

# ***Fraction and Decimal Equivalency Pedagogy***

***“Use the Point”***

## **Resource Packet**

**Resource Prepared for use with  
Video On:**

**Fraction and Decimal  
Equivalency Pedagogy**

by

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**Recommended Grade Level Use: 4<sup>th</sup> Grade and Up**

Video (free download) at: [www.thenew3rseducationconsulting.com](http://www.thenew3rseducationconsulting.com)

# Fraction and Decimal Equivalency

*“Use the Point”*

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# Resource Recommendations for Effective Use

My video series will clarify the pedagogical process so that many common missteps are avoided, and teachers of all experience levels are successful and effective with the implementation of curricular resources. In my 30 years of public education experience, I have seen many efficiently and effectively designed Tier 1, Tier 2 and Tier 3 curricular resources and pedagogy **not work** due to user-error and inefficient classroom routines and student management – either in an individual classroom or school-wide programming. If there is one curricular criticism comment that I have heard repeatedly, it is the following: *“That program or curricular resource does not work with my students.”* Then, in response to that negative critique, I followed-up and observed both the curricular resource’s implementation as well as the classroom quality controls. Invariably, I arrive at the conclusion, *“Of course, the curricular resource or program was not effective – the cause – poorly designed implementation, lack of required consistency and insufficient student accountability.”* Again, this video series provides the needed steps to rectify or greatly lessen many of these issues.

**In general**, the video series in math, science and literacy will focus on the four (4) primary phases of ‘student learning’ and ‘pedagogy’ that must be addressed to produce consistent and sustained student outcomes.

**First**, skill or process lesson design must be sequenced from **tactile** lessons as new concepts are introduced and transition to **pictorial** representation lessons. After the tactile and pictorial stages are student mastered, the lesson design transitions to a **paper-pencil** formatted structure. In short, daily core lessons begin with a concrete stage and/or pictorial stage and end in a paper-pencil structure depending on the concept and the grade level.

**Second**, there must be a **threshold number of repetitions** to master a skill or process. There are varying means of spiraling instruction to accomplish the threshold repetition limits, but if the objective is to ingrain the skill into long-term memory, repeated exposure is a necessity. For students classified as ‘general education’ scholars, the range is between 8 to 16 iterations to master a skill or process. However, if the student is receiving special education services, then the minimum required repetitions may vary widely. In those situations, a student’s defined disability must be taken into account as well as the student’s Individual Education Plan (IEP).

**Third**, there is always a **sequencing hierarchy in skill development** since skills must be learned in a specific order, or the majority of students will be cognitively overwhelmed. For example, a student should possess whole number line mastery prior to learning to ‘round’ whole numbers to the nearest 10, 100 or thousand. These prerequisite skills should be taken into consideration so the student is not trying to learn both the prerequisite skills and the dependent skills simultaneously.

**Fourth**, the **pedagogical spiraling mechanism** to achieve the threshold number of repetitions is difficult for teachers of any experience level. There is a teaching method entitled ‘spaced repetition’ that efficiently and effectively addresses this situation. That technique will be the subject of a future video. However, this resource packet is intended to provide a classroom teacher with most of the prerequisite skills, processing skills and their sequencing referenced in the video; consequently, only the repetition pedagogy remains an open question.

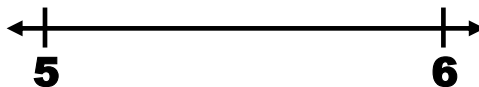
Each of the prerequisite or core skills referenced in the video are detailed below from either the pictorial or paper-pencil stage of lesson design and student learning. Finally, teachers **MUST** practice the skills sufficiently to aptly prepare students for the student assessment. All too often the lack of student learning and subsequent content mastery in many teachers’ classrooms are a result of insufficient practice opportunities.

## Curricular Resources Included for this Video

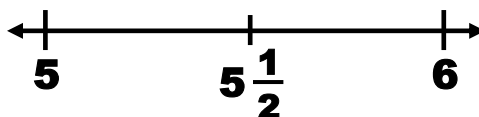
- 1.) Halves Practice (Level 1)** – This skill exercise is needed to locate the quarter points for both fractions and decimals between zero (0) and a hundred (100) as well as zero (0) and a thousand (1,000). Seventy-five (75) and seven hundred and fifty (750) is NOT covered, but that quarter point is addressed in the ‘multiples of numbers’ resource below. This Level 1 resource is designed to require the student to ‘think’ in halves ( $\frac{1}{2}$  of a number) or a number divided evenly by 2. It is recommended that prior to assessing students with a 3-minute time frame to complete this exercise, that the teacher have short, rapid mini-lessons each day prior to the core lesson to practice ‘halving’ these specific numbers. Additionally, the students should **write** the answer on a piece of notebook paper or on their desk with dry erase markers. It is also recommended that the teacher only provide students 3 numbers at a time in the beginning, and then add a new ‘halving number’ each day until all of the halves are memorized.
- 2.) Halves Practice (Level 2)** – Same exercise as the first level, but in this exercise, the student rapidly writes the answer or ‘halves’ the number in the adjacent box. Practice to prepare students to be successful prior to assessing them with this exercise. Recommended time limit is 5 minutes.
- 3.) Multiples of Numbers – Building Numeracy** – Multiples or skip-counting is a tremendous exercise in building number sense and numeracy. In this case, students learn all quarter points needed for fractions and decimals. The numbers 5 and 10 were included to provide students both confidence and practice in skip counting with numbers that are familiar to most students. Moreover, counting by 50, 100 or 500 is only adding zeroes to skip counting by either 5 or 10. The number ‘75’ was added in this exercise because students learn the third quarter point on a number line ( $\frac{75}{100}$ ,  $\frac{3}{4}$  or 0.75). The number ‘75’ is more difficult for children to skip count; thus, the teacher should practice with this number systematically. For example, the teacher starts on day one, “Students, let’s multiple count by 75 – ‘0, 75, 150, 225.’” That exercise is repeated on day two, but the teacher adds in 300 and 375. Repeat until the children can not only verbally count by 75’s but write them as well. In short, the students should verbally count AND write the multiples of 75. After the teacher has adequately prepared students to count by multiples of 75, students will not have difficulty completing this exercise in 5 minutes since they learn that 100, 250 and 500 are straightforward since (again) they are only adding a zero(s) to 5, 10 and 25. Repeat the process until all students have mastered this skill. **Note:** Multiple counting always begins with the whole number zero (0).
- 4.) Proper Fraction Shading (Tenths) – 10 Blocks** – This exercise is a pictorial practice – one step up from using a tactile manipulate such as interlocking cubes or Base 10 blocks. However, the denominator is 10, and it possesses an added feature of specifying an equivalent decimal as well as the nearest quarter point of the provided fraction.
- 5.) Proper Fraction Shading (Hundredths) – 100 Blocks** – Similar exercise to the 10 Blocks above, it is a pictorial learning activity, but with a denominator of 100.
- 6.) Number Line Practice – Fraction and Decimals – Quarters** – This exercise ties the quarter points together on a number line in all three forms – of fractions and decimals less than 1 whole. However, it also provides the students understanding with equivalencies of (0,  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1 whole) with fractions with a denominator of 100 (0,  $\frac{25}{100}$ ,  $\frac{50}{100}$ ,  $\frac{75}{100}$ ,  $\frac{100}{100}$ ). Use money – quarters (25 cents, 50 cents, 75 cents – or 1 quarter ( $\frac{1}{4}$  of a dollar), 2 quarters ( $\frac{1}{2}$  of a dollar) and 3 quarters ( $\frac{3}{4}$  of a dollar)) to make the connection, if necessary. The same money thinking can be applied to the equivalent decimals (0.25, 0.50, 0.75). Of course, use the ‘1’ under the decimal point from the video to easily compute equivalent fractions with a denominator of 100 (i.e.,  $0.25 = \frac{25}{100}$ ). **Note:** Half of 1,000 is 500, so  $\frac{500}{1,000}$  is equivalent to  $\frac{1}{2}$ . Of course, the same is true for  $\frac{50}{100}$  and  $\frac{5}{10}$ . Students can readily understand equivalent fractions of  $\frac{1}{2}$  aesthetically by evaluating only the numerator and denominator, without computing lowest terms of those fractions by division.

