

# Least Common Multiple and Least Common Denominator

To rewrite two fractions with the same denominator, find their LCD (least common denominator). That's the LCM (least common multiple) of their denominators, or the least number that is a multiple of both numbers.

Rewrite  $\frac{5}{6}$  and  $\frac{4}{9}$  using their LCD.

First find the LCM of 6 and 9.

Write at least the first five multiples of 6: 6, 12, 18, 24, 30

Write multiples of 9 until you find one that is also a multiple of 6: 9, 18

18 is the LCM of 6 and 9.

Now write fractions equivalent to  $\frac{5}{6}$  and  $\frac{4}{9}$  using their LCD.

$$\frac{5}{6} = \frac{5 \times 3}{6 \times 3} = \frac{15}{18} \quad \frac{4}{9} = \frac{4 \times 2}{9 \times 2} = \frac{8}{18}$$

Use the LCD to rewrite the fractions.

1.  $\frac{3}{5}$  and  $\frac{2}{3}$

Multiples of 5: 5, \_\_\_\_\_

Multiples of 3: 3, \_\_\_\_\_

LCM of 5 and 3: \_\_\_\_\_

$$\frac{3}{5} = \frac{3 \times 3}{5 \times 3} = \frac{9}{15}$$

$$\frac{2}{3} = \frac{2 \times 5}{3 \times 5} = \frac{10}{15}$$

3.  $\frac{1}{4}$  and  $\frac{5}{6}$

Multiples of 4: \_\_\_\_\_

Multiples of 6: \_\_\_\_\_

LCM of 4 and 6: \_\_\_\_\_

$$\frac{1}{4} = \frac{1 \times 3}{4 \times 3} = \frac{3}{12}$$

$$\frac{5}{6} = \frac{5 \times 2}{6 \times 2} = \frac{10}{12}$$

2.  $\frac{1}{2}$  and  $\frac{5}{8}$

Multiples of 2: \_\_\_\_\_

Multiples of 8: \_\_\_\_\_

LCM of 2 and 8: \_\_\_\_\_

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

$$\frac{5}{8} = \frac{5}{8}$$

4.  $\frac{7}{8}$  and  $\frac{5}{12}$

Multiples of 8: \_\_\_\_\_

Multiples of 12: \_\_\_\_\_

LCM of 8 and 12: \_\_\_\_\_

$$\frac{7}{8} = \frac{7 \times 3}{8 \times 3} = \frac{21}{24}$$

$$\frac{5}{12} = \frac{5 \times 2}{12 \times 2} = \frac{10}{24}$$

5.  $\frac{4}{9}$  and  $\frac{3}{4}$  \_\_\_\_\_

6.  $\frac{2}{5}$  and  $\frac{7}{10}$  \_\_\_\_\_