Name: _____ Date: _____

CHAPTER 6

Fractions and Mixed Numbers

Worksheet 1 Adding Fractions

Find the equivalent fraction. Shade the models.

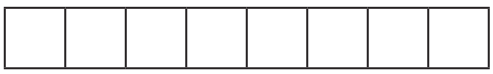
Example

$\frac{2}{3}$ 

? 

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

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

? 

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

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

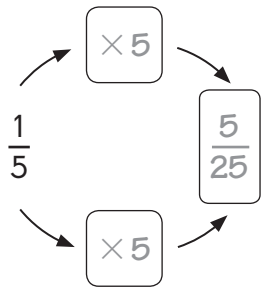
? 

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

Name: _____ **Date:** _____

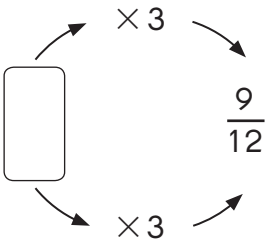
Find the equivalent fractions.

Example

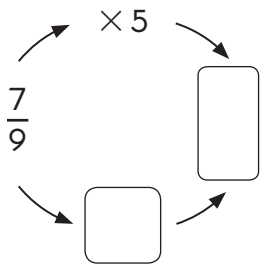


To get the equivalent fraction, multiply both the numerator and the denominator by the same number.

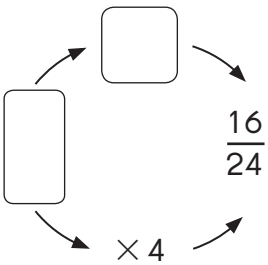
3.



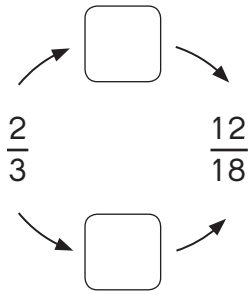
4.



5.



6.



Name: _____ **Date:** _____

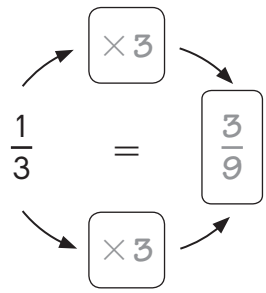
Find the equivalent fractions. Complete the model by shading the correct number of parts. Then add the fractions.

Example

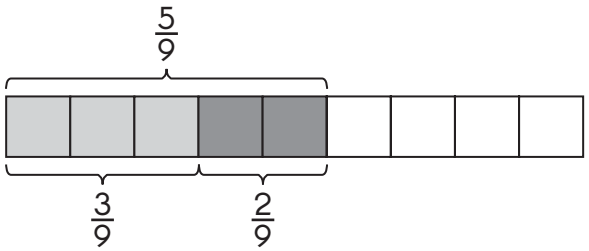
$\frac{1}{3} + \frac{2}{9} = ?$

Step 1 Change the denominator of $\frac{1}{3}$ to 9.

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



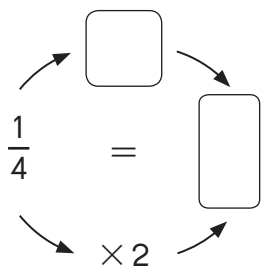
Step 2 Add the like fractions.



$\frac{1}{3} + \frac{2}{9} = \boxed{\frac{3}{9}} + \frac{2}{9} = \boxed{\frac{5}{9}}$

