2 – Application Practice

- First column: Given; 10; 2; Second column: 20; 24; 30; 5.4F
- Factors: 9 and 12; Product: $9 \times 12 = 108$; **NOTE:** Multiplication model is the same regardless the number of digits. 5.3B
- 650** ($65 \times 10 = 650$) 5.3B; 5.4B
- B** – \$ 170; (i.e. 85×2 or $85 + 85 = 170$) 4.4B; 5.4B

Part 3 – Reflection and Conceptual Understanding

Student Answer: Factors: 9 and 25; Product: $9 \times 25 = 225$; **NOTE:** The three dots (ellipsis) meaning the groups between. 4.4B

Learning Opportunity 12

Part 1 – Numeracy Development**TEKS**

- 0.70; 0.90; 0.60 4.4A
- 5,152 5.3B
- Given; 2,000; 1,000 4.2D
- First column: Given; 0.3; 0.05; Second column: 0.9; 0.6; 0.007 5.2A
- 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 **NOTE:** Practice sheets in skill support.

Part 2 – Application Practice

- First column: 10; 80; 42; Second column: 2; 24; 40; 5.4F
- Factors: 20 and 20; Product: $20 \times 20 = 400$; **NOTE:** Multiplication model is the same regardless of number size. 5.3B
- 288** (i.e. $24 \times 12 = 288$) 5.3B; 5.4B
- D** – 10,725 (i.e. $15,508 - 4,783 = 10,725$) 4.4A; 5.4B

Part 3 – Reflection and Conceptual Understanding

Student Answer: Factors: 16 and 14; Product: $16 \times 14 = 224$; **NOTE:** The three dots (ellipsis) meaning the groups between. 5.4B



Learning Opportunity 13

Part 1 – Numeracy Development **TEKS**

1. 0.70; 0.80; 0.90 **4.4A**

2. First column: 7,000; 2,000; 0; Second column: 4,000; 9,000; 1,000 **4.2D**

3. First column: 0.03; 0.03; 0.3; Second column: 0.3; 0.3; 0.003 **5.2A**

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; 3.4F**

c.) 0, 9, 18, 27, 36, 45, 54, 63, 72, 81, 90 d.) 0, 90, 180, 270, 360, 450, 540, 630, 720, 810, 900 **NOTE:** Practice sheets in skill support.

Part 2 – Application Practice

5. First column: 4; 40; 9; Second column: 3; 16; 36; **5.4F**

6. $B = (5 \times 2) + 3$; $C = 2 + (6 \times 5)$; **5.4E**

7. **672** (i.e. $32 \times 21 = 672$) **5.3B**

8. **A – 1,050** (i.e. $50 \times 21 = 1,050$) **NOTE:** 21 EQUAL groups of 50 – group model. – show diagram like problem 7 above. **5.3B; 5.4B**

Part 3 – Reflection and Conceptual Understanding

Student Answer: a.) Given b.)

409
1,000

 c.)

9
10
10

5.2A

Note: This method is an easy way for students to convert decimals to equivalent fractions. It only takes a little practice.

Learning Opportunity 14

Part 1 – Numeracy Development **TEKS**

1. 0.20; 0.60; 0.70 **4.4A**

2. First column: 4,000; 2,000; 1,000; Second column: 6,000; 10,000; 0 **4.2D**

3. First column: 0.06; 0.06; 0; Second column: 0.07; 0.9; 0.009 **5.2A**

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; 3.4F**

c.) 0, 9, 18, 27, 36, 45, 54, 63, 72, 81, 90 d.) 0, 90, 180, 270, 360, 450, 540, 630, 720, 810, 900 **NOTE:** Practice sheets in skill support.

Part 2 – Application Practice

5. 9; 18; 100 **5.4F**

6. Factors: 12 and 25; Product: $25 \times 12 = 300$; **NOTE:** Model for this word problem is shown problem 8 below. **5.4E**

7. $\frac{50}{100}$ Shade 50 of the 100 blocks (5 columns of 10 each) **NOTE:** Use the '1' under the decimal point and 2 zeros. **5.2A**

8. 300 – Group Model for problem 6. **5.3B**

9. **C - \$1,000** (i.e. Estimation problem – round to the nearest 100: $900 + 100 = \$1,000$) **4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: a.) $\frac{37}{100}$ b.) $\frac{501}{1,000}$ c.) $10; \frac{3}{10}$ **5.2A**

Learning Opportunity 15

Part 1 – Numeracy Development **TEKS**

1. 0.15; 0.25; 0.05 **NOTE:** Distinguish between 0.05 and 0.50 using money (5¢ and 50¢) and fractions ($\frac{5}{100}$ and $\frac{50}{100}$) **4.4A**

2. First column: 9,000; 6,000; 3,000; Second column: 5,000; 9,000; 1,000 **4.2D**

3. First column: 0.08; 0.004; 0.2; Second column: 0.07; 0.09; 0.8 **5.2A**

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; 3.4F**

c.) 0, 9, 18, 27, 36, 45, 54, 63, 72, 81, 90 d.) 0, 90, 180, 270, 360, 450, 540, 630, 720, 810, 900 **NOTE:** Practice sheets in skill support.

Part 2 – Application Practice

5. 40; 72; 30 **5.4F**

6. \$630 (i.e. $35 \times 18 = 630$) **5.3B; 5.4B**

7. $\frac{5}{100}$ Shade 5 of the 100 blocks. **NOTE:** Use the '1' under the decimal point and 2 zeros. **5.2A**

8. Factors: 35 in the circles; 18 in small square; Product: 630; **NOTE:** Students *must* understand these models with word problems. **5.3B**

9. **A – \$50** (i.e. $70 - 20 = 50$) **4.4A**

Part 3 – Reflection and Conceptual Understanding

Student Answer: a.) $\frac{42}{100}$ b.) $\frac{307}{1,000}$ c.) $\frac{5}{10}$ d.) $3 \frac{2}{10}$ **5.2A**



Learning Opportunity 16

Part 1 – Numeracy Development**TEKS**

- 0.45; 0.25; 0.35 **4.4A**
- First column: Given; 20; 30; Second column: 60; 100; 50 **1.4D; 4.4B**
- 11,807; 3,975 **4.4A**
- Given; $3 \times 5 = 15$; $15 \div 5 = 3$; $15 \div 3 = 5$ **NOTE:** Review the multiplication/division relationship until mastered. **4.4D; 4.4F**
- a.) 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10 b.) 0.06, 0.08, 0.10, 0.12, 0.14, 0.16, 0.18 **4.4A**
- $4,530 = (4 \times 1,000) + (5 \times 100) + (3 \times 10) + (0 \times 1)$ **4.2B**

Part 2 – Application Practice

- 1,430 feet; (i.e. $55 \times 26 = 1,430$) **5.3B; 5.4B**
- $\frac{9}{100}$ - Shade 9 out of 100 on grid; $\frac{9}{10}$ - Shade 9 out of 10 on grid. **NOTE:** Equate decimals to money for student understanding. **5.2A**
- Factors:** 55 in the circles; 26 in small square; **Product:** 1,430; **NOTE:** Students *must* understand these models with word problems. **5.3B**
- B – 10** (i.e. $20 \times 2 = 40$; $40 + 10 = 50$; $50 \div 2 = 25$; $25 - 15 = 10$) **4.4A; 4.4B**

Part 3 – Reflection and Conceptual Understanding

Student Answer: a.) $\frac{7}{100}$ b.) $2 \frac{51}{100}$ c.) $\frac{5}{1,000}$ d.) $7 \frac{6}{10}$ **5.2A**

Learning Opportunity 17

Part 1 – Numeracy Development**TEKS**

- 0.55; 0.95; 0.75 **4.4A**
- First column: 100; 30; 50; Second column: 80; 120; 60 **1.4D; 4.4B**
- 9.7; 5.4; 13.0; 3.3 **4.4A**
- $6 \times 3 = 18$; $3 \times 6 = 18$; Given; $18 \div 3 = 6$ **NOTE:** Review the multiplication/division relationship until mastered. **4.4D; 4.4F**
- a.) 0.01; 0.02; 0.03, 0.04, 0.05, 0.06, 0.08, 0.09, 0.10 b.) 0; 0.02; 0.04; 0.06, 0.10, 0.12, 0.14, 0.16, 0.20 **4.4A**
- $7,098 = (7 \times 1,000) + (0 \times 100) + (9 \times 10) + (8 \times 1)$ **4.2B**

Part 2 – Application Practice

- \$ 8.80; (i.e. $5.60 + 3.20 = 8.80$) **4.4A; 5.4B**
- $\frac{81}{100}$ - Shade 81 out of 100 on grid; $2 \frac{4}{10}$ - Shade 2 wholes and 4 out of 10 on the last grid. **5.2A**
- B – 3,375** (i.e. $45 \times 75 = 3,375$) **NOTE:** An array 45 by 75. **5.3B; 5.4B**
- $44 > 15$; (Jack = $4 \times 5 = 20$; $20 \times 2 = 40$; $40 - 10 = 30$; $30 \div 2 = 15$) (Jill = $20 \div 5 = 4$; $4 \times 6 = 24$; $24 - 20 = 4$; $4 + 40 = 44$) **4.4A; 4.4B; 4.2D**

Part 3 – Reflection and Conceptual Understanding

Student Answer: a.) $\frac{17}{100}$ b.) $8 \frac{9}{10}$ c.) $\frac{78}{1,000}$ d.) $8 \frac{67}{100}$ **5.2A**

Learning Opportunity 18

Part 1 – Numeracy Development**TEKS**

- 0.85; 0.05; 0.65 **4.4A**
- First column: 140; 50; 70; **1.4D; 4.4B**
- 14.09; 0.73 **4.4A**
- $0.04 < 0.4$ (Given); $0.07 > 0.05$ $0.80 = 0.8$; **NOTE:** 80 pennies = 8 dimes = 80 cents **5.2B**
- 21; 21; **NOTE:** Use spaces above each digit in the dividend. Zeros and the maximum size of quotient are handled. **4.4E**
- a.) 0, 0.01; 0.02; 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10 b.) 0; 0.02; 0.04; 0.06, 0.08, 0.10, 0.12, 0.14, 0.16, 0.18, 0.20 **4.4A**
- $21,980 = (2 \times 10,000) + (1 \times 1,000) + (9 \times 100) + (8 \times 10) + (0 \times 1)$ **4.2B**

Part 2 – Application Practice

- $1 \frac{8}{100}$ - Shade 1 Whole and 8 out of 100 on grid; $3 \frac{6}{10}$ - Shade 3 wholes and 6 out of 10 on the last grid. **5.2A**
- B – 29** (i.e. $145 \div 5 = 29$) **4.4E; 5.4B**
- $300 > 200$; (Jim = $20 \times 2 = 40$; $40 - 10 = 30$; $30 \times 10 = 300$) (Luz = $100 \div 5 = 20$; $20 \times 6 = 120$; $120 - 20 = 100$; $100 + 100 = 200$) **4.2D; 4.4A/B**

Part 3 – Reflection and Conceptual Understanding

Student Answer: a.) Given b.) Dividend = 525; Divisor = 5; Quotient = 105 c.) Dividend = 364; Divisor = 7; Quotient = 52 **Vocab.**



Learning Opportunity 19

Part 1 – Numeracy Development

TEKS

- 160; 90; 100 4.4B
- 5.08; 3.04 4.4A
- First Column: $0.84 < 0.91$; $0.01 < 0.1$; $0.30 = 0.3$; Second Column: $0.72 < 0.8$; $0.81 > 0.18$; $0.9 = 0.90$; 5.2B
- 55; 21; **NOTE:** Use spaces above each digit in the dividend. Zeros and the maximum size of quotient are handled. 4.4E
- a.) 0, 0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50 b.) 0, 0.10, 0.20, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00 4.4A
- $207,625 = (2 \times 100,000) + (0 \times 10,000) + (7 \times 1,000) + (6 \times 100) + (2 \times 10) + (5 \times 1)$ 4.2B

Part 2 – Application Practice

- First Column: $2 \frac{48}{100}$; Shade 2 wholes and 48 out of 100 on the grid; $1 \frac{3}{100}$; Shade 1 whole and 3 out of 100 on the grid; 5.2A
First Column: $5 \frac{1}{10}$; Shade 5 wholes and 1 out of 10 on the grid; $6 \frac{7}{10}$; Shade 6 wholes and 7 out of 10 on the grid;
- C – 22 stacks:** (i.e. $176 \div 8 = 22$). 4.4E; 5.4B
- $150 > 110$; (Rob = $24 \div 6 = 4$; $20 \times 4 = 80$; $2 \times 80 = 160$; $160 - 10 = 150$) (Yaz = $100 \times 5 = 500$; $500 - 400 = 100$; $100 \div 10 = 10$; $10 + 100 = 110$) 4.4A/B; 4.2D

Part 3 – Reflection and Conceptual Understanding

Student Answer: Decimals are lined-up to **preserve** place value. A one is subtracted from a one, etc. Students do not realize that they 4.4A
Always have been lining up decimals. For example, $3 + 4 = 7$ and $3.0 + 4.0 = 7.0$. The decimal is always present in a number.

Learning Opportunity 20

Part 1 – Numeracy Development

TEKS

- 9.48; 1.12 4.4A
- Given; 9; 10; 4.4E
- First Column: $0.70 < 0.9$; $0.015 < 0.14$; $0.20 > 0.1$; Second Column: $0.6 > 0.52$; $0.67 < 0.7$; $0.400 = 0.4$ 5.2B
- 83; 112; **NOTE:** Use spaces above each digit in the dividend. Zeros and the maximum size of quotient are handled. 4.4E
- a.) 0, 0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50 b.) 0, 0.10, 0.20, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00 4.4A
- $680,428 = (6 \times 100,000) + (8 \times 10,000) + (0 \times 1,000) + (4 \times 100) + (2 \times 10) + (8 \times 1)$ 4.2B

Part 2 – Application Practice

- First Column: $2 \frac{7}{100}$ – Two wholes shaded and 7 out of 100 on grid; $5 \frac{1}{100}$ – Shade 51 out of 100 on the grid. 5.2A
Second Column: $3 \frac{1}{10}$ – Three wholes shaded and 1 out of 10 on the last grid; $7 \frac{3}{10}$ – Shade seven wholes and 3 out of 10 on the last grid.
- D – M = (8 x 12) + 4:** (i.e. 8 equal groups of 12 and 4 added on for the 9th day.) 5.4B; 5.4F
- A = 32; **NOTE:** The student can count the squares **INSIDE** or multiply 8×4 – the lengths of the rectangle's length and width. 5.4H
- P = 24; **NOTE:** 'Peri' means around. 'Meter' means measure. So, **perimeter** means to 'measure around.' 5.4H

Part 3 – Reflection and Conceptual Understanding

Student Answer: a.) Given b.) $15.0 = 15.00$ c.) $376.0 = 376.00 = 376.000$ d.) 7,053.0 5.2A

Learning Opportunity 21

Part 1 – Numeracy Development

TEKS

- 9.382; 2.4; **NOTE:** Rewrite each equation vertically – line-up decimals and add zeros as needed. 4.4A
- 8; 10; 15; 4.4E
- First Column: $0.730 < 0.8$; $0.015 < 0.123$; $0.206 > 0.14$ 5.2B
- First Column: Given; 500; 250; Second Column: 300; 100; 450 4.4A
- 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; 3.4F; 4.4A
- $3,428 =$ three thousand four hundred twenty-eight 4.2B

Part 2 – Application Practice

- D – 322 m²:** (i.e. $23 \times 14 = 322$ square meters = 322 m².) 5.4H
- 23; $115 \div 5 = 23$ **NOTE:** Stress vocabulary of dividend, divisor and quotient – students must know mathematical vocabulary. 4.4E
- 4 hours – 12:30 to 4:30 is a span of 4 hours. 4.8C; 5.4B
- B – B = (3 x 12) + 5:** (i.e. 3 equal groups of 12 and 5 MORE years.) 5.4B; 5.4F
- & 12. A = 12** (i.e. count the inside squares or $(2 \times 4) + (2 \times 2) = 12$); **P = 16** (i.e. count the squares on the outside or add all sides) 5.4H

Part 3 – Reflection and Conceptual Understanding

Student Answer: $0.7 = 7/10$ and $0.70 = 70/100$; 7 dimes out of 10 = 70 cents; 70 out of 100 pennies = 70 cents; Hence, $0.7 = 0.70$ 5.2A



Learning Opportunity 22

Part 1 – Numeracy Development

TEKS

- 12.89; 1.75 **4.4A**
- 30; 35; 40 **4.4E**
- $0.963 > 0.954$; $0.07 < 0.081$; $0.249 < 0.3$ **5.2B**
- First Column: 700; 850; 650; Second Column: 400; 50; 150 **4.4A**
- a.) 0, 11, 22, 33, 44, 55, 66, 77, 88, 99, 110; b.) 0, 12, 24, 36, 48, 60, 72, 84, 96, 108, 120 **4.4A**
- $9.430 =$ nine thousand four hundred thirty **4.2B**