**7.) Find the Two Whole Numbers – Decimals and Fractions – V1 and V2** – There are two different versions (V1 and V2) of this exercise to provide ample student practice. However, the teacher must follow-up with rapid quick mini-lessons in subsequent days for all students to fully master the content. It is imperative that each day during those spiraling mini-lessons that the teacher require students to quickly draw the number line in quarters. Students become very capable at drawing quarter point number lines for proper fractions, mixed numbers and decimals because they learn that they are always finding midpoints. Thus, for instance, they are locating the midpoint one-half ( $\frac{1}{2}$ ) between zero (0) and 1 whole, and the mid-point between zero (0) and  $\frac{1}{2}$  - or one-fourth/one-quarter ( $\frac{1}{4}$ ) as well as the midpoint  $\frac{3}{4}$  between one-half ( $\frac{1}{2}$ ) and 1 whole.

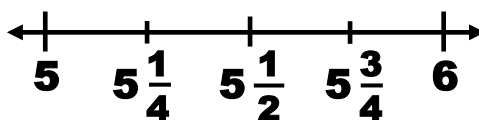
For example, the teacher may say to their students as he or she draws a number line concurrently, “Draw a number line with 5 and 6 as the beginning and ending whole numbers.”



Next, the teacher can say, “Find half-way point between 5 and 6 and label it on the number line.”



Repeat the process to locate the midpoints or quarter point locations of  $5\frac{1}{4}$  and  $5\frac{3}{4}$  between 5 and  $5\frac{1}{2}$ , as well as  $5\frac{1}{2}$  and 6, respectively. Interchange practice sessions with decimals or proper fractions when the whole numbers are zero (0) and 1 whole.



**It is important to note** that the majority of students will **not** know the two ending whole numbers between a proper fraction, mixed number or a decimal (e.g.,  $8\frac{1}{2}$  or  $8.50$  or  $8\frac{5}{10}$  or  $8\frac{50}{100}$  is between the two whole numbers 8 and 9).

For example, if the teacher asks students to write the two whole numbers that proper fractions, decimals, or mixed numbers are between, **they will not know** {e.g.,  $\frac{1}{4}$ ,  $\frac{25}{100}$ ,  $0.25$ ,  $5.75$ ,  $5\frac{3}{4}$ , or  $5\frac{75}{100}$ }. However, if the teacher practices with students for approximately 3 to 4 days in short, rapid mini-lessons prior to the daily core lesson each day, they become very adept. This fraction-decimal understanding is an essential numeracy builder as students begin to comprehend the physical meaning and magnitudes of larger mixed numbers ( $19\frac{456}{1,000}$ ) and decimals ( $15.0934$ ).

Numerical example:

After writing 7.25 on the white board, the teacher states, “Students, what two whole numbers is that decimal between?” Students should write 7 and 8. Then, number lines are drawn indicating quarter points as shown above. This exercise will securely cement students’ decimal and fraction numeracy ability within the context of magnitudes and physical location of each number type on a number line.

**Final Note:** Many times, teachers find it easier and less confusing for students if decimals and fractions are taught in isolation. Then, combine decimal and fraction number types in exercises like described above when each concept is mastered. Regardless, it is the same content lesson for each number type --- only the lesson sequencing changes.

# Halves Practice – Level 1

**Directions:** Find half of the number by mentally dividing by 2. Recommended Time: 3 minutes

**Example:**  $\frac{1}{2}$  of 8 equals 4 (or,  $8 \div 2 = 4$ )

- |   |                                      |                                      |
|---|--------------------------------------|--------------------------------------|
| <b>1.)</b> $\frac{1}{2}$ of 10 = <b>5</b> | <b>23.)</b> $\frac{1}{2}$ of 10 =    | <b>45.)</b> $\frac{1}{2}$ of 1,000 = |
| <b>2.)</b> $\frac{1}{2}$ of 100 =         | <b>24.)</b> $\frac{1}{2}$ of 1,000 = | <b>46.)</b> $\frac{1}{2}$ of 500 =   |
| <b>3.)</b> $\frac{1}{2}$ of 50 =          | <b>25.)</b> $\frac{1}{2}$ of 10 =    | <b>47.)</b> $\frac{1}{2}$ of 100 =   |
| <b>4.)</b> $\frac{1}{2}$ of 100 =         | <b>26.)</b> $\frac{1}{2}$ of 100 =   | <b>48.)</b> $\frac{1}{2}$ of 100 =   |
| <b>5.)</b> $\frac{1}{2}$ of 10 =          | <b>27.)</b> $\frac{1}{2}$ of 50 =    | <b>49.)</b> $\frac{1}{2}$ of 50 =    |
| <b>6.)</b> $\frac{1}{2}$ of 500 =         | <b>28.)</b> $\frac{1}{2}$ of 100 =   | <b>50.)</b> $\frac{1}{2}$ of 100 =   |
| <b>7.)</b> $\frac{1}{2}$ of 1,000 =       | <b>29.)</b> $\frac{1}{2}$ of 10 =    | <b>51.)</b> $\frac{1}{2}$ of 10 =    |
| <b>8.)</b> $\frac{1}{2}$ of 100 =         | <b>30.)</b> $\frac{1}{2}$ of 500 =   | <b>52.)</b> $\frac{1}{2}$ of 500 =   |
| <b>9.)</b> $\frac{1}{2}$ of 50 =          | <b>31.)</b> $\frac{1}{2}$ of 1,000 = | <b>53.)</b> $\frac{1}{2}$ of 1,000 = |
| <b>10.)</b> $\frac{1}{2}$ of 100 =        | <b>32.)</b> $\frac{1}{2}$ of 10 =    | <b>54.)</b> $\frac{1}{2}$ of 100 =   |
| <b>11.)</b> $\frac{1}{2}$ of 10 =         | <b>33.)</b> $\frac{1}{2}$ of 50 =    | <b>55.)</b> $\frac{1}{2}$ of 50 =    |
| <b>12.)</b> $\frac{1}{2}$ of 500 =        | <b>34.)</b> $\frac{1}{2}$ of 100 =   | <b>56.)</b> $\frac{1}{2}$ of 100 =   |
| <b>13.)</b> $\frac{1}{2}$ of 1,000 =      | <b>35.)</b> $\frac{1}{2}$ of 500 =   | <b>57.)</b> $\frac{1}{2}$ of 10 =    |
| <b>14.)</b> $\frac{1}{2}$ of 100 =        | <b>36.)</b> $\frac{1}{2}$ of 1,000 = | <b>58.)</b> $\frac{1}{2}$ of 500 =   |
| <b>15.)</b> $\frac{1}{2}$ of 50 =         | <b>37.)</b> $\frac{1}{2}$ of 50 =    | <b>59.)</b> $\frac{1}{2}$ of 1,000 = |
| <b>16.)</b> $\frac{1}{2}$ of 1,000 =      | <b>38.)</b> $\frac{1}{2}$ of 100 =   | <b>60.)</b> $\frac{1}{2}$ of 100 =   |
| <b>17.)</b> $\frac{1}{2}$ of 50 =         | <b>39.)</b> $\frac{1}{2}$ of 10 =    | <b>61.)</b> $\frac{1}{2}$ of 50 =    |
| <b>18.)</b> $\frac{1}{2}$ of 500 =        | <b>40.)</b> $\frac{1}{2}$ of 500 =   | <b>62.)</b> $\frac{1}{2}$ of 100 =   |
| <b>19.)</b> $\frac{1}{2}$ of 100 =        | <b>41.)</b> $\frac{1}{2}$ of 1,000 = | <b>63.)</b> $\frac{1}{2}$ of 10 =    |
| <b>20.)</b> $\frac{1}{2}$ of 10 =         | <b>42.)</b> $\frac{1}{2}$ of 50 =    | <b>64.)</b> $\frac{1}{2}$ of 500 =   |
| <b>21.)</b> $\frac{1}{2}$ of 500 =        | <b>43.)</b> $\frac{1}{2}$ of 100 =   | <b>65.)</b> $\frac{1}{2}$ of 1,000 = |
| <b>22.)</b> $\frac{1}{2}$ of 1,000 =      | <b>44.)</b> $\frac{1}{2}$ of 10 =    | <b>66.)</b> $\frac{1}{2}$ of 100 =   |

