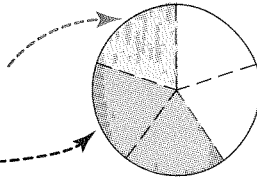


Lesson 1 Addition (fractions)

$\frac{1}{5}$ of the figure is blue.

$\frac{2}{5}$ of the figure is grey.

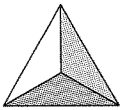
$\frac{3}{5}$ of the figure is coloured. $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$



Complete the following.

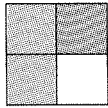
1.

a



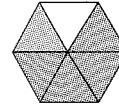
$$\frac{1}{3} + \frac{1}{3} =$$

b



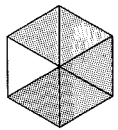
$$\frac{2}{4} + \frac{1}{4} =$$

c

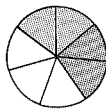


$$\frac{1}{6} + \frac{4}{6} =$$

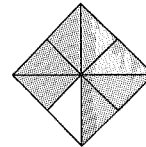
2.



$$\frac{2}{6} + \frac{3}{6} =$$

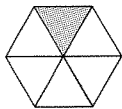


$$\frac{2}{7} + \frac{2}{7} =$$

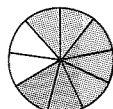


$$\frac{5}{8} + \frac{2}{8} =$$

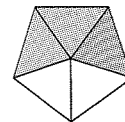
3.



$$\frac{1}{6} + \frac{0}{6} =$$

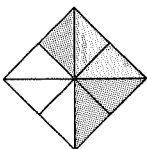


$$\frac{2}{9} + \frac{5}{9} =$$

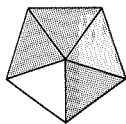


$$\frac{2}{5} + \frac{1}{5} =$$

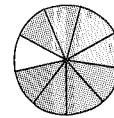
4.



$$\frac{3}{8} + \frac{2}{8} =$$



$$\frac{3}{5} + \frac{1}{5} =$$



$$\frac{4}{9} + \frac{4}{9} =$$

Lesson 2 Addition (like denominators)

Study how to add two fractions that have the same denominator.

Add the
numerators.

$$\frac{3}{8} + \frac{2}{8} = \frac{3+2}{8} = \frac{5}{8}$$

Use the same
denominator.

Add the
numerators.

$$\begin{array}{r} \frac{3}{8} \\ + \frac{2}{8} \\ \hline \frac{5}{8} \end{array}$$

Use the same
denominator.

Add.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>
1.	$\frac{1}{3}$ $+\frac{1}{3}$ <hr/>	$\frac{2}{7}$ $+\frac{4}{7}$ <hr/>	$\frac{5}{8}$ $+\frac{2}{8}$ <hr/>	$\frac{1}{4}$ $+\frac{2}{4}$ <hr/>	$\frac{2}{5}$ $+\frac{2}{5}$ <hr/>

2.	$\frac{4}{9}$ $+\frac{3}{9}$ <hr/>	$\frac{4}{8}$ $+\frac{1}{8}$ <hr/>	$\frac{1}{6}$ $+\frac{4}{6}$ <hr/>	$\frac{3}{7}$ $+\frac{3}{7}$ <hr/>	$\frac{2}{10}$ $+\frac{5}{10}$ <hr/>
-----------	--	--	--	--	--

3.	$\frac{2}{5}$ $+\frac{1}{5}$ <hr/>	$\frac{3}{6}$ $+\frac{2}{6}$ <hr/>	$\frac{2}{8}$ $+\frac{1}{8}$ <hr/>	$\frac{2}{7}$ $+\frac{2}{7}$ <hr/>	$\frac{2}{9}$ $+\frac{2}{9}$ <hr/>
-----------	--	--	--	--	--

4.	$\frac{1}{9}$ $+\frac{4}{9}$ <hr/>	$\frac{1}{7}$ $+\frac{4}{7}$ <hr/>	$\frac{6}{8}$ $+\frac{1}{8}$ <hr/>	$\frac{1}{5}$ $+\frac{1}{5}$ <hr/>	$\frac{3}{7}$ $+\frac{1}{7}$ <hr/>
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Lesson 3 Addition (like denominators)

$$\begin{array}{r}
 \frac{7}{10} \\
 + \frac{9}{10} \\
 \hline
 \frac{16}{10} = 1\frac{3}{5}
 \end{array}
 \quad
 \begin{array}{l}
 \text{Add.} \\
 \\
 \text{Change to} \\
 \text{simplest form.}
 \end{array}
 \quad
 \begin{array}{r}
 \frac{1}{12} \\
 + \frac{11}{12} \\
 \hline
 \frac{12}{12} = 1
 \end{array}$$