Part 2 – Application Practice

- 0.62 seconds; (i.e. $10.2 - 9.58 = 0.62$ seconds) **4.4A; 5.4B**
- 532; (i.e. $19 \times 28 = 532$) **5.3B; 5.4B**
- 9:15; (i.e. $6:00 + 3:15 = 9:15$) **4.8C; 5.4B**
- 275 ft.; (i.e. $1,729 - 1,454 = 275$ feet) **4.4A; 5.4B**
- $A = 180 \text{ ft}^2$; ($18 \text{ feet} \times 10 \text{ feet} = 180 \text{ ft}^2 = 180 \text{ square feet}$); $P = 56 \text{ feet}$; $(18 + 10) \times 2 = 56 \text{ feet}$ or add all four sides. **5.3B; 5.4B; 5.4H**
- \$39,352; ($14,845 + 24,507 = 39,352$) **4.4A; 5.4B**

Part 3 – Reflection and Conceptual Understanding

Student Answer: All are equal (=). Yes. **NOTE:** Stress that zeros may be added to any decimal and do not change its value. **5.2A**

Learning Opportunity 23

Part 1 – Numeracy Development

TEKS

- 7.735; 1.43 **4.4A**
- 50; 40; 45; **4.4E**
- First Column: Given; $\frac{4}{100}$; Second Column: $\frac{7}{10}$; $\frac{219}{1,000}$ **5.2A**
- 900; 750; 950 **4.4A**
- a.) 0, 12, 24, 36, 48, 60, 72, 84, 96, 108, 120; b.) 0, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150 **4.4A**
- thirty-one thousand forty-five **4.2B**

Part 2 – Application Practice

- $B - T = (4 \times 3) + (2 \times 2)$** ; **NOTE:** Provide examples until mastered, so students can work problems WITHOUT the grid. **5.3B; 5.4B; 5.4H**
- \$ 824; (i.e. $206 \times 4 = \$ 824$) **5.3B**
- 8:00; (i.e. $9:30 - 1:30 = 8:00$) **4.8C; 5.4B**
- a.) 32,224 (i.e. $84,913 - 52,689 = 32,224$) b.) 140,990 ($91,857 + 49,133 = 140,990$) c.) $49,133 < 52,689 < 84,913 < 91,857$ **4.4A/D; 5.4B**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Yes; Yes; **NOTE:** It is critical that students understand this concept. Zeros can be added because at the end of the decimal (for example, $0.94 = 0.940$) because $(0 \times \frac{1}{1,000})$ or (0×0.001) is equal to 0. **5.2A**

Learning Opportunity 24

Part 1 – Numeracy Development

TEKS

- 550; 850; 250; **4.4A**
- First Column: $\frac{95}{100}$; $\frac{46}{1,000}$; Second Column: $\frac{6}{10}$; $\frac{200}{1,000}$ **5.2A**
- First Column: 3; 5; 9; Second Column: 9; 11; 3 **4.4A; 4.4B**
- a.) 0, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150; b.) 0, 25, 50, 75, 100, 125, 150, 175, 200, 225, 250 **4.2D**
- four hundred thirty-nine thousand seven hundred forty-three **4.2B**

Part 2 – Application Practice

- $C - R = (5 \times 3) + (2 \times 3)$** ; **NOTE:** Provide examples until mastered, so students can work problems WITHOUT the grid. **5.3B; 5.4B; 5.4H**
- 1,800; ($50 \times 36 = 1,800$) **NOTE:** 36 equal groups of 50 in each month. **5.3B; 5.4B**
- $\frac{16}{100}$ (Proper Fraction); 0.16 (decimal) **5.2A**
- a.) 11.66 (i.e. $18.6 - 6.94 = 11.66$); b.) 7.696 (i.e. $6.94 + 0.756 = 7.696$) **4.4A; 5.4B**
- Sergio = 20 years old; (i.e. Bill = 15; Jim = $15 - 5 = 10$; Sergio is double Jim's age – Sergio is $2 \times 10 = 20$) **4.4A; 4.4B**

Part 3 – Reflection and Conceptual Understanding

Student Answer: First Row: Given; 67¢ 5¢ 15¢ Second Row: 20¢ 84¢ 2¢ 70¢ **5.2A; 5.2C**



Learning Opportunity 25

Part 1 – Numeracy Development**TEKS**

- 6 **5.3G**
- First Column: $\frac{25}{1,000}$; $\frac{108}{1,000}$; Second Column: $\frac{4}{10}$; $\frac{83}{100}$ **5.2A**
- First Column: 6; 5; 9; Second Column: 10; 11; 5 **4.4A; 4.4B**
- a.) 0, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150; b.) 0, 25, 50, 75, 100, 125, 150, 175, 200, 225, 250 **4.4A**
- eight hundred seven thousand nine hundred forty-three **4.2B**

Part 2 – Application Practice

- D – P = 2 x (4 + 8)** NOTE: Provide examples until mastered, so students understand that 2 EQUAL groups of (4 + 8) **5.4B; 5.4E; 5.4G**
- $3\frac{4}{10}$ (Mixed Number); 3.4 (decimal). **5.2A**
- $\frac{8}{100}$ (Proper Fraction); 0.08 (decimal) **5.2A**
- a.) 21.05 (i.e. $14.1 + 7.95 = 21.05$); b.) 7.85 (i.e. $14.1 - 6.25 = 7.85$) **4.4A; 5.4B**
- 12; (i.e. $180 \div 15 = 12$) **5.3G**

Part 3 – Reflection and Conceptual Understanding

Student Answer: First Row: 3¢; 1¢ 9¢ 22¢ Second Row: 90¢ 90¢ 88¢ 40¢ **5.2A; 5.2C**

Learning Opportunity 26

Part 1 – Numeracy Development**TEKS**

- 9; 13 **5.3G**
- First Column: $\frac{5}{1,000}$; $\frac{8}{100}$; Second Column: $\frac{13}{100}$; $\frac{8}{100}$ **5.2A**
- First Column: 3; 10; 6; Second Column: 30; 8; 3; **4.4A; 4.4B**
- a.) 0, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150; b.) 0, 25, 50, 75, 100, 125, 150, 175, 200, 225, 250 **4.4A**
- one million three hundred two thousand sixty-one **4.2B**

Part 2 – Application Practice

- C – P = 2 x (5 + 7)** NOTE: Provide examples until mastered, so students understand that 2 EQUAL groups of (5 + 7). **5.4B; 5.4E; 5.4G**
- mixed number = $5\frac{6}{10}$; decimal = 5.6 **5.2A**
- proper fraction = $\frac{12}{100}$; decimal = 0.12 **5.2A**
- \$ 36 (i.e. $180 \div 5 = 36$) **5.3G**
- 0.24 seconds (i.e. $11.04 - 10.8 = 0.24$) **4.4A; 5.4B**
- quotient = 12 (i.e. $484 \div 32 = 12$) **5.3G**

Part 3 – Reflection and Conceptual Understanding

Student Answer: First Row: 7¢; 8¢ 5¢ 28¢ Second Row: 70¢ 72¢ 60¢ 80¢ **5.2A; 5.2C**

Learning Opportunity 27

Part 1 – Numeracy Development**TEKS**

- 14; 23 **5.3G**
- $\frac{503}{1,000}$; $\frac{48}{100}$; **5.2A**
- First Column: 3; 25; 4; Second Column: 17; 18; 14; **4.4A; 4.4B**
- 4.5; 9.21 **5.4B**
- a.) 0, 12, 24, 36, 48, 60, 72, 84, 96, 108, 120; b.) 0, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150 **4.4A**
- seven million forty-six thousand six hundred five **4.2B**

Part 2 – Application Practice

- B – P = 2 x (6 + 10)** NOTE: Provide examples until mastered, so students understand that 2 EQUAL groups of (6 + 10). **5.4B; 5.4E; 5.4G**
- mixed number = $1\frac{9}{100}$; decimal = 1.09 **5.2A**
- A – 57**; (i.e. divide into two parallelograms – $(3 \times 3) + (12 \times 4) = 9 + 48 = 57$) **5.3B; 5.4B; 5.4H**
- a.) Cat = 17.82 kg. (i.e. $13.2 + 4.62 = 17.82$); b.) Mouse = 3.33 kg. (i.e. $13.2 - 9.87 = 3.33$) **4.4A; 5.4B**

Part 3 – Reflection and Conceptual Understanding

Student Answer: First Row: 8¢; 3¢ 10¢ 56¢ Second Row: 71¢ 49¢ 22¢ 10¢ **5.2A; 5.2C**

Learning Opportunity 28

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. 26	5.3G
2. First Column: 9; 27; 90; Second Column: 32; 10; 20	5.4F
3. Top to Bottom: 0.6; 0.15; 0.7	5.3K
4. Top to Bottom: 5.6; 9.71	5.3K
5. First Row: Given; 0.9; 0.9; Second Row: 0.1; 0.4; 0.8	5.2C
6. Top to Bottom: Given; 2 + 0.3 + 0.08	5.2A
7. twenty-seven million five thousand nine hundred forty	4.2B
<u>Part 2 – Application Practice</u>	
8. 26 and 8: factors; 208: product; 35: quotient; 15: divisor; 525: dividend	vocab.
9. $5\frac{7}{10}$ (Mixed Number); 5.7 (decimal).	5.2A
10. A = 792 (i.e. $22 \times 36 = \underline{792}$)	5.3B; 5.4H
11. 24; (i.e. $768 \div 32 = \underline{24}$)	5.3G
12. $0.7 > 0.603 > 0.089$ or $0.089 < 0.603 < 0.7$	5.2B
<u>Part 3 – Reflection and Conceptual Understanding</u>	
Student Answer: First Row: Given; 4 1 5 Second Row: 1 7 6 7	5.2A; 5.2C

Learning Opportunity 29

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. 61	5.3G
2. First Column: 13; 8; 45; Second Column: 6; 10; 60	5.4F
3. From Top to Bottom: 0.55; 0.15; 0.35	5.3K
4. 6.55; 8.07	5.3K
5. First Row: 0.1; 1.0; 0.9; Second Row: 0; 0.3; 0.7	5.2C
6. Given; 2 + 0.4	5.2A
7. Given; $2 + \frac{4}{10}$	5.2A
<u>Part 2 – Application Practice</u>	
8. 34 and 28: factors; 952: product; 41: quotient; 23: divisor; 943: dividend	vocab.
9. $4\frac{5}{10}$ (Mixed Number); 4.5 (decimal).	5.2A
10. B T = 268 (i.e. $67 + 67 + 67 + 67 = \underline{268}$ OR $67 \times 4 = \underline{268}$) NOTE: Recommend showing students both solutions.	5.3B; 5.4B
11. 16,994 (i.e. $62,086 - 45,092 = \underline{16,994}$)	4.4A
12. $0.60 = 0.6 > 0.059$ or $0.059 < 0.60 < 0.6$	5.2B
<u>Part 3 – Reflection and Conceptual Understanding</u>	
Student Answer: First Row: 7; 14 1 8 Second Row: 1 9 10 8	5.2A; 5.2C

Learning Opportunity 30

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. 988	5.3G
2. 5; 5; 10;	5.4F
3. First Column: 0.15; 0.05; 0.1; Second Column: 0.08; 0.09; 0.11;	5.3K
4. 2,146	5.3B
5. 0.8; 0.1; 0.9; 0.3; 0.7	5.2C
6. First Column: Given; Second Column: $3 + 0.2 + 0.05 + 0.004$; $3 + \frac{2}{10} + \frac{5}{100} + \frac{4}{1,000}$	5.2A
<u>Part 2 – Application Practice</u>	
7. Given; 50; 800 NOTE: Many students round <u>after</u> the operation. Round FIRST. Provide additional practice, as needed.	4.2D; 5.3A
8. mixed number = $2\frac{3}{10}$; decimal = 2.3	5.2A
9. D – 2,000; (i.e. $40 \times 50 = 2,000$) NOTE: Round first. Then multiply.	5.3A
10. B – 30; (i.e. $100 - 70 = 30$) NOTE: Round first. Then subtract.	5.3A
11. 62.74 grams (i.e. $24.2 + 38.54 = \underline{62.74}$)	5.3K
<u>Part 3 – Reflection and Conceptual Understanding</u>	
Student Answer: First Row: 9; 25 6 9 Second Row: 1 4 7 1	5.2A; 5.2C

Learning Opportunity 31

Part 1 – Numeracy Development **TEKS**

1. 3,822	5.3B
2. Top to Bottom: 0.2; 0.21; 0.19	5.3K
3. Decimals: 0.2; 0.3; 0.5; 0.7; 0.8 Proper Fractions: $\frac{3}{10}$; $\frac{4}{10}$; $\frac{5}{10}$; $\frac{7}{10}$; $\frac{9}{10}$	4.3E; 5.3K
4. Given; 0.07; 0.95; 0.31; 0.65	5.2C
5. First Column: $9 + 0.2 + 0.03 + 0.006$; $9 + \frac{2}{10} + \frac{3}{100} + \frac{6}{1,000}$ Second Column: $10 + 3 + 0 + 0.04 + 0.005$; $10 + 3 + \frac{0}{10} + \frac{4}{100} + \frac{5}{1,000}$	5.2A

Part 2 – Application Practice

6. 100 (i.e. $60 + 40$); 60 (i.e. $90 - 30 = 60$); 630 (i.e. $70 \times 9 = 630$)	5.3A
7. $y = 12$, Given, 16; $y = 0$, Given, 10	5.4C
8. C = 850 (i.e. $25 \times 34 = 850$) NOTE: Connect the multiplication group model with the calculation so students understand the math)	5.3B
9. A = 12 (i.e. $276 \div 23 = 12$) NOTE: Connect the division group model with the calculation so students understand the algorithm)	5.3C
10. 2; Given; 4; NOTE: Recommend showing students a division group model. 24 divided by 12 is 2 equal groups.	5.7B

Part 3 – Reflection and Conceptual Understanding

Student Answer: First Column: Whole Numbers: 2, 3; 0.15 away from 2. Second Column: Whole Numbers: 3, 4; 0.3 away from 4. **5.2A; 5.2C**

Learning Opportunity 32

Part 1 – Numeracy Development **TEKS**

1. First Column: Given; 0.07; 0.19; Second Column: 0.4; 0.35; 0.43	5.3K
2. Decimals: 0.2; 0.3; 0.5; 0.6; 0.7; 0.8 Proper Fractions: $\frac{1}{10}$; $\frac{2}{10}$; $\frac{3}{10}$; $\frac{4}{10}$; $\frac{5}{10}$; $\frac{7}{10}$; $\frac{8}{10}$; $\frac{9}{10}$	4.3E; 5.3K
3. 0.01; 0.06; 0.99; 0.31; 0.44	5.2C
4. 1 st Column: $200 + 10 + 8 + 0.4 + 0 + 0.006$; $200 + 10 + 8 + \frac{4}{10} + \frac{0}{100} + \frac{6}{1,000}$ 2 nd Column: $90 + 0 + 0.1 + 0.01 + 0.001$; $90 + 0 + \frac{1}{10} + \frac{1}{100} + \frac{1}{1,000}$	5.2A

Part 2 – Application Practice

5. 700 (i.e. $300 + 400 = 700$); 300 (i.e. $900 - 600 = 300$); 630 (i.e. $90 \times 6 = 540$)	5.3A
6. $y = 25, 28, 31$; $y = 1, 5, 9$	5.4C
7. B = 135 (i.e. $2,025 \div 15 = 135$) NOTE: Connect the division group model with the calculation so students understand the math)	5.3C
8. C = 300 (i.e. $1,000 - 700 = 300$)	5.3A
9. 1; 3; 5; NOTE: Recommend showing students a division group model. For example: 36 divided by 12 is 3 equal groups.	5.7B

Part 3 – Reflection and Conceptual Understanding

Student Answer: First Column: Whole Numbers: 7, 8; 0.08 away from 8. Second Column: Whole Numbers: 13, 14; 0.46 away from 13. **5.2A; 5.2C**

Learning Opportunity 33

Part 1 – Numeracy Development **TEKS**

1. First Column: 0.11; 0.07; 0.14;	5.3K
2. Decimals: 3.2; 3.3; 3.5; 3.6; 3.7; 3.8; 3.9 Mixed Numbers: $3\frac{1}{10}$; $3\frac{2}{10}$; $3\frac{3}{10}$; $3\frac{4}{10}$; $3\frac{5}{10}$; $3\frac{6}{10}$; $3\frac{8}{10}$; $3\frac{9}{10}$	4.3E; 5.3K
3. 0.01; 0.07; 0.96	5.2C
4. $y = 20, 25$; $y = 4, 10$	5.4C
5. $9,000 + 400 + 0 + 8 + 0.6 + 0.07 + 0.005$; $9,000 + 400 + 0 + 8 + \frac{6}{10} + \frac{7}{100} + \frac{5}{1,000}$	5.2A