# Halves Practice – Level 1 – Solution Key

**Directions:** Find half of the number by mentally dividing by 2. Recommended Time: 3 minutes

**Example:**  $\frac{1}{2}$  of 8 equals 4 (or,  $8 \div 2 = 4$ )

- |  |  |  |
|--|--|--|
| 1.) $\frac{1}{2}$ of 10 = <b>5</b>       | 23.) $\frac{1}{2}$ of 10 = <b>5</b>      | 45.) $\frac{1}{2}$ of 1,000 = <b>500</b> |
| 2.) $\frac{1}{2}$ of 100 = <b>50</b>     | 24.) $\frac{1}{2}$ of 1,000 = <b>500</b> | 46.) $\frac{1}{2}$ of 500 = <b>250</b>   |
| 3.) $\frac{1}{2}$ of 50 = <b>25</b>      | 25.) $\frac{1}{2}$ of 10 = <b>5</b>      | 47.) $\frac{1}{2}$ of 100 = <b>50</b>    |
| 4.) $\frac{1}{2}$ of 100 = <b>50</b>     | 26.) $\frac{1}{2}$ of 100 = <b>50</b>    | 48.) $\frac{1}{2}$ of 100 = <b>50</b>    |
| 5.) $\frac{1}{2}$ of 10 = <b>5</b>       | 27.) $\frac{1}{2}$ of 50 = <b>25</b>     | 49.) $\frac{1}{2}$ of 50 = <b>25</b>     |
| 6.) $\frac{1}{2}$ of 500 = <b>250</b>    | 28.) $\frac{1}{2}$ of 100 = <b>50</b>    | 50.) $\frac{1}{2}$ of 100 = <b>50</b>    |
| 7.) $\frac{1}{2}$ of 1,000 = <b>500</b>  | 29.) $\frac{1}{2}$ of 10 = <b>5</b>      | 51.) $\frac{1}{2}$ of 10 = <b>5</b>      |
| 8.) $\frac{1}{2}$ of 100 = <b>50</b>     | 30.) $\frac{1}{2}$ of 500 = <b>250</b>   | 52.) $\frac{1}{2}$ of 500 = <b>250</b>   |
| 9.) $\frac{1}{2}$ of 50 = <b>25</b>      | 31.) $\frac{1}{2}$ of 1,000 = <b>500</b> | 53.) $\frac{1}{2}$ of 1,000 = <b>500</b> |
| 10.) $\frac{1}{2}$ of 100 = <b>50</b>    | 32.) $\frac{1}{2}$ of 10 = <b>5</b>      | 54.) $\frac{1}{2}$ of 100 = <b>50</b>    |
| 11.) $\frac{1}{2}$ of 10 = <b>5</b>      | 33.) $\frac{1}{2}$ of 50 = <b>25</b>     | 55.) $\frac{1}{2}$ of 50 = <b>25</b>     |
| 12.) $\frac{1}{2}$ of 500 = <b>250</b>   | 34.) $\frac{1}{2}$ of 100 = <b>50</b>    | 56.) $\frac{1}{2}$ of 100 = <b>50</b>    |
| 13.) $\frac{1}{2}$ of 1,000 = <b>500</b> | 35.) $\frac{1}{2}$ of 500 = <b>250</b>   | 57.) $\frac{1}{2}$ of 10 = <b>5</b>      |
| 14.) $\frac{1}{2}$ of 100 = <b>50</b>    | 36.) $\frac{1}{2}$ of 1,000 = <b>500</b> | 58.) $\frac{1}{2}$ of 500 = <b>250</b>   |
| 15.) $\frac{1}{2}$ of 50 = <b>25</b>     | 37.) $\frac{1}{2}$ of 50 = <b>25</b>     | 59.) $\frac{1}{2}$ of 1,000 = <b>500</b> |
| 16.) $\frac{1}{2}$ of 1,000 = <b>500</b> | 38.) $\frac{1}{2}$ of 100 = <b>50</b>    | 60.) $\frac{1}{2}$ of 100 = <b>50</b>    |
| 17.) $\frac{1}{2}$ of 50 = <b>25</b>     | 39.) $\frac{1}{2}$ of 10 = <b>5</b>      | 61.) $\frac{1}{2}$ of 50 = <b>25</b>     |
| 18.) $\frac{1}{2}$ of 500 = <b>250</b>   | 40.) $\frac{1}{2}$ of 500 = <b>250</b>   | 62.) $\frac{1}{2}$ of 100 = <b>50</b>    |
| 19.) $\frac{1}{2}$ of 100 = <b>50</b>    | 41.) $\frac{1}{2}$ of 1,000 = <b>500</b> | 63.) $\frac{1}{2}$ of 10 = <b>5</b>      |
| 20.) $\frac{1}{2}$ of 10 = <b>5</b>      | 42.) $\frac{1}{2}$ of 50 = <b>25</b>     | 64.) $\frac{1}{2}$ of 500 = <b>250</b>   |
| 21.) $\frac{1}{2}$ of 500 = <b>250</b>   | 43.) $\frac{1}{2}$ of 100 = <b>50</b>    | 65.) $\frac{1}{2}$ of 1,000 = <b>500</b> |
| 22.) $\frac{1}{2}$ of 1,000 = <b>500</b> | 44.) $\frac{1}{2}$ of 10 = <b>5</b>      | 66.) $\frac{1}{2}$ of 100 = <b>50</b>    |

## Halves Practice – Level 2

Directions: Find half of each number by mentally dividing by 2.