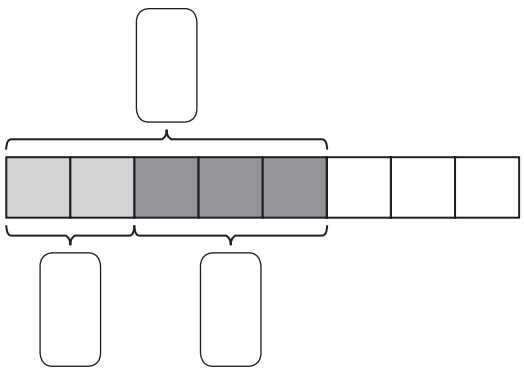
7. $\frac{3}{8} + \frac{1}{4}$

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



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

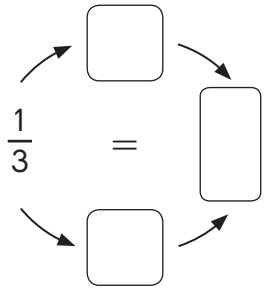
$= \square$



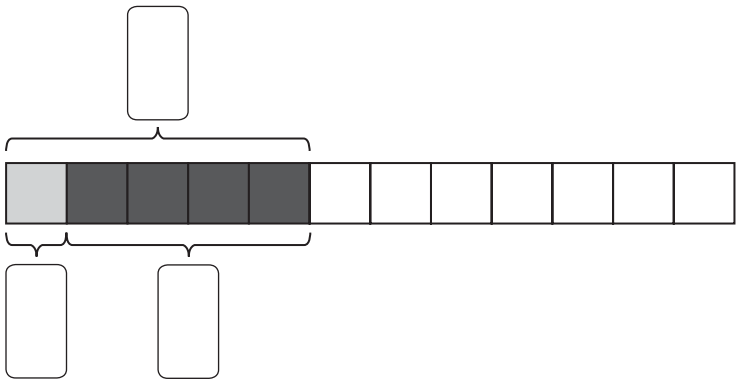
Name: _____ **Date:** _____

8. $\frac{1}{12} + \frac{1}{3}$

$\frac{1}{3} = $ ☐



$\frac{1}{12} + \frac{1}{3} = $ ☐ + ☐



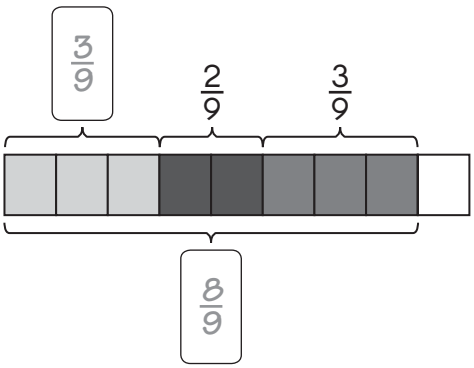
$= $ ☐

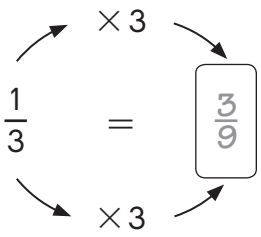
Complete the models. Then add the fractions.

Example

$\frac{1}{3} + \frac{2}{9} + \frac{3}{9} = ?$

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





$\frac{1}{3} + \frac{2}{9} + \frac{3}{9} = \frac{3}{9} + \frac{2}{9} + \frac{3}{9}$

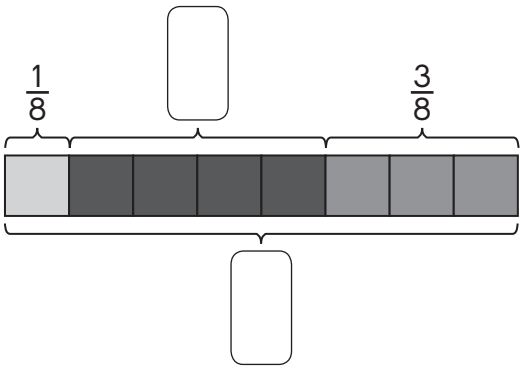
$= \frac{8}{9}$

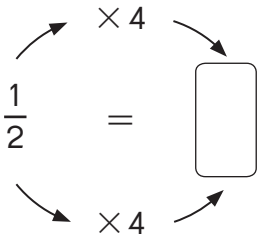
So, $\frac{1}{3} + \frac{2}{9} + \frac{3}{9} = \frac{8}{9}$.