Part 2 – Application Practice

6. 1,200 (i.e. $400 + 800 = 1,200$); 900 (i.e. $900 - 0 = 900$); 2,800 (i.e. $70 \times 40 = 2,800$)	5.3A
7. $1\frac{1}{4}$ (Mixed Number); $\frac{5}{4}$ (improper fraction). NOTE: Show examples of improper fractions, as needed. $1\frac{1}{4} = \frac{5}{4}$ (Emphasize)	4.3G
8. A = 42 (i.e. $6 \times 7 = 42$) NOTE: Remind students a regular polygon – hexagon has equal sides)	5.4H
9. D = 560 (i.e. $70 \times 8 = 560$)	5.3A
10. 6; 15; 27; 30 NOTE: Recommend showing students a multiplication group model. For example: 2 equal groups of 3 = 6	5.7B

Part 3 – Reflection and Conceptual Understanding

Student Answer: First Column: Whole Numbers: 56, 57; 0.91 away from 57. Second Column: Whole Numbers: 32, 33; 0.6 away from 33. **5.2A; 5.2C**

Learning Opportunity 34

Part 1 – Numeracy Development

TEKS

1. Top to Bottom: 0.25; 0.22; 0.31 **5.3K**
2. Decimals: 0.6; 0.8; 0.9; 1.1; 1.2; 1.3; 1.4; 1.6; Proper Fractions/MN: $\frac{7}{10}$; $\frac{8}{10}$; $\frac{9}{10}$; $1\frac{1}{10}$; $1\frac{2}{10}$; $1\frac{4}{10}$; $1\frac{5}{10}$ **4.3E; 5.3K**
3. 0.83; 1.03; 1.13; 1.33 **NOTE:** Decimals are increasing by 0.1 to the right. **5.3K**
4. First Table: $y = 23$; 41 Second Table: $y = 40$; 50 **5.4C**
5. Decimal: $600 + 0 + 1 + 0 + 0.03 + 0.002$; Fraction: $600 + 0 + 1 + \frac{0}{10} + \frac{3}{100} + \frac{2}{1,000}$ **5.2A**

Part 2 – Application Practice

6. Given; 6 (i.e. $7 - 1 = 6$); 28 (i.e. $7 \times 4 = 28$) **5.2C; 5.3A**
7. $3\frac{1}{2}$ (Mixed Number); $\frac{7}{2}$ (improper fraction). **NOTE:** Show examples of improper fractions, as needed. $7\frac{1}{2} = \frac{7}{2}$ (**Emphasize**) **4.3G**
8. **C – 9.3 kilometers...**; **NOTE:** Recommend stressing these types of examples, so students become familiar with decimals. **5.2C; 5.3K; 5.4B**
9. 21; 9; 6; 36; **NOTE:** Recommend showing students a multiplication group model. (e.g. 21 feet = 3 equal groups of 7) **5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: A.) Whole Numbers: 25, 26; 0.34 away from 25. B.) First Column: 7, 1; Second Column: 20, 8; **5.2A; 5.2C**

Learning Opportunity 35

Part 1 – Numeracy Development

TEKS

1. Top to Bottom: 0.36; 0.6; 0.43 **5.3K**
2. Decimals: 0.9; 1.1; 1.2; 1.3; 1.4; 1.5; 1.6; 1.8; Proper Fractions/M.N.: $\frac{8}{10}$; $1\frac{0}{10}$; $1\frac{1}{10}$; $1\frac{3}{10}$; $1\frac{4}{10}$; $1\frac{5}{10}$; $1\frac{6}{10}$; $1\frac{7}{10}$ **4.3E; 5.3K**
3. 0.57; 0.47; 0.27; 0.07 **NOTE:** Decimals are decreasing by 0.1 to the right. **5.3K**
4. $4\frac{2}{3}$ (Mixed Number); $\frac{14}{3}$ (improper fraction). **NOTE:** Show examples of improper fractions, as needed. $4\frac{2}{3} = \frac{14}{3}$ (**Emphasize**) **4.3G**
5. Top to Bottom: Given; sixty-seven hundredths **NOTE:** 'and' only appears as the decimal point in place value word form. **5.2A**

Part 2 – Application Practice

6. 10 (i.e. $5 + 5 = 10$); 1 (i.e. $3 - 2 = 1$); 14 (i.e. $7 \times 2 = 14$) **5.2C; 5.3A**
7. **C – 10 L** (i.e. 1.85×5 - - rounds to 2×5 - - which equals and estimates to 10) **5.2C; 5.3K**
8. **A – 16.1 meters...**; **NOTE:** Recommend stressing these types of examples, so students become familiar with decimals. **5.2C; 5.3K; 5.4B**
9. 24; 36; 6; 60; **NOTE:** Practice these measurements – use the measurement warm-ups on the Amara website. **5.7**

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; 5.4A**
NOTE: This is a critical skill to learn. The math facts are key, but using this method the student always has the first fact – the identity property (1×20 , in this case). If the number is even, divisible by 2, (2 and 10 work in this case). Now, the only numbers left are between 3 and 9. 3 doesn't work – 20 is NOT divisible by 3. At that point, the only numbers left are between 4 and 9. 20 is divisible by 4 or 5 – Hence, 4 and 5 work. No whole numbers left between 4 and 5. The compression method works every single time for a student to get all the factors of any number with simple divisibility rules.

Learning Opportunity 36

Part 1 – Numeracy Development

TEKS

1. Top to Bottom: 0.9; 0.99; 0.95 **NOTE:** May need to review that $0.1 = 0.10$ **5.3K**
2. Decimals: 6.9; 7.1; 7.2; 7.3; 7.4; 7.6; 7.7; 7.8; Mixed Numbers: $6\frac{8}{10}$; $6\frac{9}{10}$; $7\frac{0}{10}$; $7\frac{1}{10}$; $7\frac{3}{10}$; $7\frac{4}{10}$; $7\frac{5}{10}$; $7\frac{6}{10}$; $7\frac{7}{10}$ **4.3E; 5.3K**
3. 0.07; 0.11; 0.13; 0.17; 0.19 **NOTE:** Decimals are increasing by 0.02 to the right. **5.3K**
4. $3\frac{1}{3}$ (Mixed Number); $\frac{10}{3} = 3\frac{1}{3}$ (**Emphasize the equality between Mixed Numbers and Improper Fractions**) **4.3G**
5. six and two-tenths; one and thirty-five hundredths **NOTE:** 'and' only appears as the decimal point in place value word form. **5.2A**

Part 2 – Application Practice

6. 40 (i.e. $17 + 23 = 40$); 14 (i.e. $27 - 13 = 14$); 30 (i.e. $10 \times 3 = 30$) **5.2C; 5.3A**
7. **B – 3,015** (i.e. $45 \times 67 = 3,015$) **NOTE:** Recommend showing group model: 45 equal groups with 67 in each group. **5.3B**
8. **B – 130.11 meters;** **NOTE:** Recommend stressing these types of examples, so students become familiar with decimals. **5.2C; 5.3K; 5.4B**
9. 36; 60; 6; 48; **NOTE:** Practice these measurements – use the measurement warm-ups on the Amara website. **5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 6; 12; 3; 4; **Note:** Start with 1 x number (12); 12 is even – divisible by 2; 12 divisible by 3. **See Note LO 35** **4.4D; 5.4A**

Learning Opportunity 37

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. 3,875 NOTE: Work one multiplication algorithm a day until mastered. Stress the group model (i.e. 31 equal groups of 125, etc.).	5.3B
2. Improper Fractions: $\frac{6}{4}$; $\frac{7}{4}$; $\frac{9}{4}$; $\frac{10}{4}$; $\frac{11}{4}$; $\frac{12}{4}$; $\frac{14}{4}$; Mixed Numbers: $1\frac{1}{4}$; $1\frac{2}{4}$; $1\frac{3}{4}$; $2\frac{2}{4}$; $2\frac{3}{4}$; $3\frac{0}{4}$; $3\frac{2}{4}$;	4.3E
3. 0.24; 0.15; 0.12; 0.06; 0.03 NOTE: Decimals are decreasing by 0.03 to the right.	5.3K
4. $2\frac{2}{4}$ (Mixed Number); $2\frac{2}{4} = \frac{10}{4}$ NOTE: REFER to the number line in problem 2 to show students the relationship.	4.3G
5. six and two hundred ten hundredths; seven and five hundredths	5.2A
Part 2 – Application Practice	
6. $90 (60 + 30 = 90)$; $60 (i.e. 70 - 10 = 60)$; $60 (i.e. 90 - 30 = 60)$	5.2C; 5.3A
7. B – 72 (i.e. $1,080 \div 15 = 72$) NOTE: Show the group model for division, so students understand the mathematics.)	5.3C
8. D – H = (4 x 12) + 2 ; NOTE: Show 4 equal groups of 12 inches equals 48 inches PLUS the extra 2 inches for a total of 50 inches.	5.4F; 5.7
9. C – 3.555	5.2C
10. 5,280; 2,640; 10,560; 15,840; NOTE: Recommend showing students a multiplication group model. (e.g. $10,560 = 2$ equal groups of 5,280)	5.7
Part 3 – Reflection and Conceptual Understanding	
Student Answer: 2, 8, 16 4	4.4D

Learning Opportunity 38

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. 8,858 NOTE: Work one multiplication algorithm a day until mastered. Stress the group model (i.e. 43 equal groups of 206, etc.).	5.3B
2. Improper Fractions: $\frac{4}{3}$; $\frac{6}{3}$; $\frac{8}{3}$; $\frac{9}{3}$; $\frac{10}{3}$; $\frac{11}{3}$; $\frac{13}{3}$; Mixed Numbers: $1\frac{1}{3}$; $1\frac{2}{3}$; $2\frac{1}{3}$; $3\frac{0}{3}$; $3\frac{1}{3}$; $3\frac{2}{3}$; $4\frac{1}{3}$;	4.3E
3. First Row: 1: {1} 3: {1, 3} 5: {1, 5} 7: {1, 7} Second Row: 2: {1, 2} 4: {1, 2, 4} 6: {1, 2, 3, 6} 8: {1, 2, 4, 8}	4.4D
4. $2\frac{2}{3}$ (Mixed Number); $\frac{8}{3} = 2\frac{2}{3}$ NOTE: REFER to the number line in problem 2 to show students the relationship.	4.3G
5. thirteen and forty-nine thousandths	5.2A
Part 2 – Application Practice	
6. $100 (40 + 60 = 100)$; $60 (i.e. 80 - 20 = 60)$; $1,400 (i.e. 70 \times 20 = 1,400)$	5.2C; 5.3A; 5.3B
7. C – $7_{10} = 0.7$	4.2G
8. C – D = 5,280 + (5,280 \div 2) ; NOTE: Refer to problem 10 for 1 $\frac{1}{2}$ mile calculation.	4.4A; 5.3C
9. C – 24 (i.e. $(133 + 155) \div 12$)	4.4A; 5.3C
10. 5,280; 2,640; 1,320; 7,920; NOTE: Refer to problem 8 for the 1 $\frac{1}{2}$ mile algorithmic process.	5.7
Part 3 – Reflection and Conceptual Understanding	
Student Answer: Proper Fractions: $\frac{1}{10}$, $\frac{1}{3}$, $\frac{4}{5}$, $\frac{2}{5}$, $\frac{6}{8}$ Improper Fractions: $\frac{8}{5}$, $\frac{7}{3}$, $\frac{9}{2}$, $\frac{6}{6}$, $\frac{8}{8}$, $\frac{3}{1}$ Mixed Numbers: $2\frac{4}{5}$, $1\frac{1}{3}$, $4\frac{4}{7}$, $5\frac{0}{8}$, $9\frac{3}{4}$, $10\frac{1}{8}$	4.3E
NOTE: Stress that $\frac{4}{4}$, $\frac{3}{3}$, $\frac{8}{8}$, $\frac{7}{1}$, $\frac{9}{1}$, $\frac{5}{1}$, etc. are all improper fractions.	

Learning Opportunity 39

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. 46,735 NOTE: Work one multiplication algorithm a day until mastered. Stress the group model (i.e. 65 equal groups of 719, etc.).	5.3B
2. Improper Fractions: $\frac{2}{2}$; $\frac{4}{2}$; $\frac{6}{2}$; $\frac{7}{2}$; $\frac{8}{2}$; $\frac{9}{2}$; $\frac{10}{2}$; $\frac{12}{2}$ Mixed Numbers: $1\frac{1}{2}$; $2\frac{1}{2}$; $3\frac{0}{2}$; $4\frac{0}{2}$; $4\frac{1}{2}$; $5\frac{0}{2}$; $6\frac{0}{2}$	4.3E
3. First Row: 1: {1} 3: {1, 3} 5: {1, 5} 7: {1, 7} Second Row: 2: {1, 2} 4: {1, 2, 4} 6: {1, 2, 3, 6} 8: {1, 2, 4, 8}	4.4D
4. $4\frac{1}{2}$ (Mixed Number); $4\frac{1}{2} = \frac{9}{2}$ NOTE: REFER to the number line in problem 2 to show students the relationship.	4.3G
5. twenty-one and forty hundredths	5.2A
Part 2 – Application Practice	
6. 1.10; 1.14; 1.22; 1.26; A - Decimals are increasing by 0.04 to the right.	5.3K
7. B – $3_{10} = 0.3$	4.2G
8. D – T = (145 x 23) ; NOTE: Show MULTIPLICATION group model so students understand the mathematics.	5.3B
9. B – 13 jeans ; (i.e. $156 \div 12 = 13$) NOTE: <u>ALL</u> STACKS OF JEANS CONTAIN 13 JEANS. This problem illustrates division meaning.	5.3C
10. 1; 3; 2; 5; NOTE: Recommend giving physical examples of ounces and pounds – Use Amara measurement warm-ups)	5.7
Part 3 – Reflection and Conceptual Understanding	
Student Answer: Proper Fractions: $\frac{1}{9}$, $\frac{5}{10}$, $\frac{1}{2}$, $\frac{6}{9}$, $\frac{3}{6}$, $\frac{2}{6}$, $\frac{8}{9}$ Improper Fractions: $\frac{5}{5}$, $\frac{9}{1}$, $\frac{2}{2}$, $\frac{7}{2}$, $\frac{4}{1}$ Mixed Numbers: $7\frac{3}{5}$, $37\frac{8}{10}$, $4\frac{0}{5}$, $14\frac{1}{4}$, $26\frac{5}{8}$	4.3E
NOTE: Stress that $\frac{4}{4}$, $\frac{3}{3}$, $\frac{8}{8}$, $\frac{7}{1}$, $\frac{9}{1}$, $\frac{5}{1}$, etc. are all improper fractions.	