Recommended Time: 5 minutes

<b>100</b>	<b><u>50</u></b>	<b>10</b>		<b>500</b>		<b>10</b>	
<b>10</b>		<b>1,000</b>		<b>10</b>		<b>100</b>	
<b>50</b>		<b>100</b>		<b>100</b>		<b>1,000</b>	
<b>10</b>		<b>10</b>		<b>50</b>		<b>10</b>	
<b>100</b>		<b>500</b>		<b>10</b>		<b>100</b>	
<b>50</b>		<b>50</b>		<b>100</b>		<b>10</b>	
<b>1,000</b>		<b>1,000</b>		<b>50</b>		<b>500</b>	
<b>500</b>		<b>10</b>		<b>1,000</b>		<b>10</b>	
<b>10</b>		<b>100</b>		<b>10</b>		<b>500</b>	
<b>100</b>		<b>10</b>		<b>1,000</b>		<b>50</b>	
<b>1,000</b>		<b>100</b>		<b>50</b>		<b>1,000</b>	
<b>500</b>		<b>1,000</b>		<b>10</b>		<b>10</b>	
<b>50</b>		<b>500</b>		<b>100</b>		<b>500</b>	
<b>100</b>		<b>50</b>		<b>10</b>		<b>50</b>	
<b>50</b>		<b>100</b>		<b>500</b>		<b>1,000</b>	
<b>500</b>		<b>10</b>		<b>50</b>		<b>500</b>	
<b>10</b>		<b>500</b>		<b>1,000</b>		<b>100</b>	
<b>100</b>		<b>50</b>		<b>10</b>		<b>500</b>	
<b>500</b>		<b>500</b>		<b>100</b>		<b>50</b>	
<b>50</b>		<b>50</b>		<b>50</b>		<b>1,000</b>	
<b>1,000</b>		<b>1,000</b>		<b>500</b>		<b>10</b>	
<b>10</b>		<b>500</b>		<b>50</b>		<b>500</b>	
<b>500</b>		<b>10</b>		<b>1,000</b>		<b>50</b>	
<b>50</b>		<b>50</b>		<b>10</b>		<b>1,000</b>	



## Halves Practice – Level 2 – Solution Key

Directions: Find half of each number by mentally dividing by 2.

Recommended Time: 5 minutes

100	<u>50</u>	10	5	500	250	10	5
10	5	1,000	500	10	5	100	50
50	25	100	50	100	50	1,000	500
10	5	10	5	50	25	10	5
100	50	500	250	10	5	100	50
50	25	50	25	100	50	10	5
1,000	500	1,000	500	50	25	500	250
500	250	10	5	1,000	500	10	5
10	5	100	50	10	5	500	250
100	50	10	5	1,000	500	50	25
1,000	500	100	50	50	25	1,000	500
500	250	1,000	500	10	5	10	5
50	25	500	250	100	50	500	250
100	50	50	25	10	5	50	25
50	25	100	50	500	250	1,000	500
500	250	10	5	50	25	500	250
10	5	500	250	1,000	500	100	50
100	50	50	25	10	5	500	250
500	250	500	250	100	50	50	25
50	25	50	25	50	25	1,000	500
1,000	500	1,000	500	500	250	10	5
10	5	500	250	50	25	500	250
500	250	10	5	1,000	500	50	25
50	25	50	25	10	5	1,000	500



# Multiples of Numbers – Building Numeracy – Solution Key

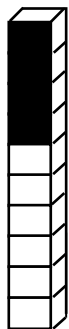
Directions: Write the multiples vertically downward for each number. Recommended Time: 5 minutes

5	10	25	50	75	100	250	500
0	0	0	0	0 (Zero)	0 (Zero)	0	0
5	10	25	50	75	100	250	500
10	20	50	100	150	200	500	1,000
15	30	75	150	225	300	750	1,500
20	40	100	200	300	400	1,000	2,000
25	50	125	250	375	500	1,250	2,500
30	60	150	300	450	600	1,500	3,000
35	70	175	350	525	700	1,750	3,500
40	80	200	400	600	800	2,000	4,000
45	90	225	450	675	900	2,250	4,500
50	100	250	500	750	1,000	2,500	5,000

# Proper Fraction Shading – Tenths - 10 Blocks

**Directions:** Your teacher will give you a **proper fraction**. **WRITE** it on the top line. Then, **SHADE** the corresponding number of blocks that represent the proper fraction **AND WRITE** the equivalent decimal. **FINALLY**, write if your fraction is closest to 0,  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$  or 1 Whole.

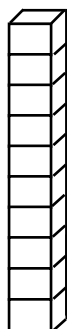
1



$$\frac{4}{10} = 0.4$$

Closest to  $\frac{1}{2}$

2



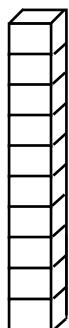
Closest to \_\_\_\_\_

3



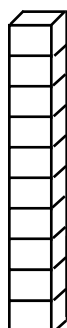
Closest to \_\_\_\_\_

4



Closest to \_\_\_\_\_

5



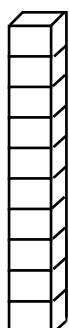
Closest to \_\_\_\_\_

6



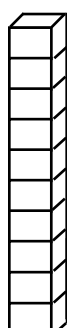
Closest to \_\_\_\_\_

7



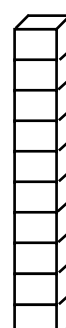
Closest to \_\_\_\_\_

8



Closest to \_\_\_\_\_

9

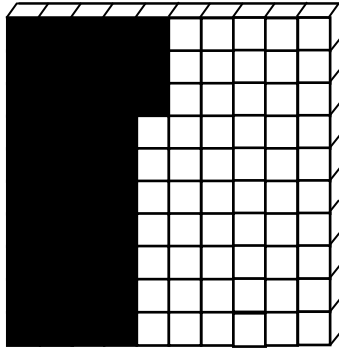


Closest to \_\_\_\_\_

# Proper Fraction Shading – Hundredths - 100 Blocks

**Directions:** Your teacher will give you a **proper fraction**. **WRITE** it on the top line. Then, **SHADE** the corresponding number of blocks that represent the proper fraction **AND WRITE** the equivalent decimal. **FINALLY**, write if your fraction is closest to 0,  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$  or 1 Whole.

