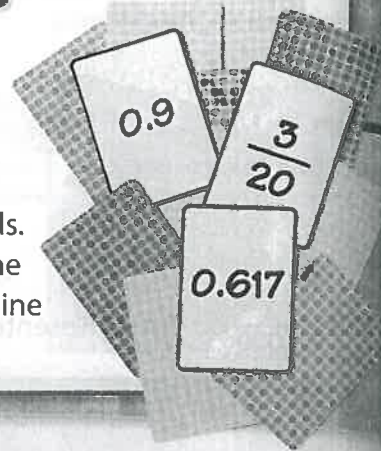


Understand It!
A point on a number line can represent a number that has both a fraction and a decimal name.

Fractions and Decimals on the Number Line

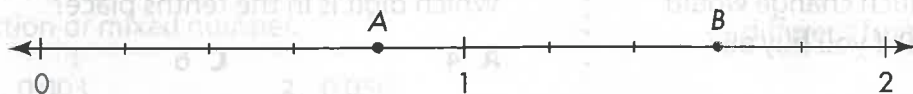
How can you locate fractions and decimals on the same number line?

Jules is playing a game in which she chooses 3 cards. Each is labeled with a fraction or a decimal. Then she must locate a point for each number on a number line that is divided into 10 segments between 0 and 1.



Another Example How can you name points on a number line?

What fraction or mixed number can name Point A? Point B?
What decimal can name Point A? Point B?



The segment between 0 and 1 is divided into 5 equal parts. So, Point A is named by $\frac{4}{5}$. You could use division to change $\frac{4}{5}$ to 0.8. Point B is named by $1\frac{3}{5}$.

Since $3 \div 5 = 0.6$, another name for Point B is 1.6.

$$\begin{array}{r} 0.8 \\ 5 \overline{)4.0} \\ \underline{-40} \\ 0 \end{array} \qquad \begin{array}{r} 0.6 \\ 5 \overline{)3.0} \\ \underline{-30} \\ 0 \end{array}$$

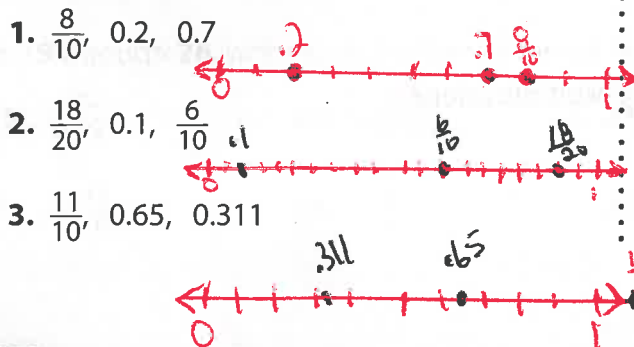
Explain It

1. Which is farther to the right on the number line, $\frac{1}{4}$ or 0.2? Why?

Guided Practice*

Do you know HOW?

Show each set of numbers on the same number line.



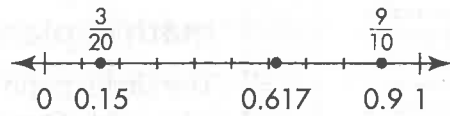
Do you UNDERSTAND?

- Is $\frac{9}{10}$ to the left or right of 1 on the number line? Explain.
- Will 0.617 be to the left or right of $\frac{6}{10}$ on a number line?
- Writing to Explain** Explain how you can find 0.311 on the number line.

What You Think

- I know that 0.9 also means $\frac{9}{10}$. I can easily locate $\frac{9}{10}$.
- I know that $\frac{3}{20}$ means $3 \div 20$. I can divide to find $3 \div 20 = 0.15$.
0.1 = 0.10 and 0.2 = 0.20. So, 0.15 is halfway between 0.1 and 0.2.
- 0.6 = 0.600 and 0.7 = 0.700. So 0.617 is between 0.6 and 0.7. It is closer to 0.6 than 0.7.

