

Fractions that name the same value are called equivalent fractions, such as $\frac{2}{3} = \frac{6}{9}$. One method for finding equivalent fractions is to use the Multiplicative Identity (Identity Property of Multiplication), that is, multiplying the given fraction by a form of the number 1 such as $\frac{2}{2}$, $\frac{5}{5}$, etc. In this course we call these fractions a “Giant One.” Multiplying by 1 does not change the value of a number.

For additional information, see the Math Notes box in Lesson 3.1.1 of the *Core Connections, Course 1* text.

Example 1

Find three equivalent fractions for $\frac{1}{2}$.

$$\frac{1}{2} \cdot \frac{2}{2} = \frac{2}{4}$$

$$\frac{1}{2} \cdot \frac{3}{3} = \frac{3}{6}$$

$$\frac{1}{2} \cdot \frac{4}{4} = \frac{4}{8}$$

Example 2

Use the Giant One to find an equivalent fraction to $\frac{7}{12}$ using 96ths: $\frac{7}{12} \cdot \frac{\quad}{\quad} = \frac{?}{96}$

Which Giant One do you use?

Since $\frac{96}{12} = 8$, the Giant One is $\frac{8}{8}$:
$$\frac{7}{12} \cdot \frac{8}{8} = \frac{56}{96}$$

Problems

Use the Giant One to find the specified equivalent fraction. Your answer should include the Giant One you use and the equivalent numerator.

1. $\frac{4}{3} \cdot \frac{\quad}{\quad} = \frac{?}{15}$

2. $\frac{5}{9} \cdot \frac{\quad}{\quad} = \frac{?}{36}$

3. $\frac{9}{2} \cdot \frac{\quad}{\quad} = \frac{?}{38}$

4. $\frac{3}{7} \cdot \frac{\quad}{\quad} = \frac{?}{28}$

5. $\frac{5}{3} \cdot \frac{\quad}{\quad} = \frac{?}{18}$

6. $\frac{6}{5} \cdot \frac{\quad}{\quad} = \frac{?}{15}$