Add. Write each answer in simplest form.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
1.	$ \begin{array}{r} \frac{2}{3} \\ + \frac{2}{3} \\ \hline \end{array} $	$ \begin{array}{r} \frac{4}{5} \\ + \frac{3}{5} \\ \hline \end{array} $	$ \begin{array}{r} \frac{2}{9} \\ + \frac{1}{9} \\ \hline \end{array} $	$ \begin{array}{r} \frac{1}{4} \\ + \frac{1}{4} \\ \hline \end{array} $

2.	$ \begin{array}{r} \frac{1}{8} \\ + \frac{5}{8} \\ \hline \end{array} $	$ \begin{array}{r} \frac{3}{10} \\ + \frac{9}{10} \\ \hline \end{array} $	$ \begin{array}{r} \frac{3}{4} \\ + \frac{3}{4} \\ \hline \end{array} $	$ \begin{array}{r} \frac{7}{12} \\ + \frac{11}{12} \\ \hline \end{array} $
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3.	$ \begin{array}{r} \frac{1}{2} \\ + \frac{1}{2} \\ \hline \end{array} $	$ \begin{array}{r} \frac{6}{7} \\ + \frac{5}{7} \\ \hline \end{array} $	$ \begin{array}{r} \frac{7}{8} \\ + \frac{7}{8} \\ \hline \end{array} $	$ \begin{array}{r} \frac{5}{6} \\ + \frac{1}{6} \\ \hline \end{array} $
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4.	$ \begin{array}{r} \frac{3}{5} \\ + \frac{3}{5} \\ \hline \end{array} $	$ \begin{array}{r} \frac{5}{12} \\ + \frac{7}{12} \\ \hline \end{array} $	$ \begin{array}{r} \frac{8}{9} \\ + \frac{5}{9} \\ \hline \end{array} $	$ \begin{array}{r} \frac{7}{10} \\ + \frac{9}{10} \\ \hline \end{array} $
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Lesson 4 Addition (mixed numerals)

$$\begin{array}{r} 4\frac{5}{8} \\ +2\frac{1}{8} \\ \hline 6\frac{6}{8} = 6\frac{3}{4} \end{array}$$

Add the fractions.

Add the whole numbers.

Change to simplest form.

$$\begin{array}{r} 6\frac{7}{10} \\ +2\frac{9}{10} \\ \hline 8\frac{16}{10} = 9\frac{3}{5} \end{array}$$

Add. Write each answer in simplest form.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
1.	$\begin{array}{r} 1\frac{2}{5} \\ +2\frac{1}{5} \\ \hline \end{array}$	$\begin{array}{r} 4\frac{1}{6} \\ +2\frac{1}{6} \\ \hline \end{array}$	$\begin{array}{r} 3\frac{1}{10} \\ +2\frac{3}{10} \\ \hline \end{array}$	$\begin{array}{r} 19\frac{3}{8} \\ +7\frac{1}{8} \\ \hline \end{array}$

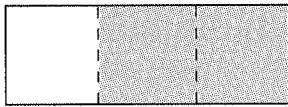
2.	$\begin{array}{r} 5\frac{3}{4} \\ +1\frac{3}{4} \\ \hline \end{array}$	$\begin{array}{r} 6\frac{2}{3} \\ +1\frac{1}{3} \\ \hline \end{array}$	$\begin{array}{r} 2\frac{9}{10} \\ +1\frac{7}{10} \\ \hline \end{array}$	$\begin{array}{r} 26\frac{4}{5} \\ +13\frac{3}{5} \\ \hline \end{array}$
----	--	--	--	--

3.	$\begin{array}{r} 4\frac{1}{2} \\ +2\frac{1}{2} \\ \hline \end{array}$	$\begin{array}{r} 3\frac{5}{6} \\ +4\frac{5}{6} \\ \hline \end{array}$	$\begin{array}{r} 8\frac{7}{12} \\ +4\frac{11}{12} \\ \hline \end{array}$	$\begin{array}{r} 36\frac{7}{8} \\ +27\frac{5}{8} \\ \hline \end{array}$
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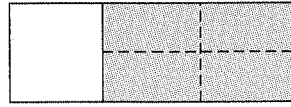
4.	$\begin{array}{r} 7\frac{2}{3} \\ +6\frac{2}{3} \\ \hline \end{array}$	$\begin{array}{r} 9\frac{2}{5} \\ +4\frac{4}{5} \\ \hline \end{array}$	$\begin{array}{r} 11\frac{3}{10} \\ +6\frac{7}{10} \\ \hline \end{array}$	$\begin{array}{r} 58\frac{7}{9} \\ +31\frac{5}{9} \\ \hline \end{array}$
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Lesson 5 Renaming Fractions

By separating the figure in different ways, you can write different fractions to tell how much is blue.



