

# Subtracting Fractions with Unlike Denominators

You can subtract fractions with unlike denominators by using the least common multiple (LCM) and the least common denominator (LCD).

Beth wants to exercise for  $\frac{4}{5}$  hour. So far, she has exercised for  $\frac{2}{3}$  hour. What fraction of an hour does she have left to go?

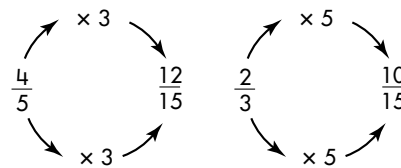
**Step 1:** Find the LCM of 5 and 3.

**multiples of 5:** 5, 10, 15, 20

**multiples of 3:** 3, 6, 9, 12, 15

Since 15 is the LCM, it is also your LCD.

**Step 2:** Using your LCD, write the equivalent fractions.

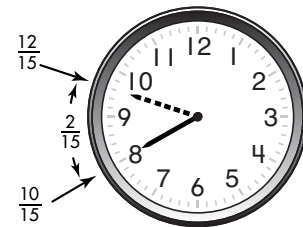


$$\frac{4}{5} = \frac{12}{15} \text{ and}$$

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

**Step 3:** Subtract the numerators.

Place the difference over the LCD. Simplify if possible.



$$\frac{12}{15} - \frac{10}{15} = \frac{2}{15}$$

Beth has  $\frac{2}{15}$  hour left.

In 1 through 7, find each difference. Simplify if possible.

1. 
$$\frac{3}{4} - \frac{2}{5}$$

2. 
$$\frac{7}{10} - \frac{1}{5}$$

3. 
$$\frac{8}{8} - \frac{4}{9}$$

4. 
$$\frac{17}{18} - \frac{2}{3}$$

5.  $\frac{7}{12} - \frac{1}{4} =$  \_\_\_\_\_

6.  $\frac{5}{6} - \frac{3}{8} =$  \_\_\_\_\_

7.  $\frac{23}{24} - \frac{7}{8} =$  \_\_\_\_\_

8. Natasha had  $\frac{7}{8}$  gallon of paint. Her brother Ivan took  $\frac{1}{4}$  gallon to paint his model boat. Natasha needs at least  $\frac{1}{2}$  gallon to paint her bookshelf. Did Ivan leave her enough paint?