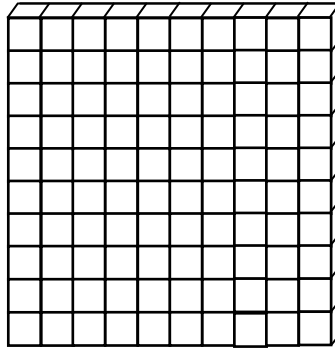
1



$$\frac{43}{100} = 0.43$$

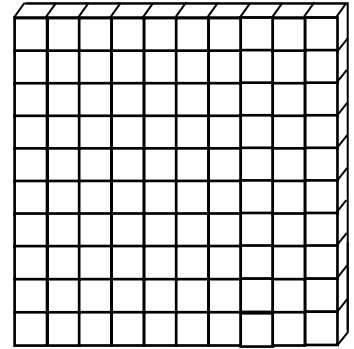
Closest to  $\frac{1}{2}$

2



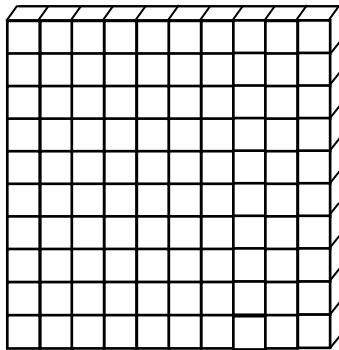
Closest to \_\_\_\_\_

3



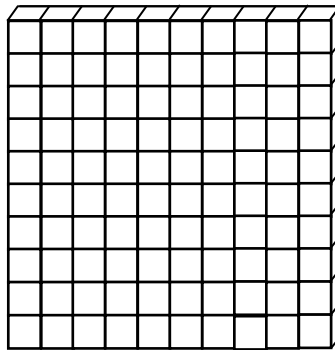
Closest to \_\_\_\_\_

4



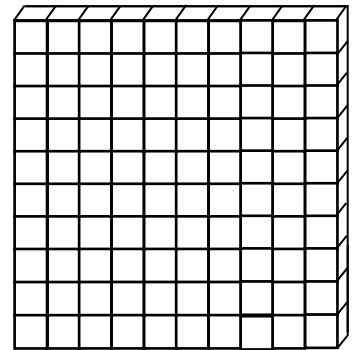
Closest to \_\_\_\_\_

5



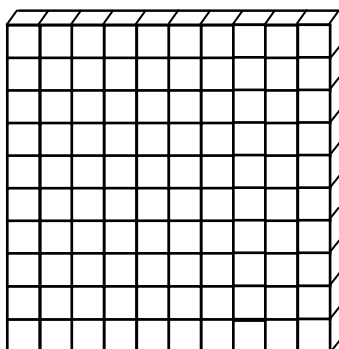
Closest to \_\_\_\_\_

6



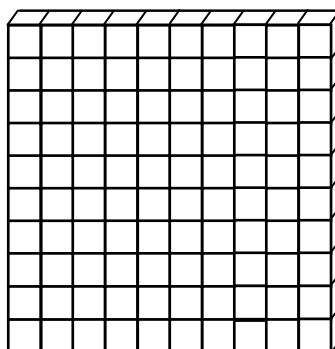
Closest to \_\_\_\_\_

7



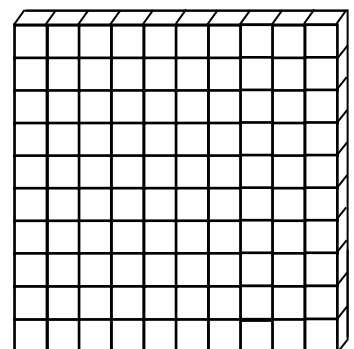
Closest to \_\_\_\_\_

8



Closest to \_\_\_\_\_

9



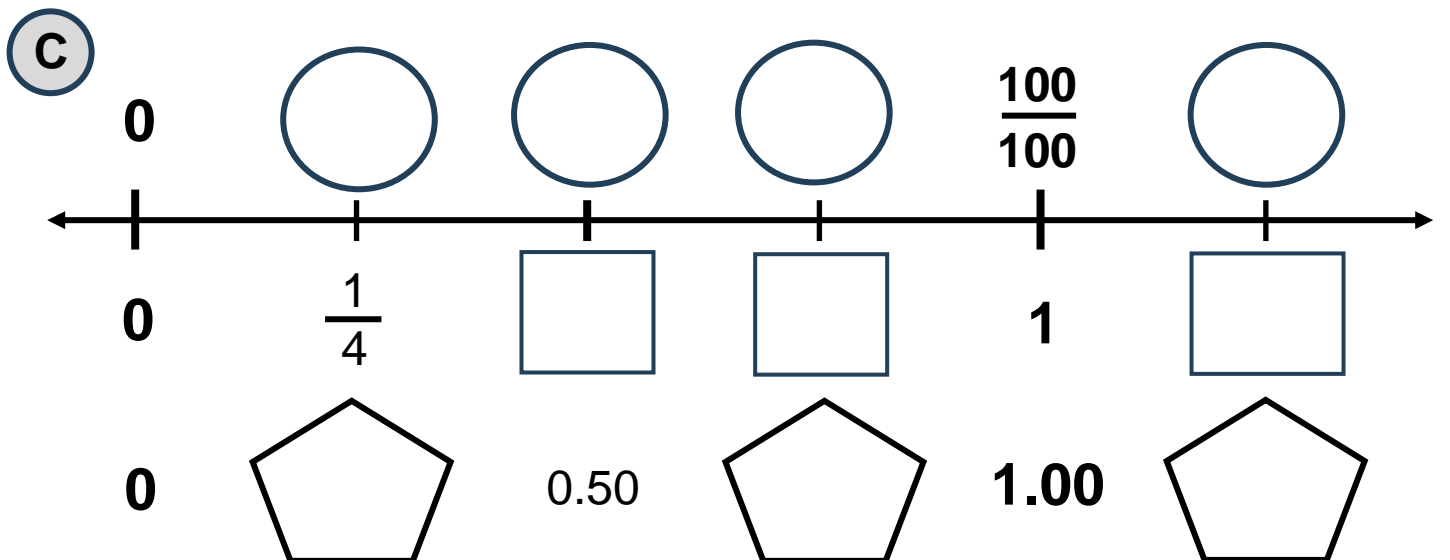
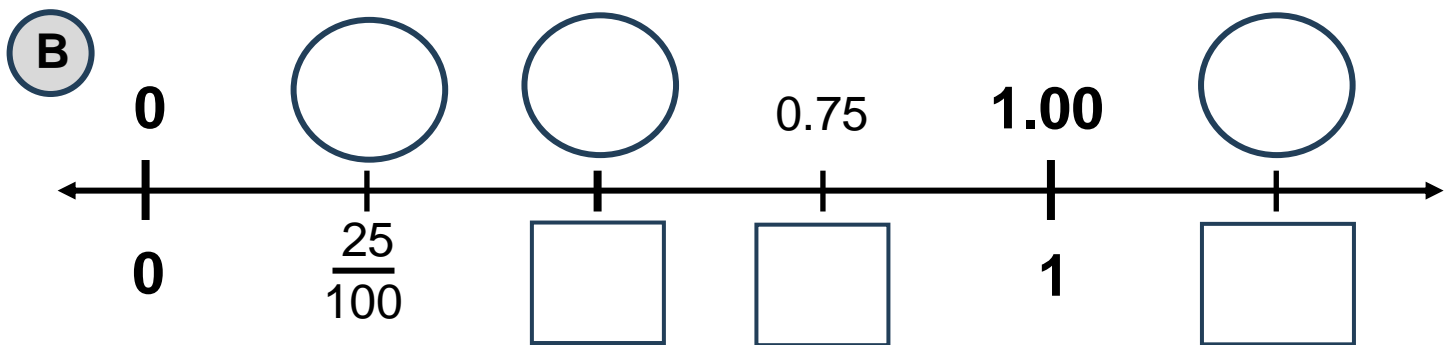
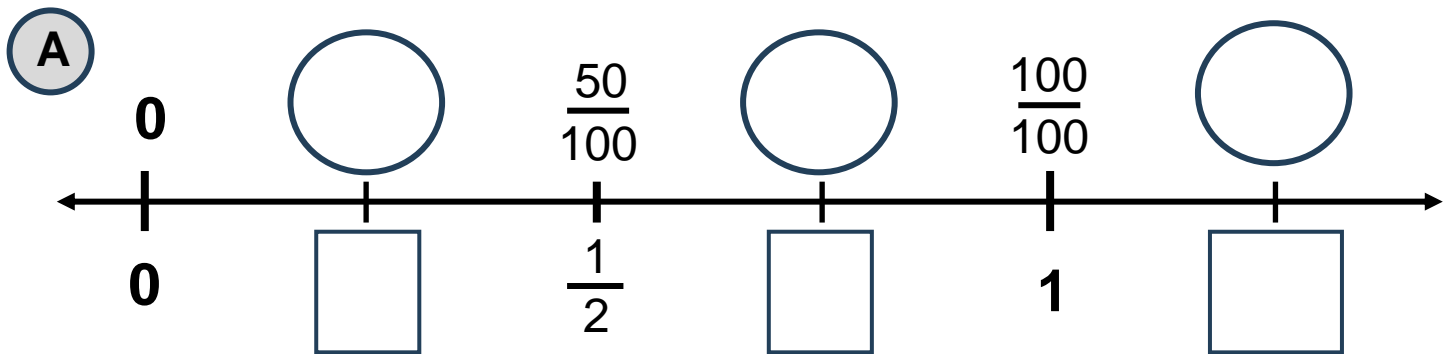
Closest to \_\_\_\_\_

