3.1.1 Are they the same?

Using the Multiplicative Identity

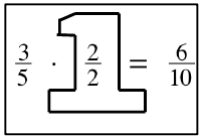
In this lesson, you will analyze a powerful tool for finding equivalent fractions.

Equivalent: _____

3-1 Ms. Vazquez has a reputation for telling math jokes. She started class today with this one: Ron was picking up his pizza at the takeout window. The clerk asked him, "Do you want your pizza cut into eight slices or twelve?" "You'd better cut it into eight slices," Ron replied. "I'm not hungry enough to eat twelve." Draw a diagram that illustrates this joke.

3-3 ONE-DERFUL ONE: Any fraction in which the numerator and denominator are the same is equivalent to 1. In addition, multiplying a number by 1 leaves that number unchanged.

We can use this idea to find a whole bunch of equivalent fractions. We will call it the GIANT ONE!"



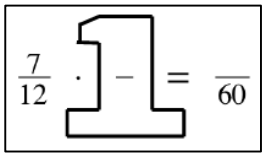
a) Is $\frac{3}{5}$ equivalent to $\frac{6}{10}$? How can you be sure?

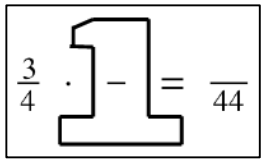
b) Find at least two other fractions or ratios that are equivalent to $\frac{3}{5}$. Use the giant one to show your work.

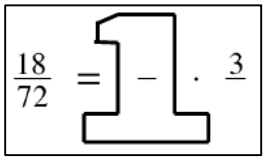
c) Use the idea of the Giant One to find at least four fractions that are equivalent to $\frac{9}{8}$.

3-5 SO MANY CHOICES: Bertrand was feeling confused. "There are so many ways to write the Giant One! How do I know which one to use?" he whined. How can Bertrand decide which Giant One to use? Answer the following questions and come up with a strategy.

a) Find the missing numbers in the fractions below.







b) What calculation could help you find the numbers to use in the Giant Ones?

3-6 Use what you have discovered about finding the necessary Giant Ones to complete the following problem.

a) How is the Giant One that you used here different from the ones that you found in problem 3-5?

b) Can you think of a different way to make sense of this problem?