Name: _____ **Date:** _____

9. $\frac{1}{8} + \frac{1}{2} + \frac{3}{8}$

$\frac{1}{2} =$ ☐





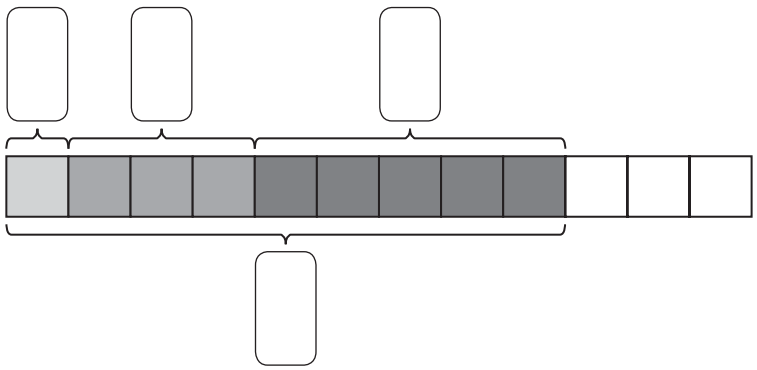
$\frac{1}{8} + \frac{1}{2} + \frac{3}{8} = \frac{1}{8} +$ ☐ $+ \frac{3}{8}$

$=$ ☐

$=$ ☐

10. $\frac{1}{12} + \frac{1}{4} + \frac{5}{12}$

$\frac{1}{4} =$ ☐



$\frac{1}{12} + \frac{1}{4} + \frac{5}{12} =$ ☐ $+$ ☐ $+$ ☐

$=$ ☐

$=$ ☐

Name: _____ **Date:** _____

Express each fraction in simplest form.

Example

$\frac{24}{32}$ $\xrightarrow{\div 8}$ $\frac{3}{4}$ $\xrightarrow{\div 8}$ $\frac{24}{32}$

$\frac{24}{32} = \frac{3}{4}$

To simplify a fraction, divide both the numerator and the denominator by the same number.

11. $\frac{12}{34} = \frac{\square}{\square}$

12. $\frac{18}{42} = \frac{\square}{\square}$

A fraction is in its simplest form when the numerator and the denominator cannot both be divided by the same number.

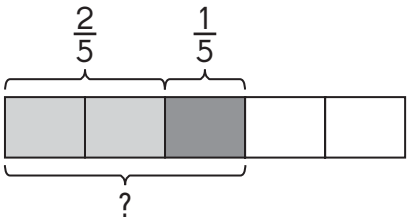
13. $\frac{21}{63} = \frac{\square}{\square}$

Name: _____ **Date:** _____

Add. Express each answer in simplest form.

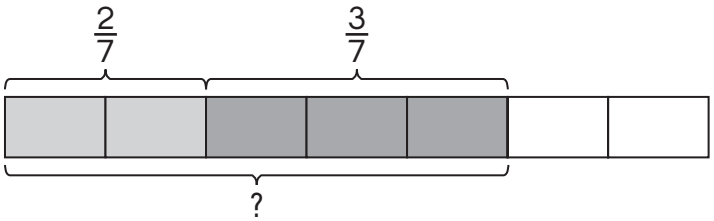
Example

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



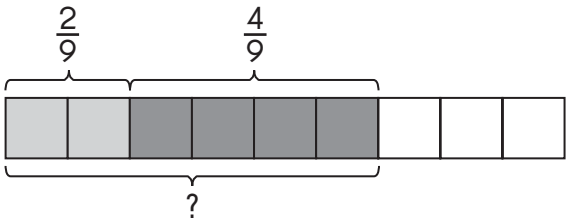
So, $\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$.