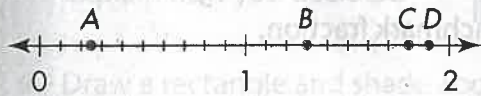
What You Show



Independent Practice

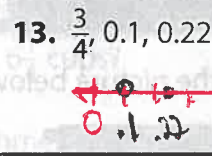
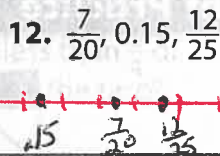
In 7 through 10, name the fraction or mixed number and decimal that identifies each point.

Tip Remember to count over from 0 on the number line to find the number of parts of the whole.



7. Point A $\frac{25}{100}$ 0.25 8. Point B $1\frac{3}{10}$ 1.3 9. Point C $1\frac{9}{10}$ 1.9 10. Point D $1\frac{9}{10}$ 1.9

Draw a number line to show each set of numbers. Then order the numbers from least to greatest.



Problem Solving

14. **Number Sense** Nadia has $2\frac{1}{2}$ pounds of tomatoes, 2.7 pounds of chicken, 2.1 pounds of celery, and $2\frac{2}{5}$ pounds of tomatillos. Which food weighs the most?

Chicken

16. If you located the following numbers on a number line, which would be closest to 0?

0.2, $\frac{2}{100}$, $\frac{3}{5}$, $\frac{2}{20}$

A 0.2

C $\frac{3}{5}$

B $\frac{2}{100}$

D $\frac{2}{20}$

15. The top three scores in an ice-dancing competition were 60.53, 59.29, and 61.07. Order the scores from least to greatest.

59.29 60.53 61.07

17. Chris bought an apple for \$0.58 with a \$1 bill and received \$0.42 in change. What is the least number of coins he could have received?

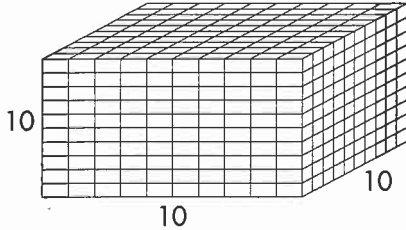
A 4

C 6

B 5

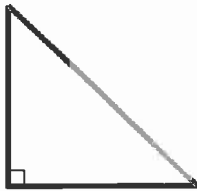
D 7

1. The drawing shows a stack of 1,000 bricks at a home improvement store.



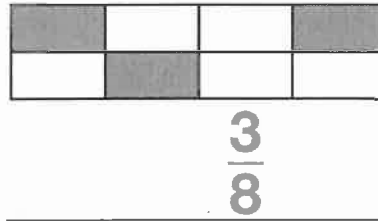
A customer buys 15 bricks from the stack. Which decimal names the fraction of the stack that is left?

- A 985,000.00
 - B 9,850.00
 - C 0.985**
 - D 0.00985
2. Which best describes the black lines in this right triangle?



- A Obtuse
- B Parallel
- C Reflections
- D Perpendicular**

3. What fraction of the drawing is shaded?



4. The table shows the area of four counties.

County	Area (square miles)
Bexar	1,246
El Paso	1,013
Travis	989
Williamson	1,122

What is the total area of Travis County and Williamson County?

2,111 square miles

5. List the four counties in the table above in order from least to greatest area.

**Travis, El Paso,
Williamson, Bexar**

Problem of the Day 9-10

Continue each pattern:

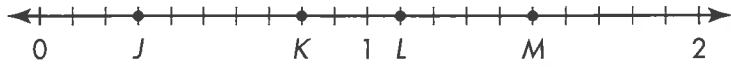
1.2, 1.0, 0.8, 0.6, 0.4, 0.2, ...

0.09, 0.18, 0.27, 0.36, 0.45, 0.54, ...

0.92, 0.95, 0.98, 1.01, 1.04, 1.07, ...

Problem of the Day
9-10

In 1 and 2, use the number line below to find the best answer.



1. What decimal identifies Point M ?

- A 0.5
- B 1.0
- C 1.5
- D 2.0

2. What fraction or mixed number identifies Point L ?

- A $\frac{20}{10}$
- B $1\frac{3}{10}$
- C $1\frac{1}{10}$
- D $\frac{1}{10}$

3. **Writing to Explain** Draw a number line to show $\frac{6}{10}$, 0.85, and $\frac{5}{20}$. Then order the numbers from least to greatest. Explain how you determined their order.

See student samples at the right.

