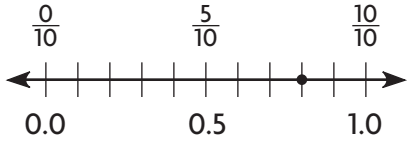
Name _____

Relate Tenths and Decimals

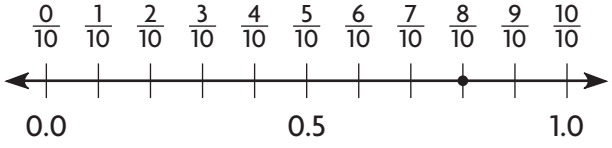
Write the fraction and the decimal that are shown by the point on the number line.



Step 1 Count the number of equal parts of the whole shown on the number line. There are ten equal parts.

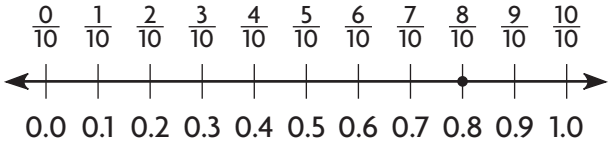
This tells you that the number line shows tenths.

Step 2 Label the number line with the missing fractions. What fraction is shown by the point on the number line?



The fraction shown by the point on the number line is $\frac{8}{10}$.

Step 3 Label the number line with the missing decimals. What decimal is shown by the point on the number line?

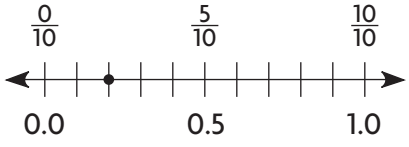


The decimal shown by the point on the number line is **0.8**.

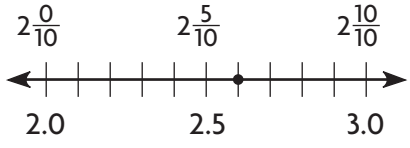
So, the fraction and decimal shown by the point on the number line are $\frac{8}{10}$ and **0.8**.

Write the fraction or mixed number and the decimal shown by the model.

1.



2.

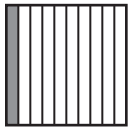
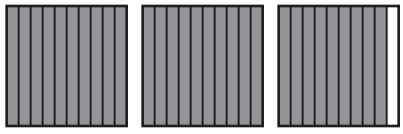
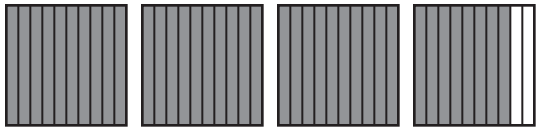
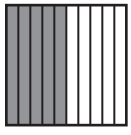


_____ _____

Name _____

Model, Decimal, and Fraction

In each row of the table below, a model, a decimal, and a fraction or mixed number are shown for the same amount. Fill in the missing information.

Model	Decimal	Fraction or Mixed Number
1. 	0.1	
2. 		$2\frac{9}{10}$
3.	1.4	
4. 		
5.		$3\frac{3}{10}$
6. 		

7. In addition to the models used, in what other way could you represent the decimals, fractions, and mixed numbers?

_____

_____

8. Write Math Describe how you filled in the missing model and fraction when only the decimal 1.4 was given.

_____

_____

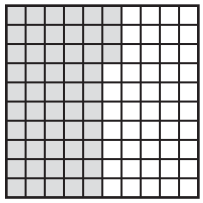
_____

_____

Name _____

Relate Hundredths and Decimals

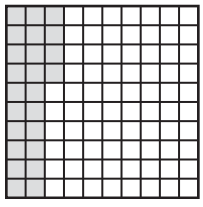
Write the fraction or mixed number and the decimal shown by the model.



Step 1 Count the number of shaded squares in the model and the total number of squares in the whole model.	Number of shaded squares: 53 Total number of squares: 100
Step 2 Write a fraction to represent the part of the model that is shaded.	$\frac{\text{Number of Shaded Squares}}{\text{Total Number of Squares}} = \frac{53}{100}$ The fraction shown by the model is $\frac{53}{100}$.
Step 3 Write the fraction in decimal form.	**Think:** The fraction shown by the model is $\frac{53}{100}$. 0.53 names the same amount as $\frac{53}{100}$. The decimal shown by the model is 0.53.
The fraction and decimal shown by the model are $\frac{53}{100}$ and 0.53.	

