

**Example 1:** Write  $\frac{3}{8}$  as an equivalent fraction with a denominator of 24.

$\frac{3}{8} \times \frac{?}{?} = \frac{?}{24}$  First, determine what factor is needed to change the denominator, 8, to 24 ( $3 \times 8 = 24$ ).

$\frac{3}{8} \times \frac{3}{3} = \frac{9}{24}$  Multiply both numerator and denominator by **3**. Multiplying by  $\frac{3}{3}$  is the same as multiplying by 1 (because  $3 \div 3 = 1$ ). The same is true for multiplying by  $\frac{2}{2}$ ,  $\frac{7}{7}$ ,  $\frac{18}{18}$ , etc.

**Example 2:** Reduce  $\frac{24}{32}$  to its lowest terms.

$\frac{24}{32} \div \frac{?}{?} = \frac{?}{4}$  First, determine the largest number (Greatest Common Factor, GCF) that will divide into the numerator **and** denominator.  $24 \div 8 = 3$  and  $32 \div 8 = 4$

$\frac{24}{32} \div \frac{8}{8} = \frac{3}{4}$  Divide numerator and denominator by **8 (GCF)** to reduce it to lowest terms. Dividing by  $\frac{8}{8}$  is the same as dividing by 1 (because  $8 \div 8 = 1$ ). The same is true for dividing by  $\frac{10}{10}$ ,  $\frac{35}{35}$ , etc.

1. List ten different ways to express the number ONE (1), as in the example above.

**1** =  $\frac{\quad}{\quad}$   $\frac{\quad}{\quad}$   $\frac{\quad}{\quad}$   $\frac{\quad}{\quad}$   $\frac{\quad}{\quad}$   $\frac{\quad}{\quad}$   $\frac{\quad}{\quad}$   $\frac{\quad}{\quad}$   $\frac{\quad}{\quad}$   $\frac{\quad}{\quad}$

2. Rename these fractions by multiplying by a form of ONE. Refer to example 1.

$\frac{2}{3} \times \frac{\quad}{\quad} = \frac{\quad}{6}$      $\frac{5}{6} \times \frac{\quad}{\quad} = \frac{\quad}{18}$      $\frac{3}{10} \times \frac{\quad}{\quad} = \frac{9}{\quad}$      $\frac{3}{5} \times \frac{\quad}{\quad} = \frac{\quad}{10}$

3. Reduce these fractions by dividing by a form of ONE. Refer to example 2.

$\frac{3}{9} \div \frac{\quad}{\quad} = \frac{\quad}{\quad}$      $\frac{6}{9} \div \frac{\quad}{\quad} = \frac{\quad}{\quad}$      $\frac{8}{10} \div \frac{\quad}{\quad} = \frac{\quad}{\quad}$      $\frac{4}{10} \div \frac{\quad}{\quad} = \frac{\quad}{\quad}$

Find these equivalent fractions.

1.  $\frac{9}{10} = \frac{\quad}{20}$

2.  $\frac{10}{13} = \frac{\quad}{39}$

3.  $\frac{7}{15} = \frac{\quad}{45}$

4.  $\frac{8}{12} = \frac{\quad}{36}$

5.  $\frac{5}{8} = \frac{\quad}{48}$

6.  $\frac{4}{9} = \frac{\quad}{45}$

7.  $\frac{15}{23} = \frac{\quad}{46}$

8.  $\frac{7}{17} = \frac{\quad}{51}$

9.  $\frac{3}{5} = \frac{\quad}{30}$

Reduce these fractions to lowest terms.

10.  $\frac{5}{10} = \text{---}$

11.  $\frac{18}{21} = \text{---}$

12.  $\frac{77}{99} = \text{---}$

13.  $\frac{45}{60} = \text{---}$

14.  $\frac{16}{48} = \text{---}$

15.  $\frac{63}{72} = \text{---}$

16.  $\frac{27}{45} = \text{---}$

17.  $\frac{39}{52} = \text{---}$

18.  $\frac{70}{100} = \text{---}$

1. 18    2. 30    3. 21    4. 24    5. 30    6. 20    7. 30    8. 21    9. 18  
10.  $\frac{1}{2}$     11.  $\frac{6}{7}$     12.  $\frac{7}{9}$     13.  $\frac{3}{4}$     14.  $\frac{1}{3}$     15.  $\frac{7}{8}$     16.  $\frac{3}{5}$     17.  $\frac{3}{4}$     18.  $\frac{7}{10}$