

# **Comparing and Ordering Fractions, Decimals and Percents**

Lesson 6-2

## Essential Question

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- How can you order numbers that are written as fractions, decimals, and percents?

**Answer:** Write the numbers either as all fractions, all decimals, or all percents.

**Study Tip:** It's usually easier to order decimals or percents.

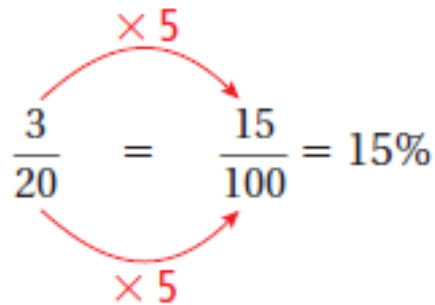
# Example 1

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a. Which is greater,  $\frac{3}{20}$  or 16%?

Write  $\frac{3}{20}$  as a percent.

**Hint:** Since 20 is a factor of 100, it would be easier to multiply the numerator and denominator by 5.

$$\frac{3}{20} = \frac{15}{100} = 15\%$$
A diagram illustrating the conversion of the fraction 3/20 to 15/100. It shows the fraction 3/20 on the left, followed by an equals sign, then the fraction 15/100, followed by another equals sign and 15%. Two red curved arrows connect the two fractions. The top arrow points from 3 to 15 and is labeled 'x 5'. The bottom arrow points from 20 to 100 and is also labeled 'x 5'.

► 15% is less than 16%. So, 16% is the greater number.

# Example 1

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b. Which is greater, 79% or 0.08?

Write 79% as a decimal.

$$79\% = \underset{\text{↺}}{79}\% = 0.79$$



0.79 is greater than 0.08, So, 79% is the greater number.

# On Your Own

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1. Which is greater,  $\frac{7}{25}$  or 25%?

$\frac{7}{25}$  is equivalent to 28%, so  $\frac{7}{25}$  is the greater number.

2. Which is greater, 0.49 or 94%?

0.49 is equivalent to 49%, so 94% is the greater number.

## Example 2: Real Life Application

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You, your sister, and a friend each take the same number of shots at a soccer goal. You make 72% of your shots, your sister makes 19 out of 25 of her shots, and your friend makes 0.67 of her shots. Who made the fewest shots?

Which method should we use? Should we change them all to percents or decimals?

## Example 2: Real Life Application

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You, your sister, and a friend each take the same number of shots at a soccer goal. You make 72% of your shots, your sister makes 19 out of 25 of her shots, and your friend makes 0.67 of her shots. Who made the fewest shots?

You: 72%

Your Sister:  $\frac{19}{25} \times \frac{4}{4} = \frac{76}{100} = 76\%$

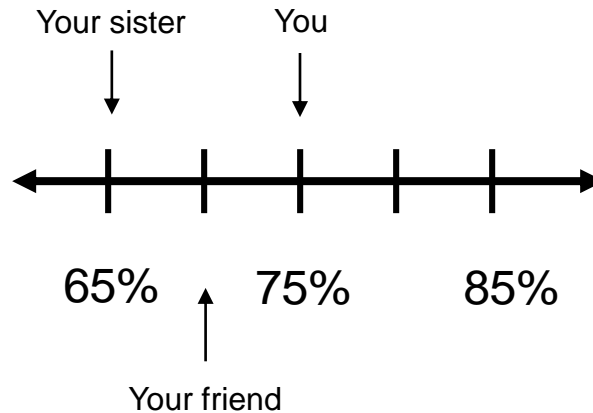
Your Friend:  $0.67 = 67\%$

Order from least to greatest: 0.67, 72%,  $\frac{19}{25}$

# On Your Own

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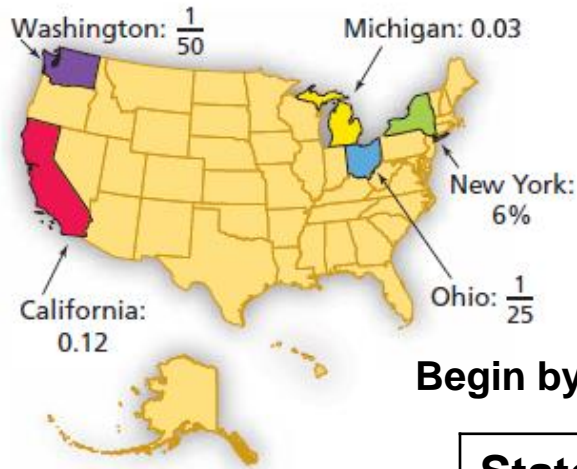
WHAT IF? You make 75% of your shots, your sister makes  $\frac{13}{20}$ , and your friend makes 0.7 of his shots. Who made the most shots? Order them from least to greatest on a number line.



You made the most shots.



# Example 3: Real Life Application



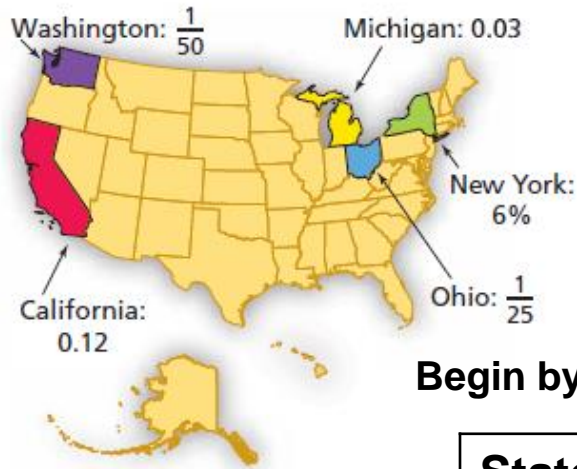
The map shows the portions of the U.S. population that live in five states.

List the five states in order by population from least to greatest.

Begin by writing each portion as a fraction, decimal, and a percent.

State	Fraction	Decimal	Percent
Michigan		0.03	
New York			6%
Washington	1/50		
California		0.12	
Ohio	1/25		

# Example 3: Real Life Application



The map shows the portions of the U.S. population that live in five states.

List the five states in order by population from least to greatest.

**Washington, Michigan, Ohio, New York, California.**

Begin by writing each portion as a fraction, decimal, and a percent.

State	Fraction	Decimal	Percent
Michigan	$\frac{3}{100}$	0.03	3%
New York	$\frac{3}{50}$	0.06	6%
Washington	$\frac{1}{50}$	0.02	2%
California	$\frac{3}{25}$	0.12	12%
Ohio	$\frac{1}{25}$	0.04	4%