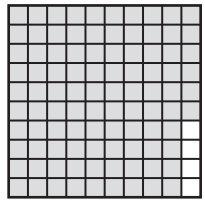
Write the fraction or mixed number and the decimal shown by the model.

1.



_____

2.

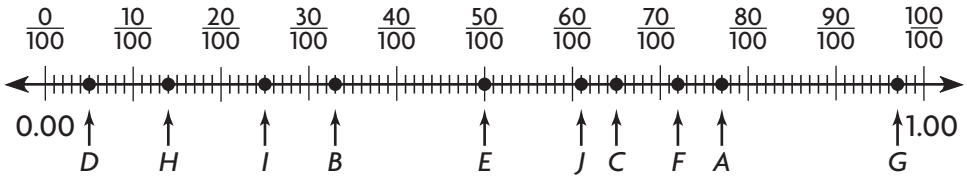


_____

Name _____

Which Hundredth Is It?

The number line below shows ten points, each labeled with a letter.



For each fraction or decimal, write the letter that shows its position on the number line.

1. $\frac{65}{100}$ _____

2. $\frac{72}{100}$ _____

3. 0.25 _____

4. $\frac{97}{100}$ _____

5. $\frac{33}{100}$ _____

6. 0.14 _____

7. $\frac{5}{100}$ _____

8. 0.77 _____

9. 0.61 _____

10. 0.50 _____

11. Between which two letters would 0.75 be located? _____

12. Write Math Describe how you would order the ten fractions and decimals above from least to greatest.

_____

_____

_____

_____

Name _____

Equivalent Fractions and Decimals

Lori ran $\frac{20}{100}$ mile. How many tenths of a mile did she run?

Write $\frac{20}{100}$ as an equivalent fraction with a denominator of 10.

Step 1 **Think:** 10 is a common factor of the numerator and the denominator.

Step 2 Divide the numerator and denominator by 10.

$$\frac{20}{100} = \frac{20 \div 10}{100 \div 10} = \frac{2}{10}$$

So, Lori ran $\frac{2}{10}$ mile.

Use a place-value chart.

Step 1 Write $\frac{20}{100}$ as an equivalent decimal.

Ones	·	Tenths	Hundredths
0	·	2	0

Step 2 **Think:** 20 hundredths is 2 tenths 0 hundredths

Ones	·	Tenths
0	·	2

So, Lori ran 0.2 mile.

Write the number as hundredths in fraction form and decimal form.

1. $\frac{9}{10}$ **2.** 0.6 **3.** $\frac{4}{10}$

_____ _____ _____

Write the number as tenths in fraction form and decimal form.

4. $\frac{70}{100}$ **5.** $\frac{80}{100}$ **6.** 0.50

_____ _____ _____

Name _____

Matching Fractions and Decimals

Match each fraction or decimal in Column A with an equivalent fraction or decimal in Column B.

Column A	Column B
$\frac{2}{5}$	0.72
0.65	$\frac{1}{5}$
$\frac{18}{25}$	0.05
$\frac{9}{20}$	$\frac{3}{5}$
0.5	0.45
0.20	0.4
$\frac{3}{25}$	0.75
$\frac{3}{4}$	$\frac{13}{20}$
0.6	$\frac{1}{2}$
$\frac{1}{20}$	0.12

Write Math **Explain** how you found the match for $\frac{9}{20}$.

_____

_____

_____

_____

Name _____

Relate Fractions, Decimals, and Money

Write the total money amount. Then write the amount as a fraction and as a decimal in terms of a dollar.

Step 1 Count the value of coins from greatest to least.
Write the total money amount.

$0.25 → $0.35 → $0.40 → $0.45 → $0.50

Step 2 Write the total money amount as a fraction of a dollar.

The total money amount is $0.50, which is the same as 50 cents.

Think: There are 100 cents in a dollar.

So, the total amount written as a fraction of a dollar is:

$$\frac{50 \text{ cents}}{100 \text{ cents}} = \frac{50}{100}$$

Step 3 Write the total money amount as a decimal.