Learning Opportunity 40

Part 1 – Numeracy Development

TEKS

- 25,437 **NOTE:** Work one multiplication algorithm a day until mastered. Stress the group model (i.e. 61 equal groups of 417, etc.). **5.3B**
- Improper Fractions: $\frac{8}{8}$; $\frac{10}{8}$; $\frac{12}{8}$; $\frac{13}{8}$; $\frac{14}{8}$; $\frac{15}{8}$; $\frac{16}{8}$; $\frac{18}{8}$; Mixed Numbers: $1\frac{1}{8}$; $1\frac{2}{8}$; $1\frac{3}{8}$; $1\frac{4}{8}$; $1\frac{5}{8}$; $1\frac{6}{8}$; $1\frac{7}{8}$; $2\frac{0}{8}$; $2\frac{2}{8}$ **4.3E**
- First Column: 4: {1, 2, 4} 5: {1, 5} 6: {1, 2, 3, 6} 7: {1, 7} Second Column: 8: {1, 2, 4, 8} 9: {1, 3, 9} 10: {1, 2, 5, 10} 11: {1, 11} Third Column: 12: {1, 2, 3, 4, 6, 12} 13: {1, 13} 14: {1, 2, 7, 14} 15: {1, 3, 5, 15} **4.4D**
- 20; 6 **NOTE:** Students will need to be shown that when a number is placed adjacent to a parenthesis it means multiply. **5.4F**
- First Row: Given; 5: P; 14: C; 15: C; Second Row: Given; 9: C; 13: P; 6: C; **5.4A**

Part 2 – Application Practice

- 0.87; 0.47; 0.37; 0.17; 0.07; B – Decimals are decreasing by 0.1 **5.3K**
- D – $\frac{6}{10} = 0.6$ **4.2G**
- A – \$ 7.86; (i.e. $20 - (4.15 + 7.99) = 7.86$) **5.3K**
- B – 314.5 km. (i.e. $239.5 + 75 = 314.5$) **5.3K**
- 2; 4; 5; 3; **NOTE:** Recommend showing students a division group model. (e.g. $32 = 2$ equal groups of 16) **5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 3; 10; 5 **4.3B**

Learning Opportunity 41

Part 1 – Numeracy Development

TEKS

- 9,768 **NOTE:** Work one multiplication algorithm a day until mastered. Stress the group model (i.e. 22 equal groups of 444, etc.). **5.3B**
- Improper Fractions: $\frac{4}{4}$; $\frac{5}{4}$; $\frac{6}{4}$; $\frac{7}{4}$; $\frac{8}{4}$; $\frac{9}{4}$; $\frac{10}{4}$; $\frac{11}{4}$; $\frac{12}{4}$; $\frac{13}{4}$; $\frac{14}{4}$; Mixed Numbers: $1\frac{0}{4}$; $1\frac{1}{4}$; $1\frac{2}{4}$; $1\frac{3}{4}$; $2\frac{0}{4}$; $2\frac{1}{4}$; $2\frac{2}{4}$; $2\frac{3}{4}$; $3\frac{1}{4}$; $3\frac{2}{4}$ **4.3E**
- First Column: 8: {1, 2, 4, 8} 9: {1, 3, 9} 10: {1, 2, 5, 10} 11: {1, 11} Second Column: 12: {1, 2, 3, 4, 6, 12} 13: {1, 13} 14: {1, 2, 7, 14} 15: {1, 3, 5, 15} Third Column: 16: {1, 2, 4, 8, 16} 17: {1, 17} 18: {1, 2, 3, 6, 9, 18} 19: {1, 19} **4.4D**
- 32; 40 **NOTE:** Students will need to be shown that when a number is placed adjacent to a parenthesis it means multiply. **5.4F**
- First Row: 7: P; 8: C; 17: P; 18: C; Second Row: 9: C; 2: P; 14: C; 19: P **5.4A**

Part 2 – Application Practice

- 5 R 1; check by multiplication; 53 R 2; check by multiplication; 535 R 3; check by multiplication; **4.4D; 5.3C**
- D – $1\frac{7}{10} = 1.7$ **4.2G**
- C – 6 cars; (i.e. $26 \div 5 = 5$ R 1) **NOTE:** Draw 6 rectangle for each car. Place 5 kids in 5 rectangles and 1 kid in one rectangle = 6 cars **5.3C**
- B – 450 feet. (i.e. $150 \times 3 = 450$) **NOTE:** Use the group model for multiplication – so students can understand the mathematics. **5.3B, 5.7**
- 32; 60; 48; 160; **NOTE:** Recommend showing students a division group model. (e.g. $32 = 2$ equal groups of 16) **5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 2; 4; 8 **4.3B**

Learning Opportunity 42

Part 1 – Numeracy Development

TEKS

- Proper/Improper Fractions: $\frac{0}{4}$; $\frac{1}{4}$; $\frac{2}{4}$; $\frac{3}{4}$; $\frac{4}{4}$; $\frac{5}{4}$; $\frac{6}{4}$; $\frac{7}{4}$; $\frac{8}{4}$; $\frac{9}{4}$; $\frac{10}{4}$; Mixed Numbers: $1\frac{0}{4}$; $1\frac{1}{4}$; $1\frac{2}{4}$; $1\frac{3}{4}$; $2\frac{0}{4}$; $2\frac{1}{4}$; $2\frac{2}{4}$ **4.3E**
- First Column: 8: {1, 2, 4, 8} 9: {1, 3, 9} 10: {1, 2, 5, 10} 11: {1, 11} Second Column: 12: {1, 2, 3, 4, 6, 12} 13: {1, 13} 14: {1, 2, 7, 14} 15: {1, 3, 5, 15} Third Column: 16: {1, 2, 4, 8, 16} 17: {1, 17} 18: {1, 2, 3, 6, 9, 18} 19: {1, 19} **4.4D**
- 25; 60 **NOTE:** Students will need to be shown that when a number is placed adjacent to a parenthesis it means multiply. **5.4F**
- First Row: 3: P; 9: C; 19: P; 16: C; Second Row: 5: P; 8: C; 13: P; 18: C **5.4A**

Part 2 – Application Practice

- 4 R 2; 44 R 5; 449 R 1; **NOTE:** students should check their division on these problems by multiplication; **4.4D; 5.3C**
- $0.5 \times 0.4 = 0.20 = \frac{20}{100}$ **NOTE:** Students should understand that the double cross hatch area is the product of two decimals. **5.3D**
- A – 5 boxes (i.e. $26 \div 6 = 4$ R 2) **NOTE:** Draw 5 rectangle for each box. Place 6 toys in 4 rectangles and 2 toys in one rectangle = 5 boxes **4.4D; 5.3C**
- 24; (i.e. $6 \times 4 = 24$) **NOTE:** Emphasize and review area is width x length. Use in volume calculation for Base (area) x height. **5.4H**
- 4,000; 10,000 **NOTE:** Recommend giving physical examples of tons and pounds – Use Amara measurement warm-ups) **5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: First Column: Given; Given; 15: 5; Second Column: 10: 2, 5, 10; 6: 2; 25: 5; Third Column: 12: 2; 50: 2, 5, 10; 36: 2 **4.4D**



Learning Opportunity 43

Part 1 – Numeracy Development

TEKS

1. First Column: Given; Given; $9.0 = 9.00 = 9.000$ Second Column: $15.0 = 15.00 = 15.000$; $1.0 = 1.00 = 1.000$; $34.0 = 34.00 = 34.000$ **4.2E**
2. First Column: 2: **P**; 9: **C**; 4: **C**; Second Column: 21: **C**; 16: **P**; 23: **P**; Third Column: 25: **C**; 30: **C**; 55: **C** **5.4A**
3. 0.3; 0.2; 1.01 **NOTE:** Highly recommend students write quotients in both decimal and fraction (e.g. $0.3 = \frac{3}{10}$) **5.3G**
4. 20: {1, 2, 4, 5, 10, 20} 21: {1, 3, 7, 21} 22: {1, 2, 11, 22} 23: {1, 23} **4.4D**
5. $5(3 + 8)$; $6 + (3 \times 5)$; $12 \times (9 - 2)$ **5.4C**
6. $0.251 < 0.26$; $5.2 = 5.200$; $0.46 < 0.6$; **NOTE:** Stress adding zeros has no effect on decimal and *think* "Money". **5.2B**

Part 2 – Application Practice

7. 7 R 13; 7 R 31 Check students work to ensure they are verifying quotients by multiplication – and adding remainder. **4.4D; 5.3C**
8. $0.2 \times 0.4 = 0.08 = \frac{8}{100}$; **NOTE:** Students must understand that the overlap or double cross-hatch is the decimal product. **5.3D; 5.3E**
9. **B – 14,000**; (i.e. $2,000 \times (2 + (2 + 3)) = 2,000 \times 7 = 14,000$ pounds) **NOTE:** Use Amara daily measurement warm-ups. **FREE.** **5.3B; 5.7**
10. **24** cubic units; (i.e. Volume = $L \times W \times H = 4 \times 3 \times 2 = 24$) **NOTE:** Stress cubic units. Contrast with perimeter (linear units) and Area (sq. units). **5.4G**
11. 14,000; 20,000 **NOTE:** Recommend showing students a multiplication group model to understand the mathematics. **5.3B; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: First Column: 12: **2**; 60: **2, 5, 10**; 18: **2**; Second Column: 70: **2, 5, 10**; 88: **2**; 55: **5**; Third Column: 36: **2**; 120: **2, 5, 10**; 75: **5** **4.4D**

Learning Opportunity 44

Part 1 – Numeracy Development

TEKS

1. First Column: Given; 1.1; 2.5; Second Column: 3.0; 3.1; 1.5 **NOTE:** Add-up to next whole number. (i.e. 8.9 to 9.0 is 0.1; 1 more = 1.1) **5.3K**
2. 0.50; **NOTE:** Computational work is first problem in Number 3. (physical example: 3 equal groups of 0.50 or 50 cents = \$1.50) **5.3F**
3. 0.50; 0.4; 6.2 **NOTE:** Highly recommend students write quotients in both decimal and fraction (e.g. $0.50 = \frac{50}{100}$) **5.3G**
4. 20: {1, 2, 4, 5, 10, 20} 21: {1, 3, 7, 21} 22: {1, 2, 11, 22} 23: {1, 23} **4.4D**
5. $(4 \times 9) - 7$; $(12 \div 3) \times 6$; $12(5 + 11)$ **5.4C**
6. $0.02 > 0.006$; $1.20 > 1.1$; $0.7 = 0.700$; **NOTE:** Stress adding zeros has no effect on decimal and *think* "Money" for magnitudes. **5.2B**

Part 2 – Application Practice

7. 14 R 6; 10 R 25 Check students work to ensure they are verifying quotients by multiplication – and adding remainder. **4.4D; 5.3C**
8. $0.2 \times 0.7 = 0.14 = \frac{14}{100}$; **NOTE:** Students must understand that the overlap or double cross-hatch is the decimal product. **5.3D; 5.3E**
9. **B – 23**; (i.e. $873 \div 25 = 34$ R 23). Or, 34 groups of 25 and one stack (remainder) of 23. **5.3C**
10. **12** cubic units; (i.e. Volume = $L \times W \times H = 2 \times 3 \times 2 = 12$) **NOTE:** Stress cubic units. Contrast with perimeter (linear units) and Area (sq. units). **5.4G**
11. 10,560; 15,840 **NOTE:** Recommend showing students a multiplication group model to understand the mathematics. **5.3B; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: First Column: 18: **3, 6, 9**; 66: **3, 6**; 15: **3**; Second Column: 45: **3, 9**; 33: **3**; 27: **3, 9**; Third Column: 36: **3, 6, 9**; 81: **3, 9**; 72: **3, 6, 9** **4.4D**

Learning Opportunity 45

Part 1 – Numeracy Development

TEKS

1. First Column: 4.1; 1.0; 2.2; Second Column: 7.0; 2.7; 3.5 **NOTE:** Add-up to next whole number. (i.e. 5.9 to 6.0 is 0.1; 4 more = 4.1) **5.3K**
2. 0.90; **NOTE:** Computational work is first problem in Number 3. (physical example: 2 equal groups of 0.90 or 90 cents = \$1.80) **5.3F**
3. 0.90; 0.3; 7.1 **NOTE:** Highly recommend students write quotients in both decimal and fraction (e.g. $0.90 = \frac{90}{100}$) **5.3G**
4. 24: {1, 2, 3, 4, 6, 8, 12, 24} 25: {1, 5, 25} 27: {1, 3, 9, 27} 28: {1, 2, 4, 7, 14, 28} **4.4D**
5. 17; 20 **5.4C**
6. 11; 3; 5 **5.4F**
7. $6.07 > 6.009$; $0.201 < 0.3$; $4.1 = 4.100$; **NOTE:** Stress adding zeros has no effect on decimal and *think* "Money". **5.2B**

Part 2 – Application Practice

8. 22 R 5; 22 in circles and 5 in Remainder box. **NOTE:** Diagram allows students to visualize complicated mathematics. **4.4D; 5.3C**
9. $0.5 \times 0.5 = 0.25 = \frac{25}{100}$; **NOTE:** Students must understand that the overlap or double cross-hatch is the decimal product. **5.3D; 5.3G**
10. **D – \$ 3.10**; (i.e. $\$12.40 \div 4 = \$ 3.10$). Or, 4 equal groups of \$ 3.10 equals \$ 12.40. **5.3G**
11. **12** cubic units; (i.e. Volume = $L \times W \times H = 4 \times 3 \times 1 = 12$) **NOTE:** Stress cubic units. Contrast with perimeter (linear units) and Area (sq. units). **5.4G**
12. 60; 96 **NOTE:** Recommend showing students a multiplication group model to understand the mathematics. **5.3B; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: First Column: 12: **3, 6**; 99: **3, 6**; 63: **3, 6**; Second Column: 66: **3, 6**; 51: **3**; 60: **3, 6**; Third Column: 36: **3, 6, 9**; 27: **3, 9**; 18: **3, 6, 9** **4.4D**

Learning Opportunity 46

Part 1 – Numeracy Development

TEKS

1. First Column: 6.1; 7.5; 8.2; Second Column: 5.4; 4.3; 9.5 **NOTE:** Add-up to next whole number. (i.e. 3.9 to 4.0 is 0.1; 6 more = **6.1**) **5.3K**
2. **D – $0.80 \div 4 = 0.20$** ; **NOTE:** (physical example: 4 equal groups of 0.20 or 20 cents = \$0.80) **5.3F**
3. 0.43; 3.1; **NOTE:** Highly recommend students write quotients in both decimal and fraction (e.g. $0.43 = \frac{43}{100}$) **5.3G**
4. 24: {1, 2, 3, 4, 6, 8, 12, 24} 25: {1, 5, 25} 27: {1, 3, 9, 27} 28: {1, 2, 4, 7, 14, 28} **4.4D**
5. 12; 15 **NOTE:** Stress the multiplication – start with the parenthesis, then multiply. Only practice is needed. **5.4C**
6. 40; 25; 8 **5.4F**
7. $0.429 < 0.5$; $0.2 < 0.391$; $0.1 = 0.100$; **NOTE:** Stress adding zeros has no effect on decimal and *think* "Money". **5.2B**

Part 2 – Application Practice

8. 16 R 31; 847 in large rectangle; 16 in circles; 51 in small rectangle; $R = 31$. **4.4D; 5.3C**
9. $0.3 \times 0.8 = 0.24 = \frac{24}{100}$; **NOTE:** Students must understand that the overlap or double cross-hatch is the decimal product. **5.3E**
10. **C – \$7.75**; (i.e. $\$2.50 \times 5 = \12.50 , then subtract $\$4.75 = \7.75). **4.4A; 5.3E**
11. **36** cubic units; (i.e. Volume = $L \times W \times H = 4 \times 3 \times 3 = 36$) **NOTE:** Stress cubic units. Contrast with perimeter (linear units) and Area (sq. units). **5.4G**
12. 3; 6 **NOTE:** Recommend showing students a multiplication/division group model to understand the mathematics. **5.3B; 5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 10.0; 1; 0.35; 2; 0.212; 3 **NOTE:** Require students to use arrows to count decimal places. **5.3E**

Learning Opportunity 47

Part 1 – Numeracy Development

TEKS

1. **C – $0.60 \div 3 = 0.20$** ; **NOTE:** (physical example: 3 equal groups of 0.20 or 20 cents = \$0.60) **5.3F**
2. 1.61; 36.6; 0.20 **5.3D**
3. 0.06; 4.2; **NOTE:** Highly recommend students write quotients in both decimal and fraction (e.g. $0.06 = \frac{6}{100}$) **5.3G**
4. 30: {1, 2, 3, 5, 6, 10, 15, 30} 32: {1, 2, 4, 8, 16, 32} 33: {1, 3, 11, 33} 36: {1, 2, 3, 4, 6, 9, 12, 18, 36} **4.4D**
5. **C – $0.70 \times 0.70 = 0.49$** **5.3D; 5.3E**
6. 35; 49 **NOTE:** Stress the multiplication – start with the parenthesis, then multiply. Only practice is needed. **5.4C**

Part 2 – Application Practice

7. 94 R 6; 852 in large rectangle; 94 in circles; 9 in small rectangle; $R = 6$. **4.4D; 5.3C**
8. **B – 18.5 miles**; (i.e. $3.7 \text{ miles} \times 5 = 18.5 \text{ miles}$) **5.3E**
9. **C – $0.36 = \frac{36}{100}$** ; (i.e. $0.4 \times 0.9 = 0.36$) **5.3E**
10. **30** cubic units; (i.e. Volume = $L \times W \times H = 5 \times 2 \times 3 = 30$) **NOTE:** Stress cubic units. Contrast with perimeter (linear units) and Area (sq. units). **5.4G**
11. 5; $\frac{1}{2}$; 10,560; 15 **5.3B; 5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 19.0; 1; 6.12; 2; 0.045; 3; 4.564; 3; 2.12; 2 **NOTE:** Require students to use arrows to count decimal places. **5.3E**

Learning Opportunity 48

Part 1 – Numeracy Development

TEKS

1. **B – $2.4 \div 3 = 0.80$** ; **NOTE:** (physical example: 3 equal groups of 0.80 or 80 cents = \$2.40) **5.3F**
2. 3.91; 12.3; 0.16 **5.3D**
3. 0.2; 0.32; **NOTE:** Highly recommend students write quotients in both decimal and fraction (e.g. $0.02 = \frac{2}{100}$) **5.3G**
4. 30: {1, 2, 3, 5, 6, 10, 15, 30} 32: {1, 2, 4, 8, 16, 32} 33: {1, 3, 11, 33} 36: {1, 2, 3, 4, 6, 9, 12, 18, 36} **4.4D**
5. **C – $0.70 \times 0.30 = 0.21$** **5.3D; 5.3E**
6. 15; 25 **5.4C**