# Number Line Practice – Fraction and Decimal - Quarters

**Directions:** Complete the number lines by writing the correct proper fraction or decimal in the circle, rectangle or pentagon. Use the ‘**Decimal and Fraction Bank**’ to assist you, as needed.

**Decimal and Fraction Bank**

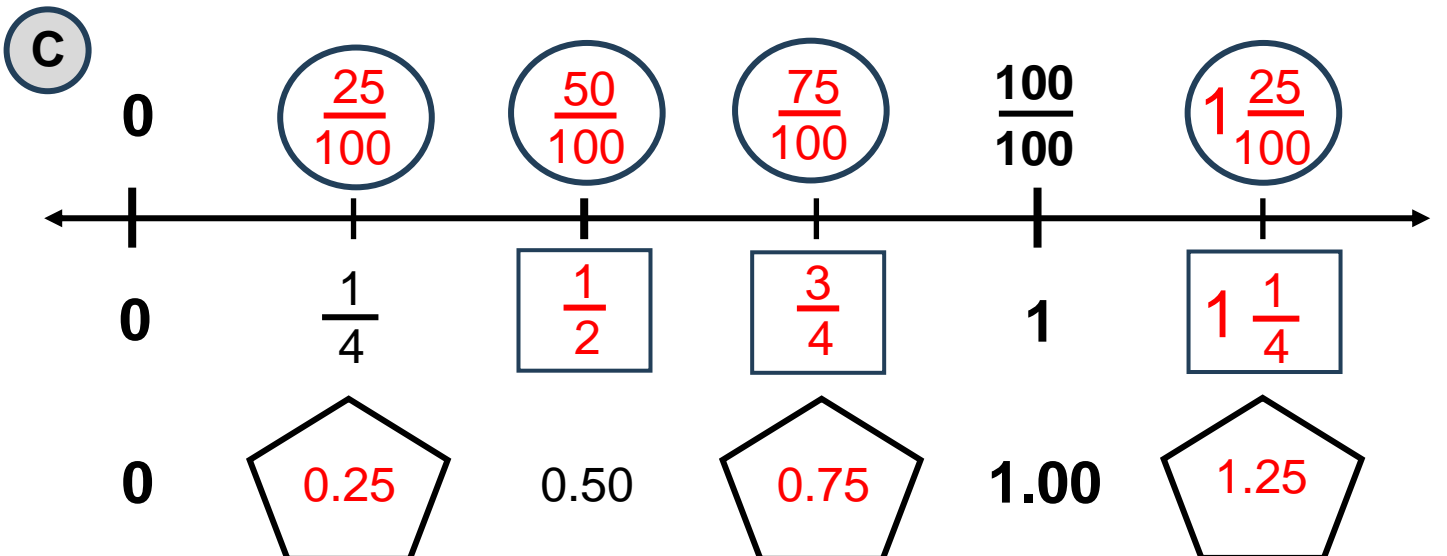
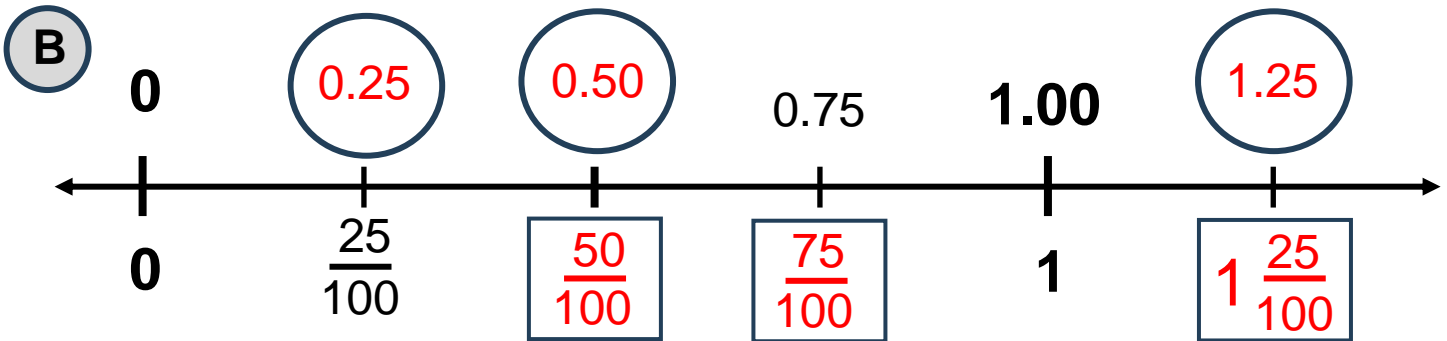
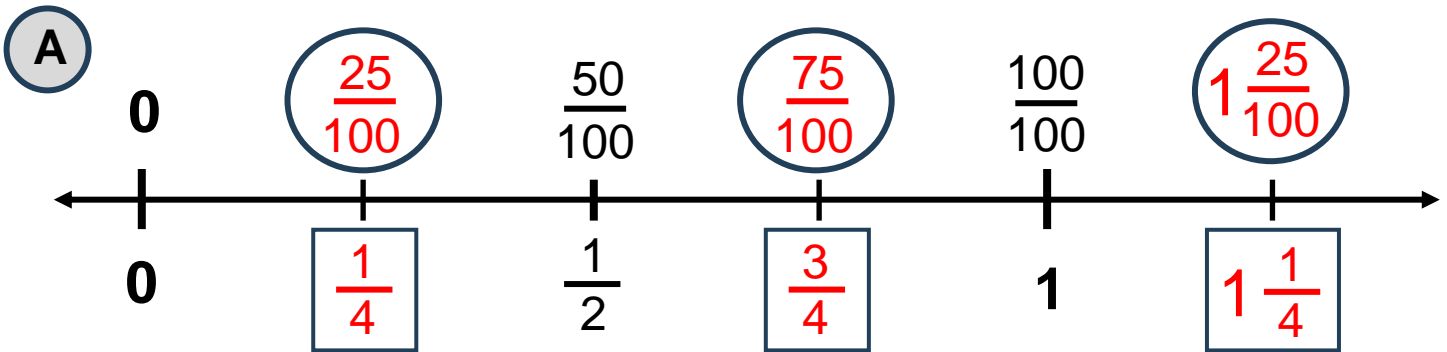
0.25    $\frac{1}{4}$     $\frac{25}{100}$    0.50    $\frac{1}{2}$     $\frac{50}{100}$    0.75    $\frac{3}{4}$     $\frac{75}{100}$



# Number Line Practice – Fraction and Decimal - Quarters

**Directions:** Complete the number lines by writing the correct proper fraction or decimal in the circle, rectangle or pentagon. Use the ‘**Decimal and Fraction Bank**’ to assist you, as needed.