Think: I can write $0.50 as 0.50.

The total money amount is $\frac{50}{100}$ written as a fraction of a dollar, and 0.50 written as a decimal.

Write the total money amount. Then write the amount as a fraction or a mixed number and as a decimal in terms of a dollar.

1.

2.

Name _____

Money Matters

For each fraction, write as a money amount and as a decimal in terms of dollars. Then write a combination of quarters, dimes, nickels, and pennies you could use to make that money amount.

1. $\frac{56}{100}$ _____ _____

2. $\frac{75}{100}$ _____ _____

3. $\frac{16}{100}$ _____ _____

4. $\frac{5}{100}$ _____ _____

5. $\frac{35}{100}$ _____ _____

6. $\frac{70}{100}$ _____ _____

7. $\frac{68}{100}$ _____ _____

8. $\frac{99}{100}$ _____ _____

9. $\frac{3}{100}$ _____ _____

10. $\frac{33}{100}$ _____ _____

11. Which fraction above can only be represented by one combination of coins? _____

12. Write Math Numbers that are represented as hundredths can sometimes also be represented as tenths. Use one of the fractions above to explain this possibility. Use money to support your answer.

_____

_____

_____

Name _____

Problem Solving • Money

Use the strategy *act it out* to solve the problem.

Jessica, Brian, and Grace earned $7.50. They want to share the money equally. How much will each person get?

Read the Problem	Solve the Problem
What do I need to find? I need to find the amount of money each person should get.	• Show the total amount, $7.50, using 7 one-dollar bills and 2 quarters. 
What information do I need to use? I need to use the total amount, $7.50, and divide it by 3, the number of people sharing the money equally.	• Share the one-dollar bills equally.  There is 1 one-dollar bill left.
How will I use the information? I will use dollar bills and coins to model the total amount and act out the problem.	• Change the dollar bill that is left for 4 quarters. Now there are 6 quarters. • Share the quarters equally.  So, each person gets 2 one-dollar bills and 2 quarters, or $2.50.

1. Jacob, Dan, and Nathan were given $6.90 to share equally. How much money will each boy get?

_____

2. Becky, Marlis, and Hallie each earned $2.15 raking leaves. How much did they earn together?

_____

Name _____

School Store

You are the cashier at the school store. Find how much change each customer should receive.

1. 1 notebook: $0.70
1 pencil: $0.15

The student pays with a $1 bill.

_____

2. 1 pen: $0.75
1 highlighter: $0.40
1 eraser: $0.25

The student pays with a $5 bill.

_____

3. 2 notebooks: $0.85 each
1 glue stick: $0.90
1 sheet of stickers: $0.28

The student pays with a $5 bill.

_____

4. 1 writing tablet: $1.30
3 pencils: $0.18 each
2 pens: $1.07 each

The student pays with a $10 bill.

_____

5. Write Math **Explain** how you found the correct change for the customer in Exercise 3.

_____

_____

_____

_____

Name _____

Add Fractional Parts of 10 and 100

Sam uses 100 glass beads for a project. Of the beads, $\frac{35}{100}$ are gold and $\frac{4}{10}$ are silver. What fraction of the glass beads are gold or silver?

Add $\frac{35}{100}$ and $\frac{4}{10}$.

Step 1 Decide on a common denominator. Use 100.

Step 2 Write $\frac{4}{10}$ as an equivalent fraction with a denominator of 100.

$$\frac{4}{10} = \frac{4 \times 10}{10 \times 10} = \frac{40}{100}$$

Step 3 Add $\frac{35}{100}$ and $\frac{40}{100}$.

$$\frac{35}{100} + \frac{40}{100} = \frac{75}{100}$$

← Add the numerators.
← Use 100 as the denominator.

So, $\frac{75}{100}$ of the glass beads are gold or silver.

Add $0.26 and $0.59.

Step 1 Write each amount as a fraction of a dollar.

$0.26 = $\frac{26}{100}$ of a dollar $0.59 = $\frac{59}{100}$ of a dollar

Step 2 Add $\frac{26}{100}$ and $\frac{59}{100}$.

$$\frac{26}{100} + \frac{59}{100} = \frac{85}{100}$$

← Add the numerators.
← 100 is the common denominator.