14. $\frac{2}{7} + \frac{3}{7} = \frac{\square}{\square}$



15. $\frac{2}{9} + \frac{4}{9} = \frac{\square}{\square}$

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



16. $\frac{5}{12} + \frac{7}{12} = \frac{\square}{\square}$

$= \square$

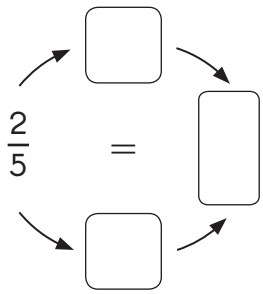
Name: _____ **Date:** _____

17. $\frac{3}{10} + \frac{2}{5} + \frac{1}{10}$

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

$= \square$

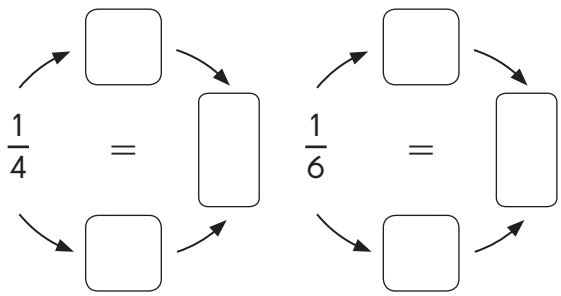
$= \square$



18. $\frac{1}{4} + \frac{1}{6} + \frac{5}{12} = \square + \square + \frac{5}{12}$

$= \square$

$= \square$



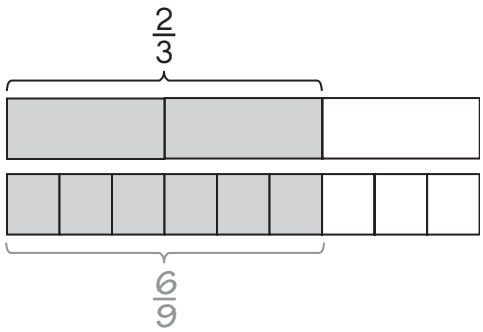
Name: _____ Date: _____

Worksheet 2 Subtracting Fractions

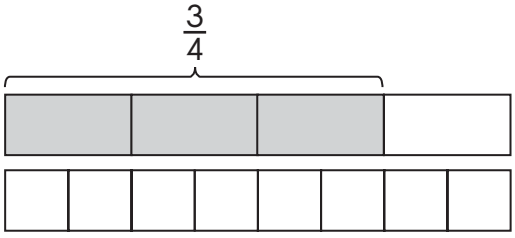
Find the equivalent fraction. Complete the model by shading the correct number of parts.

Example

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

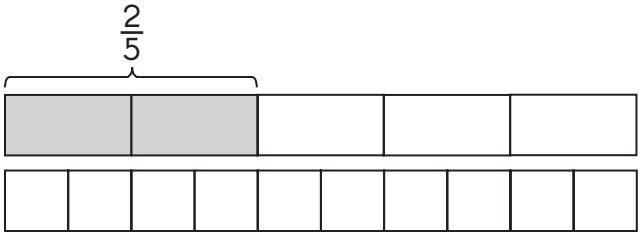


1.



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

2.



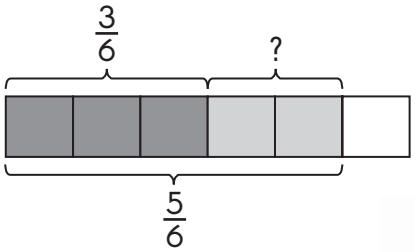
$\frac{2}{5} = \frac{\square}{\square}$

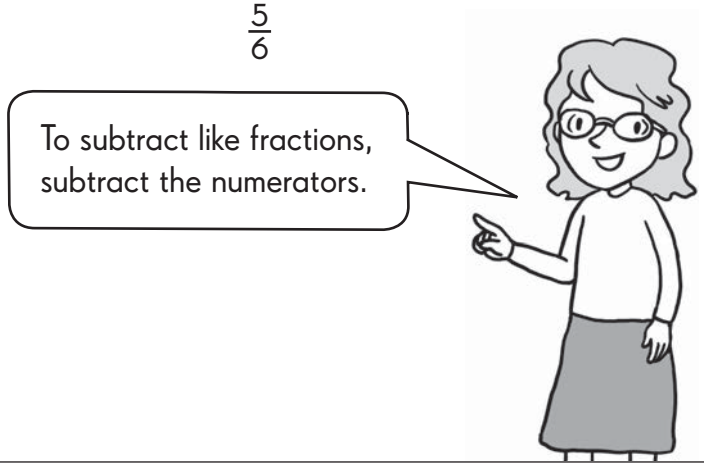
Name: _____ **Date:** _____

Subtract. Express each answer in simplest form.