<b>Decimal and Fraction Bank</b>								
0.25	$\frac{1}{4}$	$\frac{25}{100}$	0.50	$\frac{1}{2}$	$\frac{50}{100}$	0.75	$\frac{3}{4}$	$\frac{75}{100}$

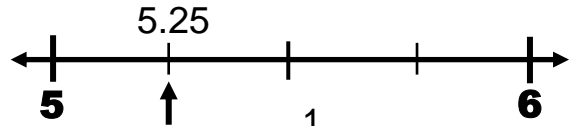


# Find the Two Whole Numbers

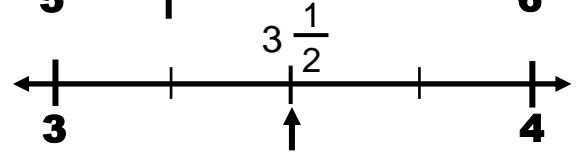
## Decimals and Fractions – V1 – Level 1

**Directions:** Write the two whole numbers that are closest to the given decimal or fraction. Then, plot the points on the number line to the right. The first two problems are completed as examples.

1.) 5.25 is between **5** and **6**



2.)  $3\frac{1}{2}$  is between **3** and **4**



3.) 1.75 is between \_\_\_\_\_ and \_\_\_\_\_



4.)  $9\frac{1}{4}$  is between \_\_\_\_\_ and \_\_\_\_\_



5.) 2.75 is between \_\_\_\_\_ and \_\_\_\_\_



6.)  $\frac{5}{10}$  is between \_\_\_\_\_ and \_\_\_\_\_



7.)  $7\frac{25}{100}$  is between \_\_\_\_\_ and \_\_\_\_\_



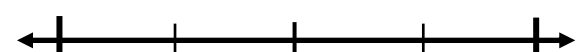
8.) 12.75 is between \_\_\_\_\_ and \_\_\_\_\_



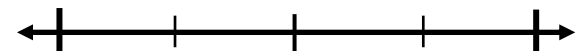
9.) 0.25 is between \_\_\_\_\_ and \_\_\_\_\_



10.)  $3\frac{500}{1000}$  is between \_\_\_\_\_ and \_\_\_\_\_



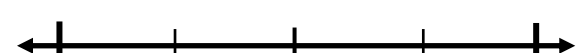
11.) 25.75 is between \_\_\_\_\_ and \_\_\_\_\_



12.) 0.5 is between \_\_\_\_\_ and \_\_\_\_\_



13.)  $\frac{1}{4}$  is between \_\_\_\_\_ and \_\_\_\_\_



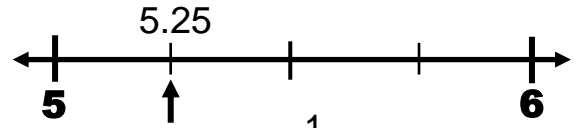


# Find the Two Whole Numbers

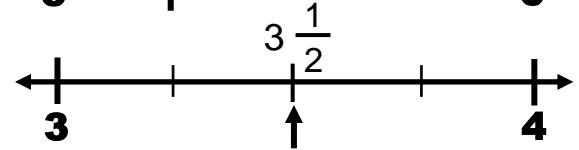
## Decimals and Fractions – V1 – Level 1 – Solution Key

**Directions:** Write the two whole numbers that are closest to the given decimal or fraction. Then, plot the points on the number line to the right. The first two problems are completed as examples.

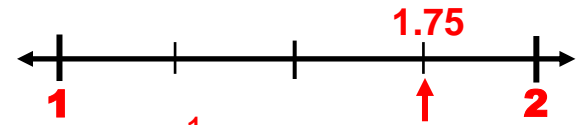
1.) 5.25 is between 5 and 6



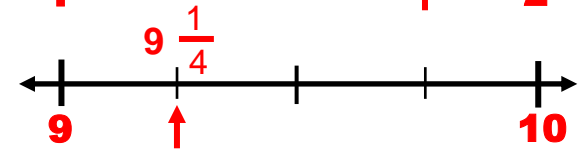
2.)  $3\frac{1}{2}$  is between 3 and 4



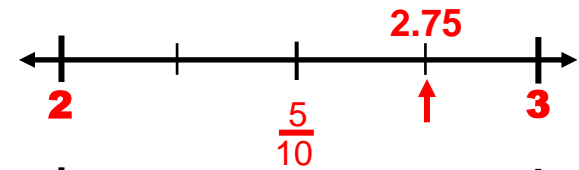
3.) 1.75 is between 1 and 2



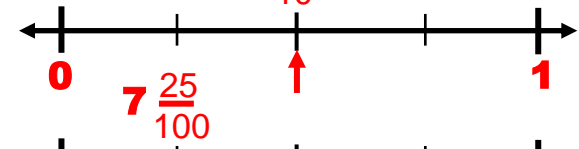
4.)  $9\frac{1}{4}$  is between 9 and 10



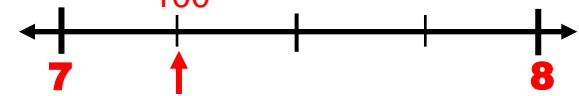
5.) 2.75 is between 2 and 3



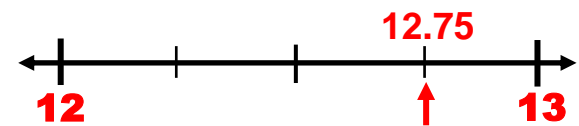
6.)  $\frac{5}{10}$  is between 0 and 1



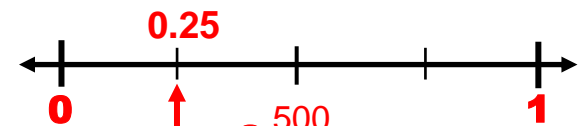
7.)  $7\frac{25}{100}$  is between 7 and 8



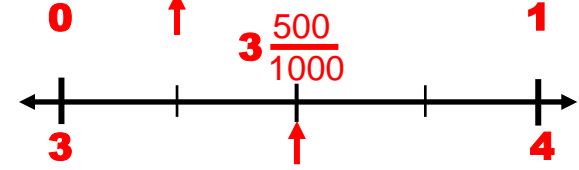
8.) 12.75 is between 12 and 13



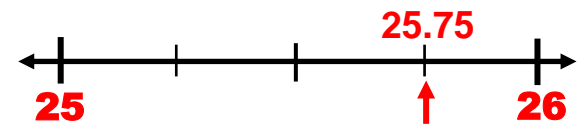
9.) 0.25 is between 0 and 1



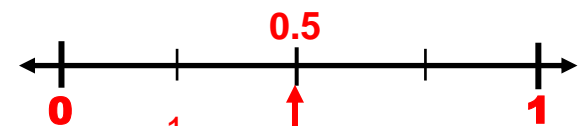
10.)  $3\frac{500}{1000}$  is between 3 and 4