$\frac{2}{3}$ of the figure is blue.



$\frac{4}{6}$ of the figure is blue.

$$\frac{2}{3} = \frac{4}{6}$$

$$\frac{2}{3} = \frac{2}{6}$$

$$\frac{2}{3} = \frac{2}{9}$$

$$\frac{2}{3} = \frac{2 \times 2}{3 \times 2}$$

Multiply the numerator and the denominator by the same number.

$$\frac{2}{3} = \frac{2 \times 3}{3 \times 3}$$

$$\frac{2}{3} = \frac{4}{6}$$

Choose 2 so the new denominator is 6.

$$\frac{2}{3} = \frac{6}{9}$$

Choose 3 so the new denominator is 9.

Rename.

1. $\frac{2}{3} = \frac{a}{12}$

$\frac{3}{4} = \frac{b}{8}$

$\frac{5}{6} = \frac{c}{12}$

2. $\frac{1}{2} = \frac{1}{10}$

$\frac{2}{5} = \frac{2}{10}$

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

3. $\frac{3}{4} = \frac{3}{12}$

$\frac{3}{8} = \frac{3}{16}$

$\frac{4}{5} = \frac{4}{20}$

Lesson 5 Renaming Fractions

$$\frac{7}{8} = \frac{\square}{32}$$
$$\frac{7}{8} = \frac{7}{8} \times 4$$
$$\frac{7}{8} = \frac{28}{32}$$

$$7 = \frac{\square}{3}$$
$$\frac{7}{1} = \frac{7}{1} \times 3$$
$$7 = \frac{21}{3}$$

Name the whole number as a fraction whose denominator is 1. Then rename.

Rename.

a

1. $\frac{1}{2} = \frac{\square}{4}$

b

$$\frac{1}{3} = \frac{\square}{9}$$

c

$$3 = \frac{\square}{12}$$

2. $6 = \frac{\square}{2}$

$$\frac{4}{5} = \frac{\square}{10}$$

$$7 = \frac{\square}{5}$$

3. $\frac{1}{4} = \frac{\square}{8}$

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

$$4 = \frac{\square}{3}$$

4. $\frac{1}{3} = \frac{\square}{6}$

$$\frac{1}{2} = \frac{\square}{8}$$

$$6 = \frac{\square}{6}$$

Lesson 6 Addition (unlike denominators)

When adding fractions that have different denominators, rename the fractions so they have the same denominator.

$$\begin{array}{r} \frac{1}{3} \\ + \frac{1}{2} \\ \hline \end{array}$$

$$\begin{array}{l} \times \frac{2}{2} \\ \times \frac{3}{3} \end{array}$$

$$\begin{array}{r} \frac{2}{6} \\ + \frac{3}{6} \\ \hline \frac{5}{6} \end{array}$$

The denominators are 2 and 3. Since $2 \times 3 = 6$, rename each fraction with a denominator of 6.

Then add the fractions.

$$\begin{array}{r} \frac{1}{2} \\ + \frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{l} \times \frac{3}{3} \\ \times \frac{2}{2} \end{array}$$

$$\begin{array}{r} \frac{3}{6} \\ + \frac{4}{6} \\ \hline \frac{7}{6} = 1\frac{1}{6} \end{array}$$

Change $\frac{7}{6}$ to a mixed numeral in simplest form.

Write each answer in simplest form.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
1.	$\begin{array}{r} \frac{2}{5} \\ + \frac{1}{2} \\ \hline \end{array}$	$\begin{array}{r} \frac{1}{4} \\ + \frac{2}{3} \\ \hline \end{array}$	$\begin{array}{r} \frac{2}{5} \\ + \frac{1}{3} \\ \hline \end{array}$	$\begin{array}{r} \frac{1}{2} \\ + \frac{1}{5} \\ \hline \end{array}$

2.	$\begin{array}{r} \frac{5}{6} \\ + \frac{3}{5} \\ \hline \end{array}$	$\begin{array}{r} \frac{2}{3} \\ + \frac{1}{5} \\ \hline \end{array}$	$\begin{array}{r} \frac{1}{3} \\ + \frac{3}{10} \\ \hline \end{array}$	$\begin{array}{r} \frac{5}{8} \\ + \frac{2}{3} \\ \hline \end{array}$
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3.	$\begin{array}{r} \frac{3}{4} \\ + \frac{1}{3} \\ \hline \end{array}$	$\begin{array}{r} \frac{2}{3} \\ + \frac{4}{5} \\ \hline \end{array}$	$\begin{array}{r} \frac{2}{3} \\ + \frac{3}{4} \\ \hline \end{array}$	$\begin{array}{r} \frac{7}{8} \\ + \frac{1}{3} \\ \hline \end{array}$
-----------	---	---	---	---

