

# Lesson 6.2:

## Comparing and Ordering Fractions, Decimals, and Percents

### Essential Question

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

#### Activity 3: The Game of Math Card War

- Play with a partner--One of you must use your journal pgs. 263 & 265 for the cards. Both of you help to cut them out.
- Mix them all up and deal 20 cards to each player facedown.
- Each player turns one card faceup. The player with the greater number wins. The winner collects both cards and places them at the bottom of his or her cards.
- If there is a tie....go to war! Each player lays three cards facedown, then a new card faceup. The player with the greater of these new cards wins. The winner collects all 10 cards and places them at the bottom of his or her cards.
- Continue playing until one player has all the cards. This player wins the game!

**Example 1:**

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

$$\frac{3 \cdot 5}{20 \cdot 5} = \frac{15}{100} = 15\%$$

b. Which is greater, 79% or 0.08?

$$79\% = 0.79$$

**6.2 Notes**

Get out your spiral notebook and calculator!

We need to convert one value so that they both are in the same form -- fraction, decimal, or percent.

Making them both fractions can be a less reliable strategy, since you need a common denominator in order to easily compare.

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

$$\frac{7 \cdot 4}{25 \cdot 4} = \frac{28}{100} = 28\%$$

Example 2:

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  $\frac{19}{25}$  of her shots, and your friend makes 0.67 of his shots. Who made the fewest shots?

$$\text{You: } 72\%$$

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

$$\text{Friend: } 0.67 = 67\%$$

2. You make 75% of your shots, your sister makes  $\frac{13}{20}$  of her shots, and your friend makes 0.7 of his shots. Who made the most shots?

$$\text{You: } 75\%$$

$$\text{Sister: } \frac{13}{20} \times \frac{5}{5} = \frac{65}{100} = 65\%$$

$$\text{Friend: } 0.7 = 70\%$$

**Example 3:**

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.

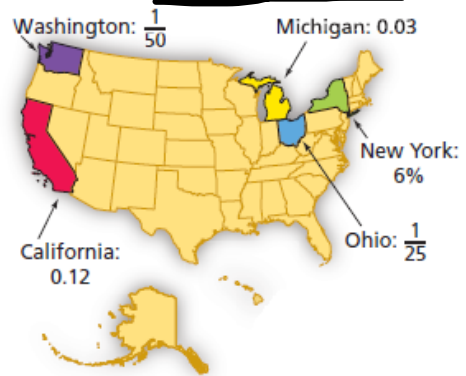
$$W: \frac{1}{50} \times 2 = \frac{2}{100} = 2\%$$

$$C: 0.12 = 12\%$$

$$M: 0.03 = 3\%$$

$$O: \frac{1}{25} \times 4 = \frac{4}{100} = 4\%$$

$$N: 6\%$$



Washington, Michigan, Ohio, New York, California

3. The portion of the U.S. population that lives in Texas is  $\frac{2}{25}$ .

The portion that lives in Illinois is 0.042. Reorder the states in

Example 3 including Texas and Illinois.

$$T: \frac{2}{25} \times 4 = \frac{8}{100} = 8\%$$

$$I: 0.042 = 4.2\%$$

Washington, Michigan, Ohio, New York, California

Washington, Michigan, Ohio, Illinois,  
New York, Texas, California

**Example 4:**

Complete this table of common fractions, decimals, and percents.

<b>Fraction</b>	$\frac{1}{4}$	$\frac{3}{10}$	$\frac{1}{2}$	$\frac{2}{5}$	$\frac{1}{20}$	$\frac{3}{20}$	$\frac{7}{10}$	$\frac{3}{4}$	$\frac{1}{5}$	1
<b>Decimal</b>	0.25	0.3	0.5	0.4	0.05	0.15	0.7	0.75	0.2	1
<b>Percent</b>	25%	30%	50%	40%	5%	15%	70%	75%	20%	100%