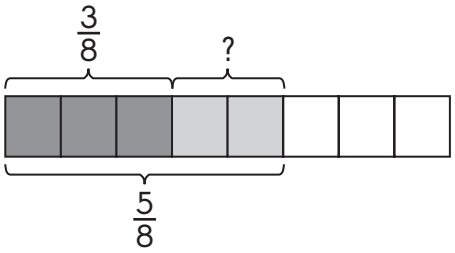
Example

$\frac{5}{6} - \frac{3}{6} = \boxed{\frac{2}{6}} = \boxed{\frac{1}{3}}$

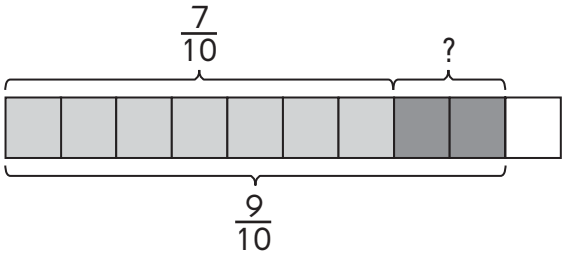




3. $\frac{5}{8} - \frac{3}{8} = \boxed{} = \boxed{}$



4. $\frac{9}{10} - \frac{7}{10} = \boxed{} = \boxed{}$



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

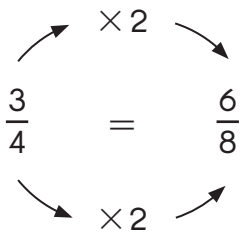
Name: _____ **Date:** _____

Complete the models by shading the correct number of parts. Then subtract the fractions.

Example

$\frac{7}{8} - \frac{3}{4} = ?$

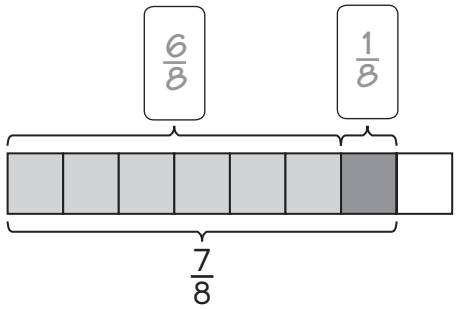
Step 1 Change the denominator of $\frac{3}{4}$ to 8, so that it has the same denominator as $\frac{7}{8}$.



Step 2 Subtract the like fractions.

$\frac{7}{8} - \frac{3}{4} = \frac{7}{8} - \boxed{\frac{6}{8}} = \boxed{\frac{1}{8}}$

So, $\frac{7}{8} - \frac{3}{4} = \frac{1}{8}$.

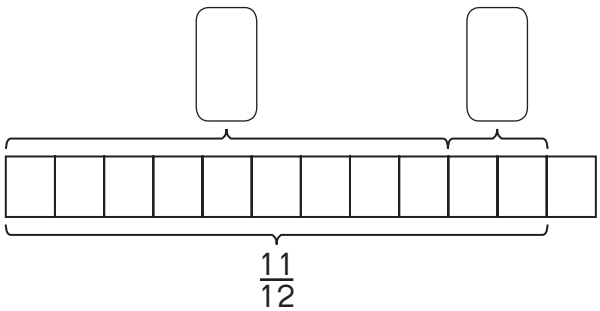


6. $\frac{11}{12} - \frac{3}{4}$

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

$\frac{11}{12} - \frac{3}{4} = \frac{11}{12} - \square = \square$

$= \square$

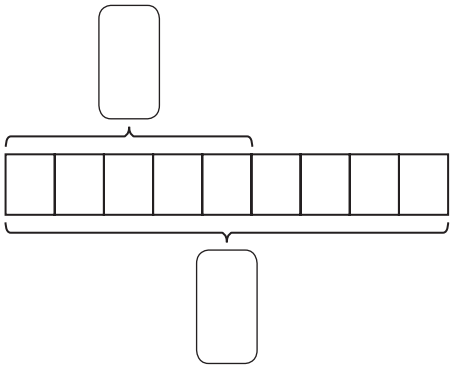


Name: _____ **Date:** _____

7. $1 - \frac{5}{9}$

$1 = \square$

$1 - \frac{5}{9} = \square - \frac{5}{9} = \square$



Find the equivalent fractions. Then subtract.