Lesson 6 Addition

$$\begin{array}{r} \frac{2}{5} \xrightarrow{\times 2} \frac{4}{10} \\ + \frac{3}{10} \longrightarrow + \frac{3}{10} \\ \hline \frac{7}{10} \end{array}$$

The denominators are 5 and 10. Since $2 \times 5 = 10$, rename only $\frac{2}{5}$ with a denominator of 10.

$$\begin{array}{r} \frac{2}{5} \xrightarrow{\times 2} \frac{4}{10} \\ + \frac{3}{10} \\ \hline \frac{7}{10} \end{array}$$

Then add the fractions.

$$\frac{11}{10} = 1\frac{1}{10} \quad \text{Change } \frac{11}{10} \text{ to simplest form.}$$

Write each answer in simplest form.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
1.	$\frac{3}{4}$ $+\frac{1}{8}$ <hr/>	$\frac{2}{3}$ $+\frac{5}{6}$ <hr/>	$\frac{1}{2}$ $+\frac{3}{10}$ <hr/>	$\frac{5}{12}$ $+\frac{2}{3}$ <hr/>

2.	$\frac{5}{16}$ $+\frac{3}{8}$ <hr/>	$\frac{1}{6}$ $+\frac{1}{2}$ <hr/>	$\frac{5}{8}$ $+\frac{1}{4}$ <hr/>	$\frac{9}{10}$ $+\frac{3}{5}$ <hr/>
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3.	$\frac{3}{4}$ $+\frac{9}{16}$ <hr/>	$\frac{5}{12}$ $+\frac{1}{4}$ <hr/>	$\frac{5}{6}$ $+\frac{1}{3}$ <hr/>	$\frac{1}{2}$ $+\frac{7}{8}$ <hr/>
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Lesson 7 Addition (unlike denominators)

$$\begin{array}{r} \frac{1}{6} \times \frac{4}{4} \\ + \frac{5}{8} \times \frac{3}{3} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{4}{24} \\ + \frac{15}{24} \\ \hline \end{array}$$

$$\frac{19}{24}$$

The denominators are 6 and 8.

Since $4 \times 6 = 24$ and $3 \times 8 = 24$,

rename each fraction with a denominator of 24.

Then add the fractions.

$$\begin{array}{r} \frac{5}{6} \times \frac{4}{4} \\ + \frac{3}{8} \times \frac{3}{3} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{20}{24} \\ + \frac{9}{24} \\ \hline \end{array}$$

$$\frac{29}{24}$$

$= 1\frac{5}{24}$ Change $\frac{29}{24}$ to simplest form.

Write each answer in simplest form.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
1.	$\begin{array}{r} \frac{1}{9} \\ + \frac{1}{6} \\ \hline \end{array}$	$\begin{array}{r} \frac{1}{6} \\ + \frac{1}{4} \\ \hline \end{array}$	$\begin{array}{r} \frac{5}{6} \\ + \frac{1}{8} \\ \hline \end{array}$	$\begin{array}{r} \frac{1}{10} \\ + \frac{1}{12} \\ \hline \end{array}$

2.	$\begin{array}{r} \frac{1}{6} \\ + \frac{3}{8} \\ \hline \end{array}$	$\begin{array}{r} \frac{3}{4} \\ + \frac{1}{6} \\ \hline \end{array}$	$\begin{array}{r} \frac{5}{6} \\ + \frac{5}{8} \\ \hline \end{array}$	$\begin{array}{r} \frac{3}{10} \\ + \frac{3}{8} \\ \hline \end{array}$
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3.	$\begin{array}{r} \frac{3}{10} \\ + \frac{5}{12} \\ \hline \end{array}$	$\begin{array}{r} \frac{5}{6} \\ + \frac{4}{9} \\ \hline \end{array}$	$\begin{array}{r} \frac{3}{10} \\ + \frac{1}{4} \\ \hline \end{array}$	$\begin{array}{r} \frac{5}{6} \\ + \frac{3}{10} \\ \hline \end{array}$
-----------	---	---	--	--

4.	$\begin{array}{r} \frac{7}{10} \\ + \frac{5}{6} \\ \hline \end{array}$	$\begin{array}{r} \frac{11}{12} \\ + \frac{7}{8} \\ \hline \end{array}$	$\begin{array}{r} \frac{9}{10} \\ + \frac{7}{8} \\ \hline \end{array}$	$\begin{array}{r} \frac{1}{4} \\ + \frac{5}{6} \\ \hline \end{array}$
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Lesson 7 Problem Solving

Solve. Write each answer in simplest form.