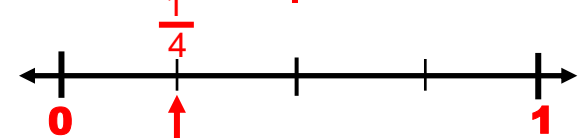
11.) 25.75 is between 25 and 26



12.) 0.5 is between 0 and 1



13.)  $\frac{1}{4}$  is between 0 and 1

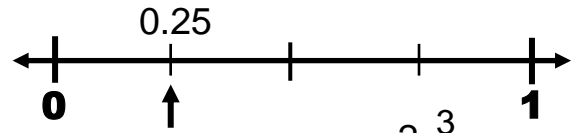


# Find the Two Whole Numbers

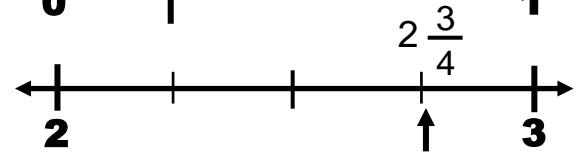
## Decimals and Fractions – V2 – Level 1

**Directions:** Write the two whole numbers that are closest to the given decimal or fraction. Then, plot the points on the number line to the right. The first two problems are completed as examples.

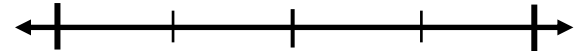
1.) 0.25 is between **0** and **1**



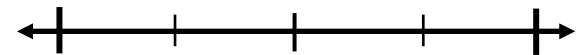
2.)  $2\frac{3}{4}$  is between **2** and **3**



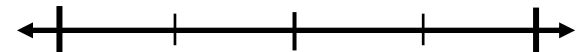
3.) 1.5 is between \_\_\_\_\_ and \_\_\_\_\_



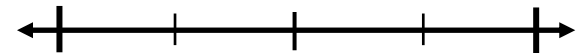
4.)  $7\frac{1}{4}$  is between \_\_\_\_\_ and \_\_\_\_\_



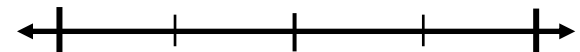
5.) 9.75 is between \_\_\_\_\_ and \_\_\_\_\_



6.)  $\frac{5}{10}$  is between \_\_\_\_\_ and \_\_\_\_\_



7.)  $3\frac{25}{100}$  is between \_\_\_\_\_ and \_\_\_\_\_



8.) 49.75 is between \_\_\_\_\_ and \_\_\_\_\_



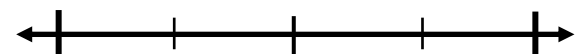
9.) 0.25 is between \_\_\_\_\_ and \_\_\_\_\_



10.)  $8\frac{500}{1000}$  is between \_\_\_\_\_ and \_\_\_\_\_



11.) 13.75 is between \_\_\_\_\_ and \_\_\_\_\_



12.) 0.5 is between \_\_\_\_\_ and \_\_\_\_\_



13.)  $\frac{3}{4}$  is between \_\_\_\_\_ and \_\_\_\_\_

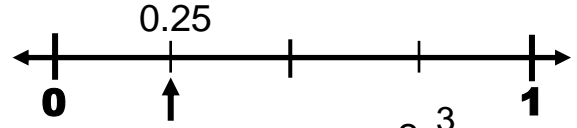


# Find the Two Whole Numbers

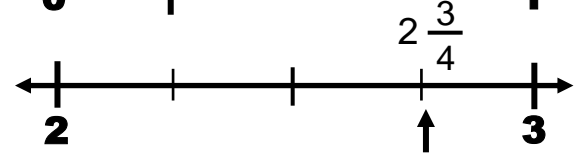
## Decimals and Fractions – V2 – Level 1 – **Solution Key**

**Directions:** Write the two whole numbers that are closest to the given decimal or fraction. Then, plot the points on the number line to the right. The first two problems are completed as examples.

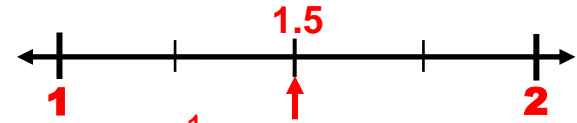
1.) 0.25 is between 0 and 1



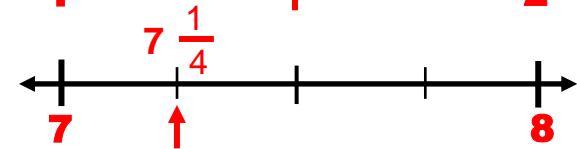
2.)  $2\frac{3}{4}$  is between 2 and 3



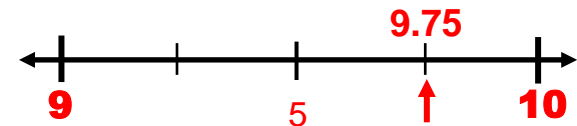
3.) 1.5 is between 1 and 2



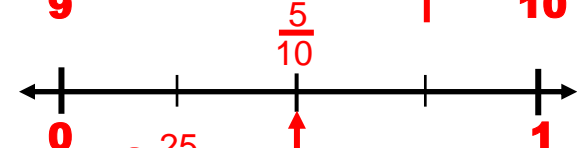
4.)  $7\frac{1}{4}$  is between 7 and 8



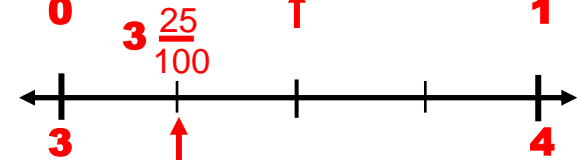
5.) 9.75 is between 9 and 10



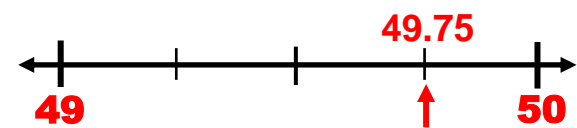
6.)  $\frac{5}{10}$  is between 0 and 1



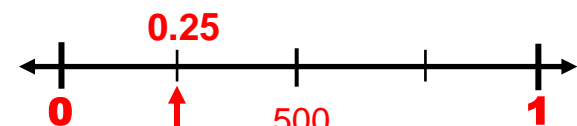
7.)  $3\frac{25}{100}$  is between 3 and 4



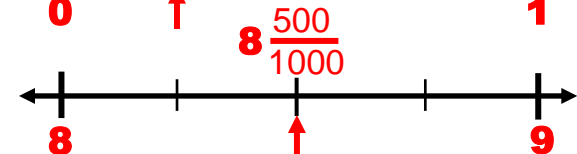
8.) 49.75 is between 49 and 50



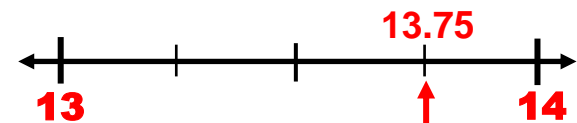
9.) 0.25 is between 0 and 1



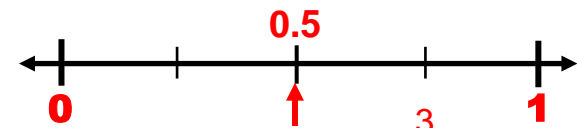
10.)  $8\frac{500}{1000}$  is between 8 and 9



11.) 13.75 is between 13 and 14



12.) 0.5 is between 0 and 1



13.)  $\frac{3}{4}$  is between 0 and 1