Part 2 – Application Practice

7. 47.7; 47.7 in large rectangle; 5.3 in circles; **5.3D; 5.3E**
8. **A – 5.22 liters**; (i.e. $0.87 \text{ liters} \times 6 = 5.22 \text{ liters}$) **5.3E**
9. $1 \frac{1}{2}$ (Mixed Number); $1 \frac{1}{2} = \frac{3}{2}$ **NOTE:** Show equality. Extend problem to decimal equality: $1 \frac{1}{2} = \frac{3}{2} = 1.5$ **4.3G**
10. **B – 0.5 kg.**; (i.e. $4.5 \div 9 = 0.5$) **5.3G**
11. **2** units; (Volume = $L \times W \times H$); ($18 = 3 \times 3 \times H$); ($18 = 9 \times H$) **NOTE:** Plug the numbers in the Volume formula. $H = 2$ is an easy visual. **5.4G**
12. 32; 256; 96; 32 **5.3B; 5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 1.6; 1; 6.72; 2; 0.225; 3; 8.112; 3; 1.76; 2 **NOTE:** Require students to use arrows to count decimal places. **5.3E**



Learning Opportunity 49

Part 1 – Numeracy Development**TEKS**

- C – $2.1 \div 3 = 0.7$** ; **NOTE:** (physical example: 3 equal groups of 0.70 or 70 cents = \$2.10) **5.3F**
- 4.56; 25.2; 0.12 **5.3D**
- Check students' work. **NOTE:** Stress any decimal less than 1 multiplied by a whole number will be less than that number. **5.3I**
- D:** 0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.7; 0.8; 0.9; 1.1; 1.2; **PF/IF:** $\frac{9}{10}$; $\frac{1}{10}$; $\frac{2}{10}$; $\frac{3}{10}$; $\frac{4}{10}$; $\frac{5}{10}$; $\frac{6}{10}$; $\frac{7}{10}$; $\frac{8}{10}$; $\frac{9}{10}$; $\frac{10}{10}$; $\frac{11}{10}$; $\frac{12}{10}$ **MN:** $1\frac{9}{10}$; $1\frac{1}{10}$; $1\frac{2}{10}$ **4.3G; 5.3K**

Part 2 – Application Practice

- 41.0; 41.0 in large rectangle; 8.2 in circles; **5.3E**
- D – 17.5 liters**; (i.e. 2.5 liters x 7 = 17.5 liters) **5.3E**
- $2\frac{1}{3}$ (Mixed Number); $2\frac{1}{3} = \frac{7}{3}$ **4.3G**
- B – 0.04 seconds**; (i.e. $10.2 - 10.16 = 0.04$) **5.3K**
- 3 units**; (Volume = L x W x H); ($30 = 5 \times 2 \times H$); ($30 = 10 \times H$) **NOTE:** Plug the numbers in the Volume formula. **H = 3** is an easy visual. **5.4G**
- 80; 384; 64; 24 **5.3B; 5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 8; 60; $150 \div 50 = 3$; $210 \div 3 = 70$; **NOTE:** Students MUST know their math facts in 5th grade. **5.3A**

Learning Opportunity 50

Part 1 – Numeracy Development**TEKS**

- B – $3.5 \div 7 = 0.5$** ; **NOTE:** (physical example: 7 equal groups of 0.50 or 50 cents = \$3.50) **5.3F**
- First Column: Given; $\frac{16}{10}$; Second Column: $\frac{17}{10}$; $\frac{10}{10}$ **4.3G**
- Check students' work. **NOTE:** Stress any decimal less than 1 multiplied by a whole number will be less than that number. **5.3I**
- D:** 0.5; 0.6; 0.7; 0.8; 0.9; 1.1; 1.2; 1.3; 1.4; 1.5; 1.6; 1.7 **PF/IF:** $\frac{5}{10}$; $\frac{6}{10}$; $\frac{7}{10}$; $\frac{8}{10}$; $\frac{9}{10}$; $\frac{11}{10}$; $\frac{12}{10}$; $\frac{13}{10}$; $\frac{14}{10}$; $\frac{15}{10}$; $\frac{17}{10}$ **4.3G; 5.3K**
MN: $1\frac{9}{10}$; $1\frac{1}{10}$; $1\frac{2}{10}$; $1\frac{3}{10}$; $1\frac{4}{10}$; $1\frac{5}{10}$; $1\frac{6}{10}$; $1\frac{7}{10}$

Part 2 – Application Practice

- 82.8; 82.8 in large rectangle; 6.9 in circles; 12 in small rectangle **5.3E**
- YES**; **NOTE:** Stress this equality on fractional number lines. Otherwise, the MN, IF and D 'float' independently of one another. **4.3E; 4.3G**
- $1\frac{3}{4}$ (Mixed Number); $1\frac{3}{4} = \frac{7}{4}$ **4.3G**
- B – 21.35 meters**; (i.e. $71.2 - 49.85 = 21.35$) **5.3K**
- 6 units**; (Volume = L x W x H); ($120 = 5 \times 4 \times H$); ($120 = 20 \times H$) **NOTE:** Plug the numbers in the Volume formula. **H = 6** is an easy visual. **5.6B**
- 2; 12; 1; 2 **5.3B; 5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 5; 100; $180 \div 20 = 9$; $250 \div 5 = 50$; **NOTE:** Students MUST know their math facts in 5th grade. **5.3A**

Learning Opportunity 51

Part 1 – Numeracy Development**TEKS**

- 56 blocks (each $\frac{1}{100}$); Less than 1.4; $0.56 = \frac{56}{100}$ **5.3D**
- First Column: Given; $\frac{31}{10}$; Second Column: $\frac{19}{4}$; $\frac{24}{8}$ **4.3G**
- Check students' work. **NOTE:** Stress any decimal less than 1 multiplied by a whole number will be less than that number. **5.3I**
- 2; shade 2 out of 4; 6; shade 3 out of 4; shade 6 out of 8 **4.3C**
- 20; 28 **5.4C**

Part 2 – Application Practice

- B – $\frac{4}{7}$** (i.e. Prime numbers: 7, 3, 5 and 11 – 4 prime numbers over a total of 7 numbers = $\frac{4}{7}$) **4.3A; 5.4A**
- B – 36** (i.e. $1,620 \div 45 = 36$. Hence, there are 36 coins in every stack, not only the 5th stack) **5.4C**
- 60 blocks; (i.e. Volume = $5 \times 4 \times 3 = 60$ blocks) **5.4H**
- C – 70 m**; (i.e. 432 is changed to 420, and $420 \div 6 = 70$ meters) **5.3A**
- A S = 47 – (2 x 14)** **Note:** isosceles - - 'iso' equal...so, isosceles means 2 equal legs (of the triangle). **5.4B**
- 2.5; 2,000; 1.05; 2,500 **5.3B; 5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 2; 3; 5; 8; 12; 45; 100; BOTH products are 7 **NOTE:** It is highly recommended that the teacher stress that equivalent fractions are mathematically correct by the identity property. Hence, the student is really multiplying or dividing by 1 whole. For example, $\frac{2}{3} = \frac{6}{9}$ only because we are multiplying by 1 whole or equivalently, $\frac{3}{3}$. **4.3C; 5.3I**

Learning Opportunity 52

Part 1 – Numeracy Development

TEKS

- 80 blocks (each $\frac{1}{100}$); Less than 1.6; $0.80 = \frac{80}{100}$ **5.3D**
- First Column: $\frac{21}{4}$; $\frac{8}{5}$; Second Column: $\frac{43}{10}$; $\frac{63}{9}$ **4.3G**
- Common Multiples: 6, 12, 18, ... **LCM = 6** **NOTE:** Skill will be needed for fractions with unlike denominators. Practice, as needed. **4.3C**
- 4; shade 2 out of 4 and shade 4 out of 8; 8; shade 1 out of 2; shade 4 out of 8 **4.3C**
- 9; 21 **5.4C**

Part 2 – Application Practice

- C** – $\frac{5}{6}$ (i.e. Composite numbers: 6, 10, 4, 21 and 25 – 5 composite numbers over a total of 6 numbers = $\frac{5}{6}$) **4.3A; 5.4A**
- 30 cm³ (i.e. Volume = 5 cm x 2 cm x 3 cm = 30 cubic centimeters) **NOTE:** Stress units – cubic cm. Area = square cm. Perimeter = cm. **5.6B**
- $\frac{2}{5}$; (i.e. $\frac{5}{5} - (\frac{2}{5} + \frac{1}{5}) = \frac{2}{5}$) **NOTE:** Review as needed. Fractions must have same denominator to add and subtract, correctly. **4.3E**
- C** – **3.8 km**; (i.e. 5 km – 1.2 km = 3.8 km – **NOTE:** change 1,200 meters to 1.2 km) **5.3K**
- 228 Stars; (i.e. 19 x 12 = 12 x 19 = 228 stars) **5.3B**
- 5; 2.7; 1,500 **5.3B; 5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 6; 6; $\frac{2}{5}$; $\frac{6}{15}$; $\frac{6}{8}$; $\frac{3}{4}$; **1** **NOTE:** It is highly recommended that the teacher stress that equivalent fractions are mathematically correct by the identity property. Hence, the student is really multiplying or dividing by 1 whole. For example, $\frac{2}{3} = \frac{6}{9}$ only because we are multiplying by 1 whole or equivalently, $\frac{2}{3}$. **4.3C; 5.3I**

Learning Opportunity 53

Part 1 – Numeracy Development

TEKS

- 84 blocks (each $\frac{1}{100}$); Less than 1.2; $0.84 = \frac{84}{100}$ **5.3D**
- First Column: $\frac{3}{1}$; $\frac{37}{5}$; Second Column: $\frac{19}{10}$; $\frac{26}{8}$ **4.3G**
- Common Multiples: 4, 8, 12, 16, ... **LCM = 4** **NOTE:** Skill will be needed for fractions with unlike denominators. Practice, as needed. **4.3C**
- 6; shade 1 out of 2 and shade 2 out of 6; 8; shade 8 out of 10; shade 4 out of 5 **4.3C**
- Rule = 7; $y = 7(x)$ - Multiplicative Table. **5.4C**

Part 2 – Application Practice

- Label the number line: $\frac{1}{7}$, $\frac{2}{7}$, $\frac{3}{7}$, $\frac{4}{7}$, $\frac{5}{7}$, $\frac{6}{7}$; Draw arrows or shade $\frac{3}{7}$, and $\frac{2}{7}$, for a total of $\frac{5}{7}$ **4.3B**
- 3** units; (Volume = L x W x H); (36 = 6 x 2 x H); (36 = 12 x H) **NOTE:** Plug the numbers in the Volume formula. **H = 3** is an easy visual. **5.4H**
- $\frac{3}{8}$; (i.e. $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$) **NOTE:** Practice as needed; Students should count the double hatch blocks – 3 of 8 total. **5.3I**
- C** – $\frac{3}{8}$; (i.e. $1 = \frac{8}{8} - \frac{5}{8} = \frac{3}{8}$) **4.3E**
- 544 ft² (i.e. 16 x 34 = 34 x 16 = 544) **NOTE:** Recommend stressing area versus volume in units (cubic feet versus square feet) . **5.3B**
- 200; 3; 1.5 **5.3B; 5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: $\frac{7}{2}$; $\frac{28}{8}$; $\frac{8}{8}$; $\frac{16}{16}$; $\frac{12}{3}$; $\frac{4}{1}$ **1**; **NOTE:** Students are actually multiplying/dividing by 1 for equivalent fractions. **4.3C**

Learning Opportunity 54

Part 1 – Numeracy Development

TEKS

- First Column: 6; 25; Second Column: 4; 4 **4.3C**
- First Column: $\frac{6}{1}$; $\frac{29}{5}$; Second Column: $\frac{20}{10}$; $\frac{22}{8}$ **4.3G**
- Common Multiples: 12, 24, ... **LCM = 12** **NOTE:** Skill will be needed for fractions with unlike denominators. Practice, as needed. **4.3C**
- First Column: $\frac{6}{12}$; $\frac{2}{10}$; Second Column: $\frac{8}{6}$; $\frac{7}{4}$ **5.3I**
- 212; 0.21; 4.6 **5.3C; 5.3G**
- Rule = 4; $y = 4(x)$ - Multiplicative Table. **5.4C**

Part 2 – Application Practice

- y:** 1, 3, 5, 6, 9, 11; Check student graphing work for accuracy. The dots should be a straight linear equation of $y = x + 1$ **5.8A; 5.8C**
- W = 2 meters; (i.e. Volume = 80 = 10 x 4 x W = 80 = 40 x W and W = 2) **5.6B**
- $\frac{6}{12}$; (i.e. $\frac{2}{3} \times \frac{3}{4} = \frac{3}{8}$) **NOTE:** Practice as needed; Students should count the double hatch blocks – 6 of 12 total. **5.3I**
- $\frac{3}{9}$; (i.e. $1 = \frac{9}{9} - (\frac{4}{9} + \frac{2}{9})$) **4.3E**
- 600; 4.8 **5.3B; 5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: **A.** $\frac{6}{5}$; $\frac{5}{5}$; $\frac{11}{10}$; $\frac{9}{1}$; $\frac{9}{4}$; **B.** 2; 6; 10; 6; 16; 10; 60; 50; 500 **4.3C; 4.3G**

Learning Opportunity 55

Part 1 – Numeracy Development

TEKS

1. First Column: 10; 25; Second Column: 3; 5 **4.3C**
2. First Column: $\frac{8}{1}$; $\frac{8}{3}$; Second Column: $\frac{81}{10}$; $\frac{37}{8}$ **NOTE:** Stress whole number improper fractions: e.g. $8 = \frac{8}{1}$ **4.3G**
3. 0.6; 0.55; 0.95 **5.3K**
4. **4:** 4, 8, 12, 20, 24; **6:** 0, 12, 18, 24, 32; Common Multiples: 12 and 24; **LCM or LCD = 12** **4.3C**
5. First Column: $\frac{4}{10}$; $\frac{6}{21}$; Second Column: $\frac{8}{6}$; $\frac{15}{4}$ **5.3I**
6. 105; 0.5; 0.25 **NOTE:** Stress that zeroes can be added after the decimal point – fraction to decimal of $\frac{1}{2}$ and $\frac{1}{4}$ **5.3C; 5.3G**

Part 2 – Application Practice

7. **y = 0, 2, 4, 5, 7, 9** Plot x,y coordinates of $y = x - 2$; **NOTE:** 'x' – walk to the elevator; 'y' take the elevator up **5.8A; 5.8C**
8. **B = $\frac{8}{9}$** (i.e. $\frac{2}{9} + \frac{6}{9} = \frac{8}{9}$) **NOTE:** Stress that the denominator must be the same for both fractions to add. **4.3E**
9. $\frac{2}{12}$; (i.e. $\frac{2}{4} \times \frac{1}{3} = \frac{2}{12}$) **NOTE:** Practice as needed; Students should count the double hatch blocks – 2 of 12 total **5.3I**
10. $\frac{2}{8}$; (i.e. $\frac{1}{8} + \frac{5}{8} = \frac{6}{8}$; then $\frac{8}{8} - \frac{6}{8} = \frac{2}{8}$) Students can use the number line to count eighths. Stress $1 = \frac{8}{8}$ **4.3E**
11. 325; 1.2; **5.3B; 5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Given: $9 \div 2$; $4 \frac{1}{2}$; $\frac{9}{2} = 4 \frac{1}{2}$ **NOTE:** Roll to the Right. Stress only the Mixed Number quotient not the decimal **4.3G; 5.3C** quotient. Practice a couple examples per day so students realize the remainder (1) becomes the numerator and the divisor (2) is the denominator in the mixed number: $4 \frac{1}{2}$

Learning Opportunity 56

Part 1 – Numeracy Development

TEKS

1. 6; 4; **4.3C**
2. $\frac{20}{3}$; $\frac{28}{7}$; **NOTE:** Stress whole number improper fractions: e.g. $7 = \frac{7}{1}$ **4.3G**
3. 4.6; 2.2; **5.3K**
4. **5:** 5, 10, 15, 20, 25; 30 **6:** 0, 12, 18, 24, 30, 36; **LCM or LCD = 30** **4.3C**
5. Given; 0; 1; 0; 1 **4.3F**
6. First Column: $\frac{14}{14}$; $\frac{18}{5}$; **5.3I**
7. 0.25; 0.2; 0.5; 0.125 **NOTE:** Stress that zeroes can be added after the decimal point **5.3G**

Part 2 – Application Practice

8. **y = 0, 2, 4, 6, 10, 12** Plot x,y coordinates of $y = 2(x)$; **NOTE:** 'x' – walk to the elevator; 'y' take the elevator up **5.8A; 5.8C**
9. **D = $\frac{6}{9}$** (i.e. $\frac{8}{9} - \frac{2}{9} = \frac{6}{9}$) **NOTE:** Stress that the denominator must be the same for both fractions to add. **4.3E**
10. $\frac{54}{8}$; (i.e. $\frac{9}{4} \times \frac{6}{2} = \frac{54}{8}$) **NOTE:** Practice as needed; 1 or 2 computations per day for 5 days. **5.3I**
11. **B = 0.9 lbs.;** (i.e. $7.2 \div 8 = 0.9$) **5.3K**
12. 40; 90; 32; **5.3B; 5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: $4 \div 3$; $1 \frac{1}{3}$; $\frac{4}{3} = 1 \frac{1}{3}$; $17 \div 5$; $3 \frac{2}{5}$; $\frac{17}{5} = 3 \frac{2}{5}$ **NOTE:** Roll fraction to the Right to divide. **4.3G; 5.3C**