Step 3 Write the sum as a decimal.

$$\frac{85}{100} = 0.85$$

So, $0.26 + $0.59 = $0.85.

Find the sum.

1. $\frac{75}{100} + \frac{2}{10} =$ _____

2. $0.73 + $0.25 = $ _____

$$\frac{73}{100} + \frac{25}{100} = \frac{\quad}{\quad}$$

Name _____

Adding Fractions and Decimals

Use the trail information to find the distance each person hiked.

Trail Information
Nature Center to Eagle's Nest……0.8 miles
Eagle's Nest to Waterfall……$\frac{53}{100}$ miles
Nature Center to Rickety Bridge…….$\frac{6}{10}$ miles
Waterfall to Rickety Bridge……..0.32 miles

1. Joni hiked from the Nature Center to Rickety Bridge and then from Rickety Bridge to the Waterfall.

_____

_____

2. Aaron hiked from the Nature Center to Eagle's Nest and then from Eagle's Nest to the Waterfall.

_____

_____

3. Iffat hiked from Eagle's Nest to the Waterfall, then to the Rickety Bridge, and then back to the Waterfall.

_____

_____

4. Troy hiked from the Nature Center to Eagle's Nest, then on to the Waterfall, from there to the Rickety Bridge, and then back to the Nature Center.

_____

_____

5. Stretch Your Thinking The Log Cabin is located near the Eagle's Nest, but it is not on the trail. It is a hike of 0.43 mile from Eagle's Nest. If the hiker in Exercise 4 also hiked to the Log Cabin and back to Eagle's Nest, how long would his total hike be?

_____

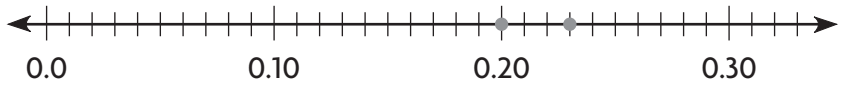
Name _____

Compare Decimals

Alfie found 0.2 of a dollar and Gemma found 0.23 of a dollar.
Which friend found more money?

To compare decimals, you can use a number line.

Step 1 Locate each decimal on a number line.



Step 2 The number farther to the right is greater.

0.23 > **0.2**, so **Gemma** found more money.

To compare decimals, you can compare equal-size parts.

Step 1 Write 0.2 as a decimal in hundredths.

0.2 is 2 tenths, which is equivalent to **20** hundredths.

0.2 = **0.20**

Step 2 Compare.

23 hundredths **is greater than** 20 hundredths,
so **0.23** > **0.2**.

So, **Gemma** found more money.

Compare. Write <, >, or =.

1. 0.17 ◯ 0.13 **2.** 0.8 ◯ 0.08 **3.** 0.36 ◯ 0.63 **4.** 0.4 ◯ 0.40

5. 0.75 ◯ 0.69 **6.** 0.3 ◯ 0.7 **7.** 0.45 ◯ 0.37 **8.** 0.96 ◯ 0.78

Name _____

Comparing Decimals

Solve each problem.

1. Abby ran the 50-yard dash in 7.05 seconds. Barb's time was 7.5 seconds. Chris's time was 6.94 seconds. List the runners in order from fastest to slowest.

_____

_____

2. Nick's bag weighs 5.4 kilograms. Amelia's bag weighs 2.26 kilograms. Henrik's bag weighs 4.4 kilograms. List the weights of the bags from lightest to heaviest.

_____

_____

3. Jeremy has three lengths of string. One is 8.3 centimeters long. The second string is 8.32 centimeters long and the third string is 8.27 centimeters long. Order the lengths of Jeremy's strings from longest to shortest.

_____

_____

4. A science class is testing model planes. Group A's plane flew 9.35 meters. Group B's plane flew 9.6 meters. Group C's plane flew 10.04 meters. Group D's plane flew 9.57 meters. Which group's plane flew the shortest distance? the longest distance?

_____

_____

5. Write Math How do you compare decimals when the digits to the left of the decimal point are not 0?

_____

_____

_____

_____

_____