1. To make green paint, Andrea mixed $\frac{7}{8}$ can of yellow paint and $\frac{1}{2}$ can of blue paint. How much green paint did she make?

She made _____ cans of green paint.

2. Sean painted $\frac{1}{3}$ of a fence. Sandra painted $\frac{1}{4}$ of the fence. How much of the fence did they paint?

They painted _____ of the fence.

3. Maureen bought $\frac{3}{4}$ of a round of cheese. Chang bought $\frac{1}{2}$ of a round of cheese. How much cheese did they buy?

They bought _____ rounds of cheese.

4. Joy used $\frac{2}{3}$ of a bag of milk in three bowls of cereal, and then $\frac{3}{4}$ of a bag to make milkshakes. How many bags of milk did Joy use?

Joy used _____ bags of milk.

5. Elisabeth read $\frac{1}{2}$ of a book on Monday, and $\frac{3}{8}$ of the book on Tuesday. How much of the book did she read on the 2 days?

She read _____ of the book.

6. Richard used $\frac{3}{4}$ of a can of paint on Saturday. He used $\frac{13}{16}$ of a can of paint on Sunday. How much paint did he use altogether?

He used _____ cans of paint.

7. It rained for $\frac{3}{10}$ h yesterday and $\frac{3}{4}$ h today. How long did it rain on the 2 days?

It rained for _____ h on the 2 days.

1.

2.

3.

4.

5.

6.

7.

Lesson 8 Addition (mixed numerals)

Rename the fractions so they have the same denominator.

$$\begin{array}{r}
 3\frac{1}{4} \longrightarrow 3\frac{3}{12} \\
 +2\frac{5}{6} \longrightarrow +2\frac{10}{12} \\
 \hline
 5\frac{13}{12} = 6\frac{1}{12}
 \end{array}
 \quad
 \begin{array}{r}
 4\frac{1}{2} \longrightarrow 4\frac{3}{6} \\
 +3\frac{2}{3} \longrightarrow +3\frac{4}{6} \\
 \hline
 7\frac{7}{6} = 8\frac{1}{6}
 \end{array}$$

Change to simplest form.

Write each answer in simplest form.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
1.	$ \begin{array}{r} 3\frac{5}{6} \\ +4\frac{5}{8} \\ \hline \end{array} $	$ \begin{array}{r} 5\frac{2}{3} \\ +1\frac{5}{6} \\ \hline \end{array} $	$ \begin{array}{r} 6\frac{5}{6} \\ +3\frac{1}{4} \\ \hline \end{array} $	$ \begin{array}{r} \frac{1}{2} \\ +2\frac{3}{4} \\ \hline \end{array} $
2.	$ \begin{array}{r} 1\frac{5}{6} \\ +4\frac{1}{3} \\ \hline \end{array} $	$ \begin{array}{r} 5\frac{1}{2} \\ +2\frac{3}{4} \\ \hline \end{array} $	$ \begin{array}{r} 3\frac{2}{3} \\ +\frac{3}{4} \\ \hline \end{array} $	$ \begin{array}{r} 2\frac{3}{5} \\ +1\frac{1}{2} \\ \hline \end{array} $
3.	$ \begin{array}{r} 4\frac{3}{8} \\ +6\frac{1}{4} \\ \hline \end{array} $	$ \begin{array}{r} 5\frac{1}{3} \\ +\frac{2}{5} \\ \hline \end{array} $	$ \begin{array}{r} 4\frac{2}{5} \\ +2\frac{3}{10} \\ \hline \end{array} $	$ \begin{array}{r} 2\frac{1}{8} \\ +5\frac{3}{4} \\ \hline \end{array} $
4.	$ \begin{array}{r} 3\frac{1}{2} \\ +3\frac{1}{2} \\ \hline \end{array} $	$ \begin{array}{r} 1\frac{3}{8} \\ +2\frac{1}{2} \\ \hline \end{array} $	$ \begin{array}{r} 9\frac{3}{4} \\ +6\frac{1}{2} \\ \hline \end{array} $	$ \begin{array}{r} 12\frac{2}{3} \\ +1\frac{5}{6} \\ \hline \end{array} $

Lesson 8 Problem Solving



Solve each problem.