Learning Opportunity 57

Part 1 – Numeracy Development

TEKS

1. 28; 3; **4.3C**
2. $\frac{4}{1}$; $\frac{21}{8}$; **NOTE:** Stress whole number improper fractions: e.g. $4 = \frac{4}{1}$ **4.3G**
3. $0.601 < 0.7$; $0.05 < 0.5$; **5.2B**
4. **4:** 0, 4, 8, 12, 16, 20; 24 **5:** 0, 5, 10, 15, 20, 25; 30 **LCM or LCD = 20** **4.3C**
5. 0; $\frac{1}{2}$; 0; $\frac{1}{2}$; 1 **4.3F**
6. First Column: $\frac{48}{2}$; $\frac{3}{12}$; **5.3I**
7. 0.25; 0.2; 0.5; 0.125 **NOTE:** Stress that zeroes can be added after the decimal point **5.3G**

Part 2 – Application Practice

8. **y = 2, 4, 7, 8, 10, 12** Plot x,y coordinates of $y = x + 2$; **NOTE:** 'x' – walk to the elevator; 'y' take the elevator up **5.8A; 5.8C**
9. Check students' work. **NOTE:** This pictorial is shown in the Reflection and Conceptual Understanding section **4.3C; 4.3G**
10. $\frac{28}{2}$; (i.e. $\frac{7}{2} \times \frac{4}{1} = \frac{28}{2}$) **NOTE:** Practice as needed; 1 or 2 computations per day for 5 days. **5.3I**
11. **B = 6 cages.;** (i.e. $28 \div 5 = 5 \text{ R } 3$) **NOTE:** 5 cages, but 3 extra birds in last cage for 6 total cages required for 28 birds. **5.3C**
12. 70; 116; 1,000; **5.3B; 5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: $3 \div 2$; $1 \frac{1}{2}$; $\frac{3}{2} = 1 \frac{1}{2}$; $8 \div 5$; $1 \frac{3}{5}$; $\frac{8}{5} = 1 \frac{3}{5}$ **NOTE:** Roll fraction to the Right to divide. **4.3G; 5.3C**



Learning Opportunity 58

Part 1 – Numeracy Development

TEKS

- $\frac{9}{2} = 4 \frac{1}{2}$; $\frac{5}{3} = 1 \frac{2}{3}$ **NOTE:** These skills take practice to master. One per day until students are proficient. **4.3G; 5.3C**
- 21,369 **NOTE:** Review as needed. **5.3B**
- 0.2; 0.5; 0.125 **5.3F**
- 0; 1; $\frac{1}{2}$; 1; 0 **4.3G**
- 0; 1; $\frac{1}{2}$; 1; 0 **4.3F**

Part 2 – Application Practice

- Label the number line (fourths – four equal spaces); $\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$ **4.3E**
- $V = 36$ cubic units (i.e. $3 \times 4 \times 3 = 36$) **5.4G**
- $\frac{34}{3}$; (i.e. $\frac{17}{3} \times 2 \frac{1}{3} = \frac{34}{3}$) **NOTE:** Practice as needed **5.3I**
- $\frac{3}{8}$; (i.e. $\frac{8}{8} - \frac{5}{8} = \frac{3}{8}$); Students can use the number line to count eighths. Stress $1 = \frac{8}{8}$ **4.3E**
- \$12.60; (i.e. $3.15 \times 4 = 12.60$) **5.3E**
- 9,000; 3,600; 5,420; **5.3B; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Given; Given; Additive; Multiplicative; Additive **NOTE:** Students should recognize paired relationship as either x or +. **5.4D**

Learning Opportunity 59

Part 1 – Numeracy Development

TEKS

- Given; $\frac{9}{5} = 1 \frac{4}{5}$; $1 \frac{1}{2} = 5 \frac{1}{2}$ **NOTE:** These skills take practice to master. One per day until students are proficient. **4.3G; 5.3C**
- $0.35 = \frac{35}{100}$ **NOTE:** Review as needed. **5.3E**
- 0.1; 0.25 **5.3F**
- $\frac{1}{2}$; 0; 0; 1; 1 **4.3G**
- 0; 1; 1; $\frac{1}{2}$; $\frac{1}{2}$ **4.3F**
- List out multiples of 2 and 4: **2:** 0, 2, 4, 6, 8, 10, 12, 15, 18... **4:** 0, 2, 4, 6, 8, 10, 12, 14, 16... **LCM = 4** **4.3C**

Part 2 – Application Practice

- $y = 12, 10, 7, 6, 4, 2$ Plot x,y coordinates of $y = 12 - x$; **NOTE:** 'x' – walk to the elevator; 'y' take the elevator up **5.8A; 5.8C**
- $V = 36$ cubic units (i.e. $3 \times 4 \times 2 = 24$ PLUS $2 \times 2 \times 3 = 12$... **$24 + 12 = 36$**) **5.4G**
- $\frac{99}{8}$; (i.e. $1 \frac{1}{2} \times \frac{9}{4} = \frac{99}{8}$) **NOTE:** Practice as needed **5.3I**
- 573.4 km; (i.e. $1,146.8 \div 2 = 573.4$) **5.3G**
- 7,500; 2,000; 9,140; **5.3B; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Multiplicative; Additive; Additive; Multiplicative; Multiplicative (x1)/Additive (+0) – either works **5.4D**

Learning Opportunity 60

Part 1 – Numeracy Development

TEKS

- $\frac{9}{8} = 1 \frac{1}{8}$; $\frac{17}{7} = 2 \frac{3}{7}$ **NOTE:** These skills take practice to master. One per day until students are proficient. **4.3G; 5.3C**
- 18.5 **NOTE:** Review as needed. **5.3E**
- $\frac{12}{15}$ **5.3I**
- 0.2; 0.125 **5.3F**
- Given; 7; 9; 2; 6 **5.2C**
- $\frac{1}{2}$; $\frac{1}{2}$; 0; $\frac{1}{2}$; 0 **4.3F**
- List out multiples of 2 and 3: **2:** 0, 2, 4, 6, 8, 10, 12, 15, 18... **3:** 0, 3, 6, 9, 12, 15, 18, 21, 24... **LCM = 6** **4.3C**

Part 2 – Application Practice

- LCM/LCD = 6;** $\frac{1}{2} = \frac{3}{6}$; $\frac{1}{3} = \frac{2}{6}$; $\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$; Check students' work on shading – $\frac{2}{6}$ shaded, $\frac{3}{6}$ shaded, $\frac{5}{6}$ shaded. **5.3H**
- $V = 42$ cubic units (i.e. $5 \times 3 \times 2 = 30$ PLUS $2 \times 3 \times 2 = 12$... **$30 + 12 = 42$**) **5.4G**
- C – 2.505 kL;** (i.e. $250.5 \times 10 = 2,505$ L) $2,505 \text{ L} \div 1,000 = 2.505 \text{ L}$ **NOTE:** Practice as needed **5.3B; 5.7**
- 11.43 miles; (i.e. $22.1 - 10.67 = 11.43$) **5.3K**
- 8; 2.5; 10.1; **5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: A1.) fifths **A2.)** thirds **B1.)** $\frac{3}{100}$ **B2.)** $4 \frac{7}{10}$ **4.3B; 5.2A**

Learning Opportunity 61

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. $\frac{7}{2} = 3 \frac{1}{2}$; $\frac{13}{8} = 1 \frac{5}{8}$ NOTE: These skills take practice to master. One per day until students are proficient.	4.3G; 5.3C
2. $\frac{1}{3} > \frac{1}{4}$; or $\frac{4}{12} > \frac{3}{12}$ NOTE: These skills take practice to master. One per day until students are proficient	4.3C
3. 0.75 NOTE: These problems are designed to assist students in converting the fraction $\frac{3}{4}$ to a decimal.	5.3G
4. 3; 6; 10; 1;	5.3F
5. $1\frac{1}{5} \times \frac{5}{3} = \frac{55}{15}$	5.3I
6. Given; 7; 5; 4;	4.3G
<u>Part 2 – Application Practice</u>	
7. LCM/LCD = 8; $\frac{1}{2} = \frac{4}{8}$; $\frac{1}{8} = \frac{1}{8}$; $\frac{4}{8} + \frac{1}{8} = \frac{5}{8}$; Check students' work on shading – $\frac{4}{8}$ shaded, $\frac{1}{8}$ shaded, $\frac{5}{8}$ shaded.	5.3H
8. V = 48 cubic units (i.e. $5 \times 2 \times 3 = 30$ PLUS $2 \times 3 \times 3 = 18$) Hence, $30 + 18 = 48$ units ³	5.4G
9. A = 5.38 liters (i.e. $1.5 + 1.3 + 2.58 = 5.38$); NOTE: Students MUST be reminded to line-up decimal points when adding/subtracting	5.3K
10. T = 10; P = 1; T + P = 11	5.4F
11. 1.25; 3.9; 15;	5.3B; 5.7
<u>Part 3 – Reflection and Conceptual Understanding</u>	
Student Answer: A1.) halves A2.) fourths B1.) $\frac{509}{1,000}$ B2.) $9 \frac{6}{100}$	4.3B; 5.2A

Learning Opportunity 62

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. $\frac{16}{8} = 2 \frac{0}{8} = 2$; NOTE: These skills take practice to master. One per day until students are proficient.	4.3G; 5.3C
2. $\frac{2}{3} < \frac{3}{4}$; or $\frac{8}{12} < \frac{9}{12}$ NOTE: These skills take practice to master. One per day until students are proficient	4.3C
3. 0.90; 2.5; 0.75	5.3G
4. 10; 8; 2;	5.3F
5. 26; 40; 66;	5.4F
6. $1\frac{1}{5} \times \frac{8}{1} = \frac{88}{5}$	5.3I
7. 3; 5; 9;	4.3G
<u>Part 2 – Application Practice</u>	
8. LCM/LCD = 8; $\frac{3}{4} = \frac{6}{8}$; $\frac{1}{8} = \frac{1}{8}$; $\frac{6}{8} - \frac{1}{8} = \frac{5}{8}$; Check students' work on shading – $\frac{6}{8}$ shaded, $\frac{1}{8}$ shaded, $\frac{5}{8}$ shaded.	5.3H
9. $y = 26$; 36 NO , this pattern is multiplicative, not additive.	5.4C
10. D – W = (11 x 12) + 6	5.4B
11. V = 100 cubic units (i.e. $20 \times 5 = 100$) NOTE: Stress with students the base is L x W = Area.	5.6B
12. $0.5 = \frac{1}{2}$; $1.5 = 1 \frac{1}{2}$; 4;	5.3C; 5.7
<u>Part 3 – Reflection and Conceptual Understanding</u>	
Student Answer: Given; 0.1; Shade 1 of 10; 0.5; Shade 2 of 4; 0.2; Shade 1 of 5	5.3C; 5.3F; 5.3G

Learning Opportunity 63

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. $\frac{23}{7} = 3 \frac{2}{7}$; NOTE: These skills take practice to master. One per day until students are proficient.	4.3G; 5.3C
2. $\frac{3}{5} < \frac{4}{6}$; or $\frac{18}{30} < \frac{20}{30}$ NOTE: These skills take practice to master. One per day until students are proficient.	4.3C
3. 34	5.3C
4. $\frac{5}{2} \times \frac{17}{3} = \frac{85}{6}$	5.3I
5. 5; 2; 3; 3	4.3G
6. $\frac{12}{3} = 4$; 4; NOTE: There are 4 dots in $\frac{2}{3}$ of 6. Stress that a fraction less than 1 times a whole number (WN) is less than the W.N.	5.3I
7. $(5 \times \frac{1}{100}) + (8 \times \frac{1}{1,000})$; 0.405 = (4 x $\frac{1}{10}$) + (0 x $\frac{1}{100}$) + (5 x $\frac{1}{1000}$)	5.2A
<u>Part 2 – Application Practice</u>	
8. LCM/LCD = 10; $\frac{3}{5} = \frac{6}{10}$; $\frac{1}{2} = \frac{5}{10}$; $\frac{3}{5} - \frac{1}{2} = \frac{1}{10}$; Check students' work on shading – $\frac{6}{10}$ shaded, $\frac{5}{10}$ shaded, $\frac{1}{10}$ shaded.	5.3H
9. Check students' work; NOTE: Show students how the decimal moves 10 times more/less one PV to the right or the left.	5.3C
10. B – D = 3.14 + (3 x 2.46) NOTE: Practice as needed	5.4B
11. V = 60 m ³ (i.e. $10 \times 6 = 60$) NOTE: Stress with students the base is L x W = Area.	5.6B
12. 0.75; 2.3; 8.5;	5.3C; 5.7
<u>Part 3 – Reflection and Conceptual Understanding</u>	
Student Answer: 0.5; Shade 1 of 2; 0.4; Shade 4 of 10; 0.75; Shade 3 of 4; 0.6; Shade 3 of 5	5.3C; 5.3F; 5.3G

Learning Opportunity 64

Part 1 – Numeracy Development

TEKS

- D** – 0.5, 0.6, 0.7, 0.8, 0.9, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7; **PF** – $\frac{5}{10}$; $\frac{6}{10}$; $\frac{7}{10}$; $\frac{8}{10}$; $\frac{9}{10}$; **IF** – $\frac{11}{10}$, $\frac{12}{10}$, $\frac{13}{10}$, $\frac{14}{10}$, $\frac{15}{10}$, $\frac{16}{10}$, $\frac{17}{10}$; **4.3E; 5.3C**
- 12.79** = $(1 \times 10) + (2 \times 1) + (7 \times \frac{1}{10}) + (9 \times \frac{1}{100})$; **234.5** = $(2 \times 100) + (3 \times 10) + (4 \times 1) + (5 \times \frac{1}{10})$; **0.701** = $(7 \times \frac{1}{10}) + (0 \times \frac{1}{100}) + (1 \times \frac{1}{1,000})$; **5.2A**
- $\frac{4}{2} = 2$; 2 dots in one of the two groups. **NOTE:** $4 \div 2 = 2$; Stress a fraction is a division problem – *“Roll to the Right.”* **5.3I**

Part 2 – Application Practice

- B – E** = $\frac{8}{12} + \frac{3}{12}$; $\frac{2}{3} = \frac{8}{12}$; $\frac{1}{4} = \frac{3}{12}$; $\frac{2}{3} + \frac{1}{4} = \frac{11}{12}$; LCD = 12; **NOTE:** Practice the LCD and one problem a day until mastered. **5.3H**
- Check students' work; **NOTE:** Show students how the decimal moves 10 times more/less one PV to the right or the left. **4.2A**
- P = 50 m** (i.e. $2(10 + (12 + 3)) = 50$); **A = 150 m²** ($10 \times (12 + 3)) = 150$ **NOTE:** Focus on units of P and A compared to Volume (m³) **5.4H**
- Pt. **A:** (0, 6); Pt. **B:** (4, 5); Pt. **C:** (5, 1); Pt. **D:** (7, 0); **NOTE: X:** *“Walk to the Elevator”* **Y:** *“Ride the Elevator Up”* **5.8B**
- $\frac{3}{4} < \frac{5}{6}$; LCD = 12; $\frac{3}{4} = \frac{9}{12}$ and $\frac{5}{6} = \frac{10}{12}$; **NOTE:** Practice LCD and equivalent fractions, as needed. **4.3C**
- 2,000; 500; 3,200; **5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 0.8; Shade 4 of 5; 0.5; Shade 5 of 10; 0.25; Shade 1 of 4; 0.4; Shade 2 of 5 **5.3C; 5.3F; 5.3G**

Learning Opportunity 65

Part 1 – Numeracy Development

TEKS

- D** – 0.2, 0.4, 0.6, 0.8, 1.2, 1.4, 1.6, 1.8; 2.2; 2.4 **PF** – $\frac{0}{5}$; $\frac{1}{5}$; $\frac{2}{5}$; $\frac{3}{5}$; $\frac{4}{5}$; **IF** – $\frac{5}{5}$, $\frac{6}{5}$, $\frac{7}{5}$, $\frac{8}{5}$, $\frac{9}{5}$, $\frac{10}{5}$, $\frac{11}{5}$, $\frac{12}{5}$; **4.3E; 5.3C**
- 46.8** = $(4 \times 10) + (6 \times 1) + (8 \times \frac{1}{10})$; **74.59** = $(7 \times 10) + (4 \times 1) + (5 \times \frac{1}{10}) + (9 \times \frac{1}{100})$; **3.456** = $(3 \times 1) + (4 \times \frac{1}{10}) + (5 \times \frac{1}{100}) + (6 \times \frac{1}{1,000})$; **5.2A**
- $\frac{9}{3} = 3$; 3 dots in one of the two groups. **NOTE:** $9 \div 3 = 3$; Stress a fraction is a division problem – *“Roll to the Right.”* **5.3I**

