

**Another Look!**Find  $\frac{1}{6} + \frac{5}{8}$ .

Remember: A multiple is a product of the number and any nonzero whole number.



# Additional Practice 7-3

## Add Fractions with Unlike Denominators

**Step 1**

List multiples of the denominators.

Look for a multiple that is the same in both lists.

Choose the least one.

6: 6, 12, 18, 24, 30, 36, 42, 48

8: 8, 16, 24, 32, 40, 48

24 and 48 are common multiples of 6 and 8. 24 is the lesser of the two.

**Step 2**

Write equivalent fractions using the common multiple as the denominator.

$$\frac{1}{6} = \frac{1 \times 4}{6 \times 4} = \frac{4}{24}$$

$$\frac{5}{8} = \frac{5 \times 3}{8 \times 3} = \frac{15}{24}$$

**Step 3**

Add the fractions to find the total number of twenty-fourths.

$$\frac{4}{24} + \frac{15}{24} = \frac{4 + 15}{24} = \frac{19}{24}$$

$$\text{So, } \frac{1}{6} + \frac{5}{8} = \frac{19}{24}.$$

In 1–4, find each sum.

1.  $\frac{1}{2} + \frac{1}{6}$

Least multiple that is the same: 6

Add using renamed fractions:

$$\frac{3}{6} + \frac{1}{6} = \frac{4}{6} \text{ or } \frac{2}{3}$$

2.  $\frac{1}{9} + \frac{5}{6}$

Least multiple that is the same: 18

Add using renamed fractions:

$$\frac{2}{18} + \frac{15}{18} = \frac{17}{18}$$

3.  $\frac{4}{5} + \frac{1}{15}$

Least multiple that is the same: 15

Add using renamed fractions:

$$\frac{12}{15} + \frac{1}{15} = \frac{13}{15}$$

4.  $\frac{2}{8} + \frac{1}{2}$

Least multiple that is the same: 8

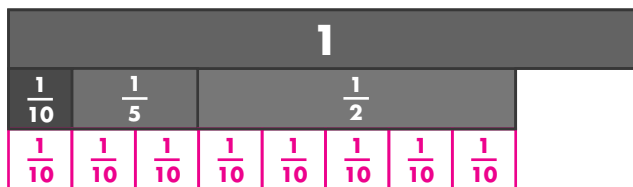
Add using renamed fractions:

$$\frac{2}{8} + \frac{4}{8} = \frac{6}{8} \text{ or } \frac{3}{4}$$



- 5. Model with Math** Before school, Janine spends  $\frac{1}{10}$  hour making the bed,  $\frac{1}{5}$  hour getting dressed, and  $\frac{1}{2}$  hour eating breakfast. What fraction of an hour does she spend doing these activities? Complete the drawing of fraction strips to show the solution.

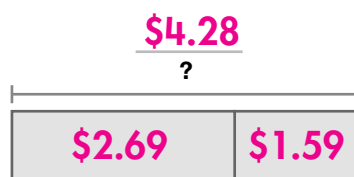
$\frac{4}{5}$  hour;  $\frac{8}{10} = \frac{4}{5}$



- 6. enVision® STEM** Hair color is an inherited trait. In Marci's family, her mother has brown hair. Her father has blond hair. The family has 6 children in all. Of the 6 children,  $\frac{1}{3}$  of them have blond hair,  $\frac{1}{6}$  of them have red hair, and  $\frac{1}{2}$  of them have brown hair. What fraction of the children have red or brown hair?

$\frac{2}{3}$  of the children

- 7.** Abdul bought a loaf of bread for \$1.59 and a package of cheese for \$2.69. How much did Abdul spend? Complete the diagram below.



- 8. Higher Order Thinking** Robert wants to walk one mile for exercise each day. He made a table to show the distance from his home to each of four different places. What is the total distance from home to the store and back home, and from home to the library and back home? If Robert walks this total distance, will he walk one mile? Explain how you found your answer.

$\frac{7}{10}$  mile; No. Sample answer:  $\frac{1}{4} + \frac{1}{4} = \frac{2}{4}$ ;  $\frac{1}{10} + \frac{1}{10} = \frac{2}{10}$ ;  $\frac{2}{4} + \frac{2}{10} = \frac{10}{20} + \frac{4}{20} = \frac{14}{20} = \frac{7}{10}$  mile;  $\frac{7}{10} < 1$

Walking Distances from Home to Each Place	
Place	Distance
Bank	$\frac{1}{5}$ mile
Library	$\frac{1}{10}$ mile
Park	$\frac{1}{2}$ mile
Store	$\frac{1}{4}$ mile



### Assessment Practice

- 9.** Which equations are true when  $\frac{2}{3}$  is placed in the box?

☒  $\frac{1}{3} + \frac{1}{3} = \square$

☐  $\frac{1}{6} + \frac{1}{6} = \square$

☒  $\square + \frac{6}{9} = \frac{4}{3}$

☐  $\frac{2}{5} + \square = \frac{14}{15}$

- 10.** Which equations are true when  $\frac{4}{5}$  is placed in the box?

☒  $\frac{1}{5} + \square = 1$

☒  $\frac{1}{2} + \frac{3}{10} = \square$

☒  $\frac{7}{10} + \frac{1}{10} = \square$

☐  $\square + \frac{1}{15} = \frac{14}{15}$