1. Jennifer spent $1\frac{1}{2}$ h working on Ms. Thomkin's car on Monday. She spent $2\frac{3}{4}$ h more on Tuesday to finish the tune-up. How many hours in all did she work on Ms. Thomkin's car?

She worked _____ h in all.

2. Marissa worked $7\frac{1}{4}$ h on Monday. She worked $9\frac{3}{4}$ h on Tuesday. How many hours did she work in all on Monday and Tuesday?

She worked _____ h in all on Monday and Tuesday.

3. The auto repair shop is $1\frac{3}{10}$ km from the bank. The bank is $3\frac{3}{5}$ km from Gina's home. After she left her car at the shop, Gina walked to the bank. Then she walked home. How far did Gina walk in all?

Gina walked _____ km.

4. It took $2\frac{5}{6}$ h to fix Mrs. Sax's car. It took $3\frac{1}{2}$ h to fix Mr. Wong's car. How long did it take to fix both cars?

It took _____ h to fix both cars.

1.

2.

3.

4.

Lesson 9 Addition Review

Write each answer in simplest form.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
1.	$\begin{array}{r} \frac{1}{12} \\ + \frac{1}{6} \\ \hline \end{array}$	$\begin{array}{r} 5\frac{5}{6} \\ + 3\frac{5}{8} \\ \hline \end{array}$	$\begin{array}{r} 4\frac{1}{3} \\ + 2\frac{3}{4} \\ \hline \end{array}$	$\begin{array}{r} \frac{9}{16} \\ + \frac{3}{4} \\ \hline \end{array}$
2.	$\begin{array}{r} 1\frac{1}{4} \\ + 6\frac{3}{5} \\ \hline \end{array}$	$\begin{array}{r} \frac{4}{7} \\ + \frac{9}{10} \\ \hline \end{array}$	$\begin{array}{r} 3\frac{3}{4} \\ + \frac{9}{10} \\ \hline \end{array}$	$\begin{array}{r} \frac{7}{18} \\ + \frac{7}{9} \\ \hline \end{array}$
3.	$\begin{array}{r} \frac{5}{7} \\ + \frac{1}{2} \\ \hline \end{array}$	$\begin{array}{r} 4\frac{2}{5} \\ + 2\frac{8}{15} \\ \hline \end{array}$	$\begin{array}{r} \frac{5}{12} \\ + 5\frac{3}{4} \\ \hline \end{array}$	$\begin{array}{r} \frac{9}{14} \\ + \frac{3}{4} \\ \hline \end{array}$
4.	$\begin{array}{r} 2\frac{1}{10} \\ + 1\frac{1}{6} \\ \hline \end{array}$	$\begin{array}{r} \frac{1}{12} \\ + \frac{5}{9} \\ \hline \end{array}$	$\begin{array}{r} \frac{5}{6} \\ + \frac{1}{2} \\ \hline \end{array}$	$\begin{array}{r} 8\frac{1}{3} \\ + 3\frac{2}{9} \\ \hline \end{array}$
5.	$\begin{array}{r} \frac{2}{5} \\ + \frac{3}{10} \\ \hline \end{array}$	$\begin{array}{r} \frac{7}{9} \\ + 1\frac{1}{6} \\ \hline \end{array}$	$\begin{array}{r} 5\frac{2}{5} \\ + 3\frac{7}{10} \\ \hline \end{array}$	$\begin{array}{r} 7\frac{3}{4} \\ + 9\frac{5}{6} \\ \hline \end{array}$

Lesson 9 Problem Solving

Solve. Write each answer in simplest form.

1. Emilio planted $3\frac{1}{2}$ rows of corn and $2\frac{3}{4}$ rows of beans. How many rows did he plant altogether?

He planted _____ rows.

2. Arlene spent $2\frac{1}{2}$ h planting part of a garden. It took her $1\frac{3}{4}$ h to finish planting the garden. How long did it take to plant the garden?

It took _____ h.

3. It takes April $\frac{3}{4}$ h to fall asleep, and then she sleeps for $8\frac{1}{2}$ h. How long is April in bed?

April is in bed for _____ h.

4. June's school is $6\frac{1}{2}$ blocks from her house. The grocery store is $7\frac{3}{4}$ blocks from the school. How far is it from June's house to the grocery store?

It is _____ blocks.

5. Ned can run 10 km in $1\frac{1}{8}$ h. Phil can run 10 km in $\frac{1}{10}$ of an hour longer. How long does it take phil to run 10 km?

It takes Phil _____ h to run 10 km.

6. Jake used $1\frac{7}{12}$ cartons of eggs last week and $2\frac{5}{12}$ cartons this week. How many cartons of eggs did he use in the 2 weeks?