Part 2 – Application Practice

- A** – $\frac{11}{15}$; $\frac{2}{5} = \frac{6}{15}$; $\frac{1}{3} = \frac{5}{15}$; $\frac{2}{5} + \frac{1}{3} = \frac{11}{15}$; LCD = 15; **NOTE:** Practice the LCD and one problem a day until mastered. **5.3H**
- Check students' work; **NOTE:** Show students how the decimal moves 10 times more/less one PV to the right or the left. **4.2A**
- B – 24 boxes** (i.e. $4 \times 3 \times 2 = 24$) **NOTE:** This is an (obvious) volume problem without asking for the specific geometric name. **5.4G**
- Pt. **R:** (4, 7); Pt. **A:** (6, 3); Pt. **M:** (2, 0); Pt. **E:** (0, 3); **NOTE: X:** *“Walk to the Elevator”* **Y:** *“Ride the Elevator Up”* **5.8B**
- C – 39.27 oz;** (i.e. $5.1 \times 7.7 = 39.27$) **NOTE:** Line-up decimals when adding/subtracting and counting when multiplying. **5.3D**
- 5,000; 750; 8,600; **5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 0.2; Shade 1 of 5; 0.7; Shade 7 of 10; 0.25; Shade 1 of 4; 1.0; Shade 5 of 5 **5.3C; 5.3F; 5.3G**

Learning Opportunity 66

Part 1 – Numeracy Development

TEKS

- D** – 0.25, 0.5, 0.75, 1.25, 1.5, 1.75, 2.25, 2.5, 2.75; **PF** – $\frac{0}{4}$; $\frac{1}{4}$; $\frac{2}{4}$; $\frac{3}{4}$; **IF** – $\frac{4}{4}$, $\frac{5}{4}$, $\frac{6}{4}$, $\frac{7}{4}$, $\frac{8}{4}$, $\frac{9}{4}$, $\frac{10}{4}$, $\frac{11}{4}$, $\frac{12}{4}$; **4.3E; 5.3C**
- $\frac{8}{4}$, 2; $\frac{10}{5}$, 2 **NOTE:** $10 \div 2 = 5$; Stress a fraction is a division problem – *“Roll to the Right.”* **5.3I**
- $\frac{6}{30}$; $\frac{5}{18}$; **5.3I**
- $\frac{3}{5}$; $\frac{1}{12}$; **5.3H**
- Check students' work, and **STRESS that any decimal or fraction < than 1 multiplied by number > 1 is always < than that number.** **4.2A**

Part 2 – Application Practice

- C – $\frac{1}{10}$ hour;** $\frac{7}{10} = \frac{7}{10}$; $\frac{4}{5} = \frac{8}{10}$; $\frac{8}{10} - \frac{7}{10} = \frac{1}{10}$; LCD = 10; **NOTE:** Practice the LCD and one problem a day until mastered. **5.3H**
- Check students' work; **NOTE:** Show students how the decimal moves 10 times more/less one PV to the right or the left. **4.2A**
- B – \$51.00** (i.e. $4.25 \times 4 = 17.0$ kg. then, $\$3 \times 17 = \51.00) **5.3D**
- Pt. **E:** (0, 7); Pt. **A:** (0, 3); Pt. **S:** (2, 0); Pt. **Y:** (6, 0); **NOTE: X:** *“Walk to the Elevator”* **Y:** *“Ride the Elevator Up”* **5.8G**
- B – 2 apples** (i.e. $\frac{1}{5} \times 10 = \frac{10}{5} = 2$) **NOTE:** ‘Of’ means multiply. Example $\frac{1}{2}$ of 12 means $\frac{1}{2} \times 12$ – Stress to students. **5.3I**
- 5,000; 500; 50,000; **5.3C; 5.7**

Part 3 – Reflection and Conceptual Understanding

Student Answer: 0.6; Shade 3 of 5; 0.9; Shade 9 of 10; 0.75; Shade 3 of 4; 0.125; Shade 1 of 8 **5.3C; 5.3F; 5.3G**

Learning Opportunity 67

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. D – 0.5, 1.5, 2.5, 3.5, 4.5, 5.5; PF – $\frac{0}{2}; \frac{1}{2}$; IF – $\frac{2}{2}, \frac{3}{2}, \frac{4}{2}, \frac{5}{2}, \frac{6}{2}, \frac{7}{2}, \frac{8}{2}, \frac{9}{2}, \frac{10}{2}, \frac{11}{2}, \frac{12}{2}$;	4.3E; 5.3C
2. $\frac{24}{4} = 6$; $\frac{30}{5} = 6$ NOTE: $30 \div 5 = 6$; Stress a fraction is a division problem – “Roll to the Right.”	5.3I
3. $\frac{5}{6}$; $\frac{24}{21}$;	5.3I
4. $\frac{8}{6}$; $\frac{1}{8}$;	5.3H
5. Check students' work, and STRESS that any decimal or fraction < than 1 multiplied by number > 1 is always < than that number.	4.2A
<u>Part 2 – Application Practice</u>	
6. $1 \frac{1}{2} = \frac{3}{2}$; $2 \frac{1}{3} = \frac{7}{3}$; LCD = 6; $\frac{3}{2} + \frac{7}{3} = \frac{9}{6} + \frac{14}{6} = \frac{23}{6}$ NOTE: One problem a day until mastered.	5.3H
7. Check students' work; NOTE: Show students how the decimal moves 10 times more/less one PV to the right or the left.	4.2A
8. C – 45 cars (i.e. $179 \div 4 = 44$ R3; hence, 44 cars with 4 people and 1 car with 3 people = 45 cars)	5.3C
9. C – 20 people (i.e. $\frac{2}{5} \times \frac{25}{1} = \frac{100}{5} = 20$) NOTE: 'Of' means multiply. Example $\frac{1}{2}$ of 12 means $\frac{1}{2} \times 12$ – Stress to students.	5.3I
10. 3,200; 750; 10,000;	5.3B; 5.7
<u>Part 3 – Reflection and Conceptual Understanding</u>	
Student Answer: 0.4; 0.4; $1 \frac{3}{5}$; $2 \frac{1}{2}$ NOTE: An improper fraction can also equal a decimal	5.3F; 5.3G

Learning Opportunity 68

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. D – 0.25, 0.5, 0.75, 1.25, 1.5, 1.75, 2.25, 2.5, 2.75; PF – $\frac{0}{4}; \frac{1}{4}; \frac{2}{4}; \frac{3}{4}$; IF – $\frac{4}{4}, \frac{5}{4}, \frac{6}{4}, \frac{7}{4}, \frac{8}{4}, \frac{9}{4}, \frac{10}{4}, \frac{11}{4}, \frac{12}{4}$;	4.3E; 5.3C
2. $\frac{16}{2} = 8$; $\frac{42}{7} = 6$ NOTE: $42 \div 7 = 6$; Stress a fraction is a division problem – “Roll to the Right.”	5.3I
3. $2 \frac{1}{2} = \frac{5}{2}$; $1 \frac{2}{3} = \frac{5}{3}$; $\frac{5}{2} \times \frac{5}{3} = \frac{25}{6}$	5.3I
4. 8.4; $\frac{2}{9}$	5.3H; 5.3K
5. PT. A -- $0.75 = \frac{3}{4}$; PT. A -- $2.25 = \frac{9}{4}$; NOTE: Students must understand the number line means these entities are equal.	4.3D
<u>Part 2 – Application Practice</u>	
6. $3 \frac{1}{3} = \frac{10}{3}$; $4 \frac{0}{4} = \frac{16}{4}$; LCD = 12; $\frac{10}{3} + \frac{16}{4} = \frac{40}{12} + \frac{48}{12} = \frac{88}{12}$ NOTE: One problem a day until mastered.	5.3H
7. C – $\frac{5}{7}$ (i.e. 7 total numbers; Composite Numbers: 15, 25, 16, 21, 33; Fraction = $\frac{5}{7}$)	3.3A; 5.4A
8. A – 141.4oz. [i.e. $(14.8 \times 8) + (4.6 \times 5) = 141.4$ ounces]	5.3E
9. C – $\frac{1}{16}$ [i.e. $\frac{9}{16} - (\frac{1}{2} = \frac{8}{16}) = \frac{1}{16}$]	5.3H
10. 7,000; 250; 9,342;	5.3B; 5.7
<u>Part 3 – Reflection and Conceptual Understanding</u>	
Student Answer: 0.25; 0.5; $2 \frac{0}{5} = 2$; $1 \frac{3}{4}$ NOTE: An improper fraction can also equal a decimal.	5.3F; 5.3G

Learning Opportunity 69

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. D – 0.2, 0.4, 0.6, 0.8, 1.2, 1.4, 1.6, 1.8; 2.2; 2.4 PF – $\frac{0}{5}; \frac{1}{5}; \frac{2}{5}; \frac{3}{5}; \frac{4}{5}$; IF – $\frac{5}{5}, \frac{6}{5}, \frac{7}{5}, \frac{8}{5}, \frac{9}{5}, \frac{10}{5}, \frac{11}{5}, \frac{12}{5}$;	4.3E; 5.3C
2. $\frac{42}{7}$; 6; $\frac{90}{9}$; 10 NOTE: $90 \div 10 = 9$; Stress a fraction is a division problem – “Roll to the Right.”	5.3I
3. 1.7; 5.5; 0.2;	5.3K
4. 6; 4; 25;	5.4F
5. PT. A -- $0.6 = \frac{3}{5}$; PT. A -- $1.8 = \frac{9}{5}$; NOTE: Students must understand the number line means these entities are equal.	4.3D
<u>Part 2 – Application Practice</u>	
6. $2 \frac{2}{4} = \frac{10}{4}$; $5 \frac{1}{6} = \frac{31}{6}$; LCD = 12; $\frac{10}{4} + \frac{31}{6} = \frac{30}{12} + \frac{62}{12} = \frac{92}{12}$ NOTE: One problem a day until mastered.	5.3H
7. 1,440; (i.e. $32 \times 45 = 1,440$); Composite; NOTE: Use divisibility rules - it is an even number – must have > 2 factors.	5.4A; 5.4B
8. 1,515.82 miles; $(663.9 + 554.92 + 297 = 1,515.82)$ NOTE: Stress must line-up decimal points when adding or subtracting.	5.3K
9. B – 10 apples (i.e. $\frac{2}{3} \times \frac{30}{1} = \frac{60}{3} = 20$, so $30 - 20 = 10$) NOTE: Or, if the students are capable: $\frac{1}{3} \times 30 = 10$ apples.	5.3I
10. 48 m^3 ; (i.e. $8 \text{ m} \times 2 \text{ m} \times 3 \text{ m} = 48 \text{ m}^3$)	5.4H
<u>Part 3 – Reflection and Conceptual Understanding</u>	
Student Answer: 0.5; 0.8; $2 \frac{3}{7}$; 1; NOTE: An improper fraction can also equal a decimal.	5.3C; 5.3G

Learning Opportunity 70

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. B – $0.4 \div 2 = 0.20$	5.3F
2. $\frac{2}{3}$; $\frac{1}{2}$; $\frac{2}{3} \times \frac{1}{2} = \frac{2}{6}$	5.3I
3. 8.1; 2.2; 5.9	5.3K
4. 105	5.3C
5. $1\frac{1}{4} = \frac{5}{4}$; $3\frac{1}{2} = \frac{7}{2}$; LCD = 4; $\frac{5}{4} + \frac{7}{2} = \frac{5}{4} + \frac{14}{4} = \frac{19}{4}$	5.3H
6. 20: (1, 2, 4, 5, 10, 20); C; 21: (1, 3, 7, 21) C; 23: (1, 23) P NOTE: Review the Compression Method, as needed	4.4A; 5.4A
7. Given; $8 + 0 + 0.09$; $+ 0.005$; $2,000 + 0 + 30 + 2 + 0.4$	5.2A
Part 2 – Application Practice	
8. 4; 12; $\frac{4}{4} = 1$	5.4F
9. 725; (i.e. $1,234 - 509 = 725$); Composite number NOTE: Divisibility Rule of 5 – More than 2 factors – Composite	4.4A; 5.4A
10. B – $\frac{48}{10}$ (i.e. $3\frac{1}{5} \times 1\frac{1}{2} = \frac{16}{5} \times \frac{3}{2} = \frac{48}{10}$)	5.3I
11. C: (7, 6); NOTE: X: "Walk to the Elevator" Y: "Ride the Elevator Up"	5.8C
12. D – 12; ($\frac{6}{10} \times 20 = \frac{120}{10} = 12$)	5.3I
13. B – 160 ft³; (i.e. $(10 \times 4 \times 3) + (10 \times 2 \times 2) = 160$)	5.4A
Part 3 – Reflection and Conceptual Understanding	
Student Answer: Given; IT; ST; ST; ET; ST; IT	5.5

Learning Opportunity 71

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. $1\frac{2}{3} = \frac{5}{3}$; $2\frac{1}{2} = \frac{5}{2}$; LCD = 6; $\frac{5}{3} + \frac{5}{2} = \frac{10}{6} + \frac{15}{6} = \frac{25}{6}$; $3\frac{1}{5} = \frac{16}{5}$; $1\frac{2}{3} = \frac{5}{3}$; LCD = 15; $\frac{16}{5} - \frac{5}{3} = \frac{48}{15} - \frac{25}{15} = \frac{23}{15}$	5.3H
2. $1.2 \times 0.5 = 0.60$; NOTE: Stress to students to count the double-hatched squares to verify that 0.60 or $\frac{60}{100}$ are shaded.	5.3E
3. 4.8; 0.7; 6.4	5.3K
4. 4,248	5.3B
5. 12: (1, 2, 3, 4, 6, 12); C; 13: (1, 13) P; 15: (1, 3, 5, 15) C NOTE: Review the Compression Method, as needed	4.4A; 5.4A
6. Given; $4 + \frac{3}{10} + \frac{9}{100} + \frac{2}{1,000}$; $500 + 30 + 5 + \frac{7}{10}$	5.2A
Part 2 – Application Practice	
7. 1.5; 22.1; $\frac{8}{4} = 2$	5.4F
8. C – 0.484;	5.2C
9. $13\frac{1}{2} = \frac{27}{2}$ (i.e. $4\frac{1}{2} \times 3 = \frac{9}{2} \times \frac{3}{1} = \frac{27}{2} = 13\frac{1}{2}$)	5.3I
10. C: (5, 5); NOTE: X: "Walk to the Elevator" Y: "Ride the Elevator Up"	5.8C
11. B – 9; ($\frac{2}{3} \times 6 = \frac{12}{3} = 4$; $\frac{1}{2} \times 10 = \frac{10}{2} = 5$; $4 + 5 = 9$)	5.3I
12. D – 36 boxes; (i.e. $4 \times 3 \times 3 = 36$)	5.4H
Part 3 – Reflection and Conceptual Understanding	
Student Answer: ST; ET; IT; IT; ET; ST; IT	5.5

Learning Opportunity 72

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. First Row: 6; 4; 18; Second Row: 12; 12; 5	4.3C
2. First Column: 0.9; 0.61; 0.5; Second Column: 0.4; 0.45; 0.4	5.2C
3. 1,620	5.3B
4. 0.26; 0.7; 0.33;	5.3K
5. 18: (1, 2, 3, 6, 9, 18); C; 19: (1, 19) P; 14: (1, 2, 7, 14) C NOTE: Review the Compression Method, as needed.	4.4A; 5.4A
6. Given; $(1 \times 10) + (5 \times 1) + (3 \times \frac{1}{10})$; $(7 \times \frac{1}{10}) + (9 \times \frac{1}{100}) + (5 \times \frac{1}{1,000})$	5.2A
Part 2 – Application Practice	
7. y; 3, 5, 7, 8, 10, 11; NOTE: Students should use a ruler to connect the points. Place pencil on ONE point, rotate and align the ruler.	5.8C
8. a.) 11 dollars b.) 3 hours NOTE: Read the graph. Start at $x = 8$ or $y = 6$. This exercise only takes practice.	5.8C
9. 89.25 (i.e. $(147.75 + 120) \div 3 = 89.25$); 25.5 (i.e. $120 - 94.5 = 25.5$)	5.3K
Part 3 – Reflection and Conceptual Understanding	
Student Answer: A. Check students' work for accuracy B. True, (i.e. isosceles or scalene <i>right</i> triangle) False (impossible – only 3 sides)	5.5
NOTE: Require students to draw the three types of triangles and their understanding will vastly improve.	

