Name _____

Practice Video Tools Games

# Additional Practice 7-4

## Subtract Fractions with Unlike Denominators

## Another Look!

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 exercise?

### Step 1

Find a common multiple.

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

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

Since 15 is a multiple of both 5 and 3, use 15 as a common denominator.

### Step 2

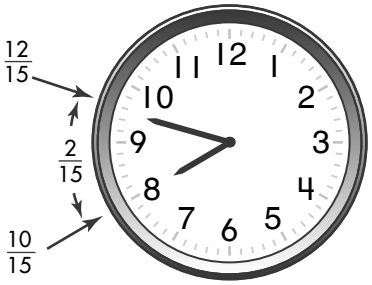
Write equivalent fractions.

$$\frac{4}{5} \times \frac{3}{3} = \frac{12}{15}$$
$$\frac{4}{5} = \frac{12}{15}$$

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

### Step 3

Subtract the numerators.




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

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

In **1–8**, find each difference.

**1.** $\frac{1}{3} = \frac{2}{6}$
$-\frac{1}{6} = \frac{1}{6}$
$\frac{1}{6}$

**2.** $\frac{2}{3} = \frac{8}{12}$
$-\frac{5}{12} = \frac{5}{12}$
$\frac{3}{12}$ or $\frac{1}{4}$

**3.** $\frac{3}{5} = \frac{9}{15}$
$-\frac{1}{3} = \frac{5}{15}$
$\frac{4}{15}$

**4.** $\frac{2}{9} = \frac{16}{72}$
$-\frac{1}{8} = \frac{9}{72}$
$\frac{7}{72}$

**5.** $\frac{3}{4} - \frac{2}{5} = \frac{7}{20}$

**6.** $\frac{4}{3} - \frac{2}{5} = \frac{14}{15}$

**7.** $\frac{8}{8} - \frac{4}{9} = \frac{5}{9}$

**8.** $\frac{17}{18} - \frac{2}{3} = \frac{5}{18}$

Use the table for **9** and **10**. The trail around Mirror Lake in Yosemite National Park is 5 miles long.

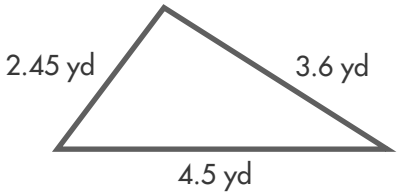
DATA

| Hiker | Fraction of Trail Hiked |
|---|---|
| Andrea | $\frac{2}{5}$ |
| Jon | $\frac{1}{2}$ |
| Callie | $\frac{4}{5}$ |

**9.** What fraction describes how much more of the trail Jon hiked than Andrea hiked? $\frac{1}{10}$

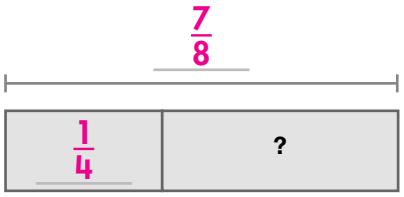
**10.** What fraction describes how much more of the trail Callie hiked than Jon hiked? $\frac{3}{10}$

**11.** **Critique Reasoning** Amy said that the perimeter of the triangle below is less than 10 yards. Do you agree with her? Why or why not?




**No; Sample answer: The sum of the whole numbers is 9 and the sum of the decimals is greater than 1. So, the perimeter has to be more than 10 yards.**

**12.** Eva had $\frac{7}{8}$ gallon of paint. Her brother Ivan used $\frac{1}{4}$ gallon to paint his model boat. Eva needs at least $\frac{1}{2}$ gallon to paint her bookshelf. Did Ivan leave her enough paint? Write an equation and fill in the bar diagram to solve.




**Yes.** $\frac{7}{8} - \frac{1}{4} = \frac{5}{8}$; $\frac{5}{8} > \frac{1}{2}$

**13.** Paul's dad made a turkey pot pie for dinner on Wednesday. The family ate $\frac{4}{8}$ of the pie. On Thursday after school, Paul ate $\frac{2}{16}$ of the pie for a snack. What fraction of the pie remained?

$\frac{3}{8}$ **of the pie**

**14.** **Higher Order Thinking** Write a real-world problem in which you would subtract fractions with unlike denominators. Then, solve your problem.

**Sample answer: Recipe 1 calls for $\frac{2}{3}$ cup of flour. Recipe 2 calls for $\frac{1}{2}$ cup of flour. How much more flour is needed for recipe 1?; $\frac{1}{6}$ cup**

## Assessment Practice

**15.** Choose the correct numbers from the box below to complete the subtraction sentence that follows.

| | | | | |
|---|---|---|---|---|
| $\frac{1}{2}$ | $\frac{5}{14}$ | $\frac{3}{7}$ | $\frac{1}{7}$ | $\frac{1}{14}$ |

$\boxed{\frac{1}{2}} - \frac{3}{7} = \boxed{\frac{1}{14}}$

**16.** Choose the correct numbers from the box below to complete the subtraction sentence that follows.

| | | | | |
|---|---|---|---|---|
| $\frac{3}{20}$ | $\frac{3}{5}$ | $\frac{1}{20}$ | $\frac{4}{5}$ | $\frac{7}{9}$ |

$\boxed{\frac{4}{5}} - \frac{3}{4} = \boxed{\frac{1}{20}}$