He used _____ cartons of eggs.

1.

2.

3.

4.

5.

6.

Lesson 10 Addition Review

Write each answer in simplest form.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
1.	$\begin{array}{r} \frac{1}{9} \\ +\frac{4}{9} \\ \hline \end{array}$	$\begin{array}{r} \frac{2}{7} \\ +\frac{3}{7} \\ \hline \end{array}$	$\begin{array}{r} \frac{8}{9} \\ +\frac{5}{9} \\ \hline \end{array}$	$\begin{array}{r} \frac{11}{16} \\ +\frac{7}{16} \\ \hline \end{array}$
2.	$\begin{array}{r} \frac{2}{3} \\ +\frac{1}{5} \\ \hline \end{array}$	$\begin{array}{r} \frac{2}{5} \\ +\frac{3}{4} \\ \hline \end{array}$	$\begin{array}{r} \frac{1}{2} \\ +\frac{3}{4} \\ \hline \end{array}$	$\begin{array}{r} \frac{5}{6} \\ +\frac{1}{12} \\ \hline \end{array}$
3.	$\begin{array}{r} \frac{7}{8} \\ +\frac{5}{6} \\ \hline \end{array}$	$\begin{array}{r} \frac{5}{12} \\ +\frac{1}{3} \\ \hline \end{array}$	$\begin{array}{r} \frac{1}{5} \\ +\frac{7}{10} \\ \hline \end{array}$	$\begin{array}{r} \frac{7}{8} \\ +\frac{5}{12} \\ \hline \end{array}$
4.	$\begin{array}{r} \frac{2}{5} \\ +\frac{1}{5} \\ \hline \end{array}$	$\begin{array}{r} 2\frac{1}{9} \\ +\frac{1}{3} \\ \hline \end{array}$	$\begin{array}{r} 7\frac{5}{8} \\ +\frac{2}{3} \\ \hline \end{array}$	$\begin{array}{r} 4\frac{7}{12} \\ +1\frac{1}{2} \\ \hline \end{array}$
5.	$\begin{array}{r} \frac{1}{5} \\ +\frac{1}{3} \\ \hline \end{array}$	$\begin{array}{r} \frac{3}{4} \\ +\frac{1}{5} \\ \hline \end{array}$	$\begin{array}{r} 1\frac{2}{3} \\ +1\frac{5}{6} \\ \hline \end{array}$	$\begin{array}{r} 3\frac{11}{12} \\ +2\frac{5}{6} \\ \hline \end{array}$

Lesson 10 Problem Solving

Solve. Write each answer in simplest form.

1. Jared lives $\frac{7}{8}$ of a block from the stadium and $\frac{3}{8}$ of a block from the school. He walked home from school and then to the stadium. How far did he walk?

Jared walked _____ blocks.

2. Courtney read for $\frac{5}{6}$ h before dinner. After dinner she read for $\frac{2}{5}$ h. How long did she read?

Courtney read _____ h in all.

3. The Clements family drank $\frac{3}{4}$ of a carton of milk for dinner. There was $\frac{1}{8}$ of a carton left. How much milk was there before dinner?

There was _____ of a carton of milk.

4. Gary sprinted $1\frac{3}{10}$ laps around the track. Glen sprinted $\frac{3}{10}$ of a lap more. How far did Glen sprint?

Glen sprinted _____ laps.

5. Rocio read $4\frac{3}{4}$ books last week. His sister read $1\frac{1}{2}$ more books. How many books did Rocio's sister read?

Rocio's sister read _____ books.

6. To make pale blue paint, Lynn mixed $2\frac{1}{2}$ cans of blue paint and $3\frac{3}{4}$ cans of white paint. How much pale blue paint did she make?

She made _____ cans of pale blue paint.

7. Last year Becky could run for $49\frac{1}{2}$ min without stopping. Since then she has added $1\frac{7}{8}$ min. How long can she run now?

She can now run for _____ min.

1.

2.

3.

4.

5.

6.

7.

CHAPTER 12 PRACTICE TEST

Addition of Fractions

Write each answer in simplest form.