Learning Opportunity 73

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. First Row: 2; 9; 7; Second Row: 6; 3; 30	4.3C
2. First Row: $\frac{5}{10}$; $8\frac{4}{10}$; Second Row: $\frac{307}{1,000}$	5.2C
3. 1.08	5.3E
4. 0.83; 0.2; 0.98;	5.3K
5. $1\frac{4}{5}$; $3\frac{1}{2}$;	4.3G; 5.3C
6. $(9 \times \frac{1}{100})$; $(5 \times 10) + (7 \times 1) + (1 \times \frac{1}{10})$; $(0 \times \frac{1}{10}) + (9 \times \frac{1}{100}) + (8 \times \frac{1}{1,000})$	5.2A
<u>Part 2 – Application Practice</u>	
7. y; 0, 4, 6, 8, 10; NOTE: Students should use a ruler to connect the points. Place pencil on ONE point, rotate and align the ruler.	5.8C
8. a.) 2 dollars b.) 6 gallons NOTE: Read the graph. Start at $x = 1$ or $y = 12$. This exercise only takes practice to mastery.	5.8C
9. Pattern 1: A ; Pattern 2: M ; Pattern 3: M ; Pattern 4: A	5.4D
<u>Part 3 – Reflection and Conceptual Understanding</u>	
Student Answer: A. Square; Rectangle; Rhombus; Parallelogram B. <u>True</u> , (i.e. quadrilateral is a 4 sided polygon) <u>True</u> (All are Parallelograms)	5.5
NOTE: Require students to group polygons starting with Quadrilaterals...separate trapezoid and a general 4 sided figure (general quadrilateral)...then group the parallelograms (rectangle, square, rhombus).	

Learning Opportunity 74

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. First Row: $\frac{1}{2}$; $\frac{1}{5}$; $\frac{1}{4}$; Second Row: $\frac{2}{3}$; $\frac{1}{6}$; $\frac{2}{6}$ or $\frac{1}{3}$;	4.3C
2. First Row: $\frac{25}{100}$; $8\frac{4}{10}$; Second Row: $4\frac{318}{1,000}$;	5.3G
3. 4.1;	5.3E
4. 0.69; 0.95	5.3K
5. $3\frac{2}{3}$; $1\frac{1}{8}$	5.3I
6. $\frac{2}{6}$; $\frac{8}{2}$, 4;	5.3H
7. $\frac{3}{4}$; $\frac{1}{8}$;	5.3H
<u>Part 2 – Application Practice</u>	
8. y; 0, 2, 3, 4, 5; NOTE: Students should use a ruler to connect the points. Place pencil on ONE point, rotate and align the ruler.	5.8C
9. a.) 8 feet b.) 6 seconds NOTE: Read the graph. Start at $x = 8$ or $y = 6$. This exercise only takes practice to mastery.	5.8C
10. C – N = 20 feet (i.e. $90 = 50 + N + N$) N must equal 20 by substitution or trial and error. Must know Perimeter meaning.	5.4H
11. H = 2 inches (i.e. $(V = 30 = B \times H = L \times W \times H = 3 \times 5 \times H = 15 \times H)$ or $30 = 15 \times H$; H must equal 2.	5.6B
<u>Part 3 – Reflection and Conceptual Understanding</u>	
Student Answer: True; False; True NOTE: Teacher should stress this diagram. Students must know - draw polygons to match words	5.5

Learning Opportunity 75

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. First Row: $\frac{3}{5}$; $\frac{1}{6}$; $\frac{1}{2}$; Second Row: $\frac{2}{3}$; $\frac{1}{2}$; $\frac{1}{6}$;	4.3C
2. 1 shaded out of five; 0.2	5.3C; 5.3F; 5.3G
3. 3.2;	5.3G
4. 3	5.4C
5. $2\frac{1}{5}$; $1\frac{1}{16}$	5.3C
6. $\frac{45}{21}$; $\frac{24}{4}$, 6;	5.3I
7. $\frac{5}{6}$; $\frac{1}{9}$;	5.3H
<u>Part 2 – Application Practice</u>	
8. Top to Bottom: quadrilaterals; trapezoid; rectangles; squares; equilateral; isosceles	5.5
9. \$ 2.58 (i.e. $(3.56 + 4.18) \div 3 = 2.58$)	5.3K; 5.3G
10. A – $\frac{17}{4}$ (i.e. $5\frac{3}{4} - 1\frac{1}{2} = \frac{23}{4} - \frac{3}{2} = \frac{23}{4} - \frac{6}{4} = \frac{17}{4}$)	5.3H
11. D – $1\frac{1}{16}$ (i.e. $\frac{5}{8} + \frac{7}{16} = \frac{10}{16} + \frac{7}{16} = \frac{17}{16} = 1\frac{1}{16}$) and Jim ate more.	5.3H
12. V = 24 units³ (i.e. $(V = L \times W \times H = 4 \times 2 \times 3 = 24$ cubic units) NOTE: Students may not count the block in left, back corner.	5.6A
<u>Part 3 – Reflection and Conceptual Understanding</u>	
Student Answer: True; True; False; False NOTE: Students must know relationships - draw polygons of each to match words	5.5

Learning Opportunity 76

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. D – 0.5, 0.6, 0.7, 0.8, 0.9, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7; PF – $\frac{5}{10}; \frac{6}{10}; \frac{7}{10}; \frac{8}{10}; \frac{9}{10}$; IF – $\frac{11}{10}, \frac{12}{10}, \frac{13}{10}, \frac{14}{10}, \frac{15}{10}, \frac{16}{10}, \frac{17}{10}$; MN – $1 \frac{0}{10}; 1 \frac{1}{10}; 1 \frac{2}{10}; 1 \frac{3}{10}; 1 \frac{4}{10}; 1 \frac{5}{10}; 1 \frac{6}{10}; 1 \frac{7}{10}$ NOTE: Ask students, write three equivalencies (i.e. $1 \frac{4}{10} = 1.4 = 1 \frac{4}{10}$)	4.3E; 5.3C
2. First Row: $\frac{3}{5}; \frac{2}{4}$ or $\frac{1}{2}$;	4.3C
3. Shade 7 out of 10; 0.7;	5.3C; 5.3F; 5.3G
4. $2 \frac{1}{4}$, Shade $\frac{9}{4}$ on quarters shown; $1 \frac{3}{10}$, Shade $\frac{13}{10}$ on tenths shown	5.3C
Part 2 – Application Practice	
5. Top to Bottom: quadrilaterals; trapezoid; rectangles; rhombuses; squares; scalene; isosceles	5.5
6. Shade $\frac{1}{2}$ horizontally and shade $\frac{3}{4}$ vertically. <i>Double cross-hatched is $\frac{3}{8}$</i> ; $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$	5.3I
7. D – y = x + 1 ; NOTE: This problem is challenging at first, but it is mainly exposure. Tell students to look for x,y relationship (+ 1 difference)	5.4C
8. B – 1,999,999	4.2C
9. $V = 36$ cubic units = units ³ ; (i.e. $(3 \times 4 \times 2) + (3 \times 2 \times 2) = 36$)	5.6A
Part 3 – Reflection and Conceptual Understanding	
Student Answer: True; True; True NOTE: Teacher should stress this diagram. Students must know - draw polygons to match words 4 sided figure (general quadrilateral)...then group the parallelograms (rectangle, square, rhombus).	5.5

Learning Opportunity 77

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. First Row: $\frac{7}{12}; \frac{1}{2}$;	4.3C
2. Shade 1 out of 5; 0.2;	5.3C; 5.3F; 5.3G
3. $1 \frac{0}{5}$, Shade $\frac{5}{4} = 1$ on fifths shown; $2 \frac{3}{5}$, Shade $\frac{13}{5}$ on fifths shown	5.3C
4. D – 0.2, 0.4, 0.6, 0.8, 1.0, 1.2, 1.4, 1.6, 1.8, 2.0, 2.2 2.4; PF – $\frac{0}{5}; \frac{1}{5}; \frac{2}{5}; \frac{3}{5}; \frac{4}{5}$; IF – $\frac{5}{5}; \frac{6}{5}; \frac{7}{5}; \frac{8}{5}; \frac{9}{5}; \frac{10}{5}; \frac{11}{5}; \frac{12}{5}$; MN – $1 \frac{0}{5}; 1 \frac{1}{5}; 1 \frac{2}{5}; 1 \frac{3}{5}; 1 \frac{4}{5}; 2 \frac{0}{5}; 2 \frac{1}{5}; 2 \frac{2}{5}$; NOTE: Ask students, write three equivalencies (i.e. $1 \frac{4}{5} = 1.8 = \frac{9}{5}$)	4.3E; 5.3C
Part 2 – Application Practice	
5. Top to Bottom: quadrilaterals; parallelograms; trapezoid; rectangles; rhombuses; squares; equilateral; isosceles; scalene;	5.5
6. Shade $\frac{1}{2}$ horizontally and shade $\frac{1}{2}$ vertically. <i>Double cross-hatched is $\frac{1}{4}$</i> ; $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$ Yes, 1 of 4 should be double-shaded.	5.3I
7. A – y = 2(x) ; NOTE: This problem is challenging at first, but it is mainly exposure. Tell students to look for x,y relationship (x 2 change)	5.4B
8. Choose any point on the number line: for instance, $1.6 = \frac{8}{5} = 1 \frac{3}{5}$	3.3A; 4.3D
9. B – $2 \frac{0}{24}$; (i.e. $\frac{4}{8} + \frac{2}{6} = \frac{12}{24} + \frac{8}{24} = 2 \frac{0}{24}$)	5.3H
Part 3 – Reflection and Conceptual Understanding	
Student Answer: Right; Obtuse; Acute; NOTE: Review as needed. The angles will be needed to classify triangles by their angles.	4.6C

Learning Opportunity 78

<u>Part 1 – Numeracy Development</u>	<u>TEKS</u>
1. First Row: $\frac{2}{3}; \frac{1}{2}$;	4.3C
2. Shade 1 out of 2; 0.5;	5.3C; 5.3F; 5.3G
3. $2 \frac{0}{2}$, Shade $\frac{4}{2} = 2 = 2 \frac{0}{2}$ on halves shown; $1 \frac{1}{2}$, Shade $\frac{3}{2} = 1 \frac{1}{2}$ on halves shown	5.3C
4. D – 0.5, 1.5, 2.5, 3.5, 4.5, 5.5, PF – $\frac{0}{2}; \frac{1}{2}$; IF – $\frac{2}{2}; \frac{3}{2}; \frac{4}{2}; \frac{5}{2}; \frac{6}{2}; \frac{7}{2}; \frac{8}{2}; \frac{9}{2}; \frac{10}{2}; \frac{11}{2}; \frac{12}{2}$; MN – $1 \frac{0}{2}; 1 \frac{1}{2}; 2 \frac{0}{2}; 2 \frac{1}{2}; 3 \frac{0}{2}; 3 \frac{1}{2}; 4 \frac{0}{2}; 4 \frac{1}{2}; 5 \frac{0}{2}; 5 \frac{1}{2}; 6 \frac{0}{2}$; NOTE: write three equivalencies (i.e. $3 \frac{1}{2} = 3.5 = \frac{7}{2}$)	4.3E; 5.3C
Part 2 – Application Practice	
5. Check Students' work for accuracy; Correct any misunderstandings with interventions in following days – exposure	5.5
6. A – $3 \frac{3}{8}$ – (i.e. $\frac{11}{4} \times \frac{3}{2} = \frac{33}{8}$)	5.3I
7. A – y = x - 2 ; NOTE: This problem is challenging at first, but it is mainly exposure.	5.4B
8. Choose any point on the number line: for instance, $2.5 = \frac{5}{2} = 2 \frac{1}{2}$	3.3A; 4.3D
9. C – $4 \frac{1}{24}$; (i.e. $\frac{4}{8} - \frac{2}{6} = \frac{12}{24} - \frac{8}{24} = 4 \frac{1}{24}$)	5.3H
Part 3 – Reflection and Conceptual Understanding	
Student Answer: Acute; Acute; Obtuse; NOTE: Review as needed. The angles will be needed to classify triangles by their angles.	4.6C



Learning Opportunity 79

Part 1 – Numeracy Development **TEKS**

1. Check Students' Work: Obtuse: Ray drawn so angle is larger than 90°; Right Angle 90°; Acute: Ray is drawn so less than 90° **4.6C**
2. Shade 3 out of 4; 0.75; **5.3C; 5.3F; 5.3G**
3. $1 \frac{0}{4}$, Shade $\frac{4}{4} = 1 = 1 \frac{0}{4}$ on fourths shown; $1 \frac{1}{4}$, Shade $\frac{5}{4} = 1 \frac{1}{4}$ on fourths shown **5.3C**
4. **D** – 0.25, 0.5, 0.75, 1.25, 1.5, 1.75, 2.25, 2.5, 2.75 **PF** – $\frac{0}{4}$; $\frac{2}{4}$; $\frac{3}{4}$; **IF** – $\frac{4}{4}$; $\frac{5}{4}$; $\frac{6}{4}$; $\frac{7}{4}$; $\frac{8}{4}$; $\frac{9}{4}$; $\frac{10}{4}$; $\frac{11}{4}$; $\frac{12}{4}$; **MN** – $1 \frac{0}{4}$; $1 \frac{1}{4}$; $1 \frac{2}{4}$; $1 \frac{3}{4}$; $2 \frac{0}{4}$; $2 \frac{1}{4}$; $2 \frac{2}{4}$; $2 \frac{3}{4}$; $3 \frac{0}{4}$; **NOTE:** write three equivalencies (i.e. $2 \frac{1}{4} = 2.25 = \frac{5}{4}$) **4.3E; 5.3C**

Part 2 – Application Practice

5. Top to Bottom: quadrilaterals; parallelogram; trapezoid; rectangles; rhombuses; squares; equilateral; isosceles; scalene; **5.5**
6. **B** – $1 \frac{1}{4} - (i.e. \frac{9}{2} - \frac{7}{4} = \frac{18}{4} - \frac{7}{4} = \frac{11}{4})$ **5.3H**
7. **C – y = x - 2**; **NOTE:** This problem is challenging at first, but it is mainly exposure. Tell students to look for x,y relationship (- 2 change) **5.4C**
8. **Choose any point on the number line:** for instance, $1.75 = 1 \frac{1}{4} = 2 \frac{3}{4}$ **3.3A; 4.3D**
9. **A** – $10 \frac{23}{32}$; (i.e. $\frac{5}{8} \times \frac{2}{4} = \frac{10}{32}$) **5.3I**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Right; Acute; Obtuse; **NOTE:** Review as needed – discern from Triangles by sides – scalene, equilateral, isosceles **5.5**

Learning Opportunity 80

Part 1 – Numeracy Development **TEKS**

1. Check Students' Work: Obtuse: Ray drawn so angle is larger than 90°; Right Angle 90°; Acute: Ray is drawn so less than 90° **4.6C**
2. Shade 1 out of 8; 0.125; **5.3C; 5.3F; 5.3G**
3. $1 \frac{0}{8}$, Shade $\frac{8}{8} = 1 = 1 \frac{0}{8}$ on eighths shown; $1 \frac{3}{8}$, Shade $\frac{11}{8} = 1 \frac{3}{8}$ on eighths shown **5.3C**
4. **D** – 0.125, 0.25, 0.5, 0.625, 0.75, 0.875, 1.000, 1.125, 1.25; 1.375; 1.5 **PF** – $\frac{0}{8}$; $\frac{1}{8}$; $\frac{2}{8}$; $\frac{3}{8}$; $\frac{4}{8}$; $\frac{5}{8}$; $\frac{6}{8}$; $\frac{7}{8}$ **IF** – $\frac{8}{8}$; $\frac{9}{8}$; $\frac{10}{8}$; $\frac{11}{8}$; $\frac{12}{8}$; **MN** – $1 \frac{0}{8}$; $1 \frac{1}{8}$; $1 \frac{2}{8}$; $1 \frac{3}{8}$; $1 \frac{4}{8}$; **NOTE:** write three equivalencies (i.e. $2 \frac{1}{8} = 2.125 = \frac{17}{8}$) **4.3E; 5.3C**

Part 2 – Application Practice

5. Top to Bottom: quadrilaterals; parallelogram; trapezoid; rectangles; rhombuses; squares; equilateral; isosceles; scalene; **5.5**
6. **C – K = (5 x 6) – (3 x 8)** **5.3H; 5.4B**
7. **D – 64 cubic feet = 64 feet³** (i.e. $4\text{ft} \times 4\text{ft} \times 4\text{ft} = 64\text{ cubic feet}$) **5.6A**
8. **Choose any point on the number line:** for instance, $1.125 = \frac{9}{8} = 1 \frac{1}{8}$ **3.3A; 4.3D**
9. 28.36 feet; ; Keisha = 9 feet; Mary = 9.4 feet; Carla = 9.96 feet; (i.e. $9.00 + 9.40 + 9.96\text{ feet} = 28.36\text{ feet}$) **5.3K**

Part 3 – Reflection and Conceptual Understanding

Student Answer: Obtuse; Right; Acute; **NOTE:** Review as needed – discern from Triangles by sides – scalene, equilateral, isosceles **5.5**