Compare Unit Fractions on the Number Line   Example

$$\frac{1}{3} \qquad \frac{1}{2}$$

$$0 \qquad\qquad 1$$

Step 1: Place the following unit fractions on the number line above. Mark and label the locations of zero and one. Use the denominators of the unit fractions to partition the line between zero and one into equal segments. Use the numerators to determine where each fraction is located.

$$\frac{1}{3} \qquad \frac{1}{2}$$

Step 2: Determine which of the unit fractions is largest and which is smallest.

Step 3: Write the unit fractions in order from smallest to largest:

One-half is farther to the right of the number line which means it is the larger number.

$$\frac{1}{3} \qquad\qquad \frac{1}{2}$$

smallest   largest

Step 4: Double check your work. Show another representation of each unit fraction to support your answer in step 3. Fractions can be thought of as part of a whole thing or part of a set of items.

one-third   one-half

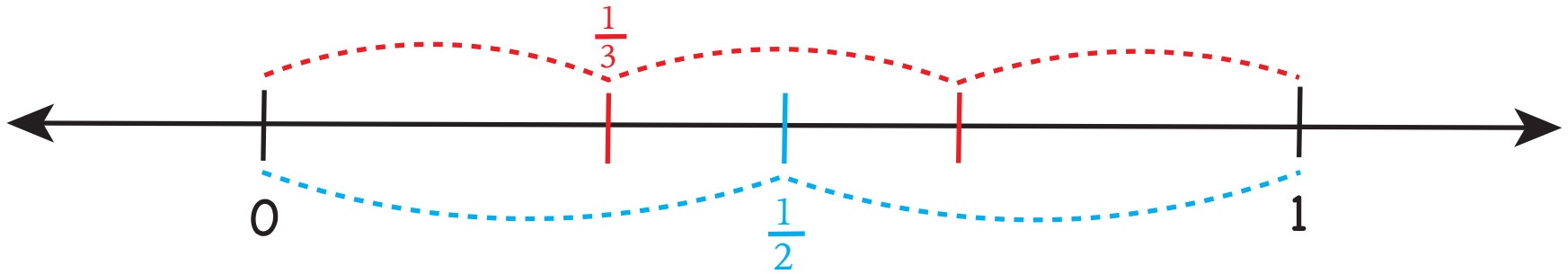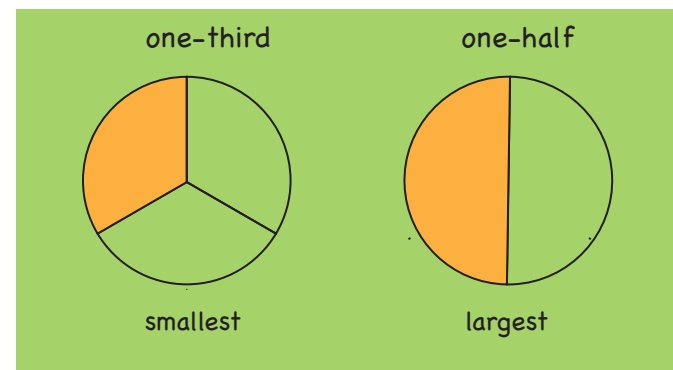
smallest   largest

Compare Unit Fractions on the Number Line

name:

Step 1: Place the following unit fractions on the number line above. Mark and label the locations of zero and one. Use the denominators of the unit fractions to partition the line between zero and one into equal segments. Use the numerators to determine where each fraction is located.

$$\frac{1}{\quad} \quad \frac{1}{\quad} \quad \frac{1}{\quad}$$

Step 2: Which of the unit fractions is largest and which is smallest?

Step 3: Write the unit fractions in order from smallest to largest:

Step 4: Double check your work. Show another representation of each unit fraction to support your answer in step 3. Fractions can be thought of as part of a whole thing or part of a set of items.

Compare Unit Fractions on the Number Line   Teacher Tips

Begin with two unit fractions that will be easy for your students to locate on the number line.
Increase the level of difficulty by using unfamiliar unit fractions or comparing more than two unit fractions.

←——→

Encourage your students to plan the length of the line segment between zero and one carefully.
This activity is easier when the measurement between zero and one
is a multiple of the denominators in both unit fractions.

Step 1: Place the following unit fractions on the number line above. Mark and label the locations of zero and one. Use the denominators of the unit fractions to partition the line between zero and one into equal segments. Use the numerators to determine where each fraction is located.

$$\frac{1}{\quad} \qquad \frac{1}{\quad} \qquad \frac{1}{\quad}$$

Write in the denominators of your choice or let students choose.

Step 2: Determine which of the unit fractions is largest and which is smallest.

Step 4: Double check your work. Show another representation of each unit fraction to support your answer in step 3. Fractions can be thought of as part of a whole thing or part of a set of items.

Step 3: Write the unit fractions in order from smallest to largest:

There is an inverse relationship between the magnitude of the number in the denominator and the size of the unit fraction.

Have your students explore this inverse relationship in depth. They could make charts, graphs, or displays to show what is happening.

Larger denominators
mean smaller unit fractions.

Fractions can also be conceptualized as the answer in a division problem. Your students could use calculators to find the quotients.

Encourage students to sketch a simple doodle to show the unit fractions as part of a whole of part of a set. The idea is more important than measuring the equal pieces accurately in this case.