- | | <i>a</i> | <i>b</i> | <i>c</i> | <i>d</i> |
|-----------|--|--|---|---|
| 1. | $\begin{array}{r} \frac{3}{10} \\ + \frac{1}{10} \\ \hline \end{array}$ | $\begin{array}{r} \frac{5}{6} \\ + \frac{1}{6} \\ \hline \end{array}$ | $\begin{array}{r} \frac{7}{8} \\ + \frac{5}{8} \\ \hline \end{array}$ | $\begin{array}{r} \frac{4}{7} \\ + \frac{1}{7} \\ \hline \end{array}$ |
| 2. | $\begin{array}{r} \frac{5}{8} \\ + \frac{1}{4} \\ \hline \end{array}$ | $\begin{array}{r} \frac{3}{10} \\ + \frac{3}{4} \\ \hline \end{array}$ | $\begin{array}{r} \frac{1}{2} \\ + \frac{4}{5} \\ \hline \end{array}$ | $\begin{array}{r} \frac{5}{6} \\ + \frac{3}{4} \\ \hline \end{array}$ |
| 3. | $\begin{array}{r} 5\frac{3}{10} \\ + 1\frac{1}{3} \\ \hline \end{array}$ | $\begin{array}{r} 4\frac{2}{9} \\ + 2\frac{2}{3} \\ \hline \end{array}$ | $\begin{array}{r} \frac{5}{6} \\ + 3\frac{1}{12} \\ \hline \end{array}$ | $\begin{array}{r} 6\frac{5}{12} \\ + \frac{1}{3} \\ \hline \end{array}$ |
| 4. | $\begin{array}{r} 1\frac{3}{4} \\ + 4\frac{7}{10} \\ \hline \end{array}$ | $\begin{array}{r} 5\frac{1}{3} \\ + \frac{4}{5} \\ \hline \end{array}$ | $\begin{array}{r} 2\frac{3}{4} \\ + 6\frac{15}{16} \\ \hline \end{array}$ | $\begin{array}{r} 7\frac{7}{10} \\ + 8\frac{4}{5} \\ \hline \end{array}$ |
| 5. | $\begin{array}{r} 7\frac{1}{5} \\ + \frac{1}{4} \\ \hline \end{array}$ | $\begin{array}{r} 9\frac{9}{10} \\ + \frac{7}{12} \\ \hline \end{array}$ | $\begin{array}{r} 42\frac{5}{6} \\ + 5\frac{2}{3} \\ \hline \end{array}$ | $\begin{array}{r} 54\frac{1}{2} \\ + 21\frac{4}{5} \\ \hline \end{array}$ |

CHAPTER 13 PRETEST

Subtraction of Fractions

Write each answer in simplest form.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
1.	$\begin{array}{r} \frac{7}{8} \\ -\frac{3}{8} \\ \hline \end{array}$	$\begin{array}{r} \frac{8}{9} \\ -\frac{2}{9} \\ \hline \end{array}$	$\begin{array}{r} \frac{5}{6} \\ -\frac{1}{6} \\ \hline \end{array}$	$\begin{array}{r} \frac{11}{12} \\ -\frac{3}{12} \\ \hline \end{array}$

2.	$\begin{array}{r} 5\frac{4}{5} \\ -2\frac{1}{5} \\ \hline \end{array}$	$\begin{array}{r} 4\frac{5}{9} \\ -3\frac{2}{9} \\ \hline \end{array}$	$\begin{array}{r} 6\frac{4}{7} \\ -1\frac{6}{7} \\ \hline \end{array}$	$\begin{array}{r} 3\frac{3}{8} \\ -\frac{7}{8} \\ \hline \end{array}$
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3.	$\begin{array}{r} \frac{5}{6} \\ -\frac{2}{3} \\ \hline \end{array}$	$\begin{array}{r} \frac{2}{3} \\ -\frac{1}{2} \\ \hline \end{array}$	$\begin{array}{r} \frac{8}{9} \\ -\frac{1}{3} \\ \hline \end{array}$	$\begin{array}{r} \frac{7}{8} \\ -\frac{3}{4} \\ \hline \end{array}$
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4.	$\begin{array}{r} \frac{7}{10} \\ -\frac{1}{5} \\ \hline \end{array}$	$\begin{array}{r} \frac{7}{8} \\ -\frac{3}{10} \\ \hline \end{array}$	$\begin{array}{r} \frac{9}{10} \\ -\frac{2}{5} \\ \hline \end{array}$	$\begin{array}{r} \frac{5}{6} \\ -\frac{7}{12} \\ \hline \end{array}$
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5.	$\begin{array}{r} 4\frac{5}{6} \\ -2\frac{1}{3} \\ \hline \end{array}$	$\begin{array}{r} 3\frac{7}{8} \\ -1\frac{2}{3} \\ \hline \end{array}$	$\begin{array}{r} 2\frac{1}{10} \\ -1\frac{4}{5} \\ \hline \end{array}$	$\begin{array}{r} 2\frac{1}{5} \\ -\frac{2}{3} \\ \hline \end{array}$
----	--	--	---	---