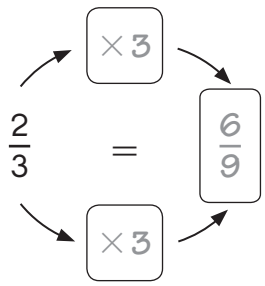
Example

$\frac{7}{9} - \frac{2}{3} = ?$

$\frac{7}{9} - \frac{2}{3} = \frac{7}{9} - \square$ $\frac{6}{9}$

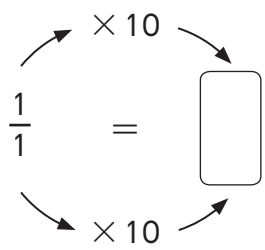
$= \square$ $\frac{1}{9}$

So, $\frac{7}{9} - \frac{2}{3} = \frac{1}{9}$.



8. $1 - \frac{7}{10} = \square - \frac{7}{10}$

$= \square$

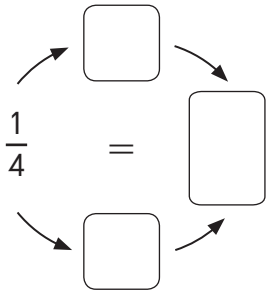


Name: _____ **Date:** _____

9. $\frac{7}{12} - \frac{1}{4} = \frac{7}{12} - \square$

$= \square$

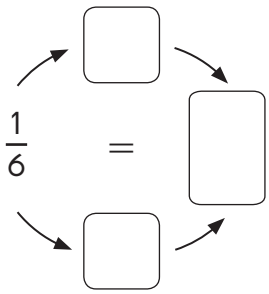
$= \square$



10. $\frac{11}{12} - \frac{1}{6} = \frac{11}{12} - \square$

$= \square$

$= \square$



Name: _____ **Date:** _____

Complete the models. Then subtract.

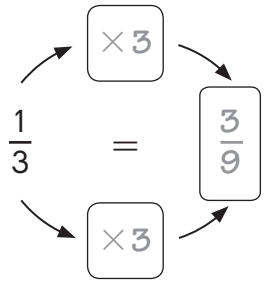
Example

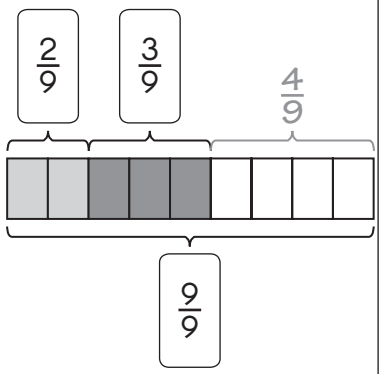
$1 - \frac{2}{9} - \frac{1}{3} = ?$

$1 - \frac{2}{9} - \frac{1}{3}$

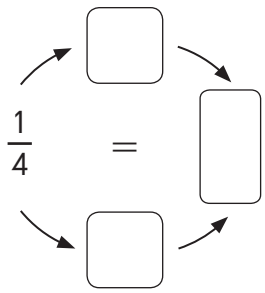
$= \boxed{\frac{9}{9}} - \frac{2}{9} - \boxed{\frac{3}{9}} = \boxed{\frac{4}{9}}$

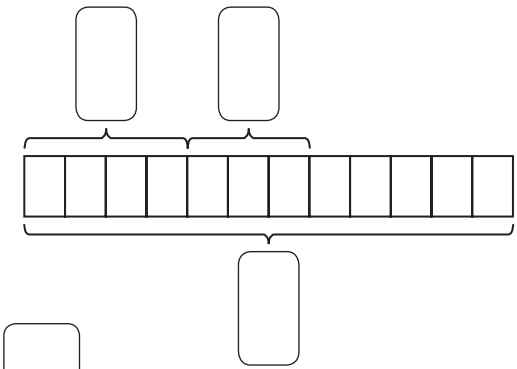
So, $1 - \frac{2}{9} - \frac{1}{3} = \frac{4}{9}$.





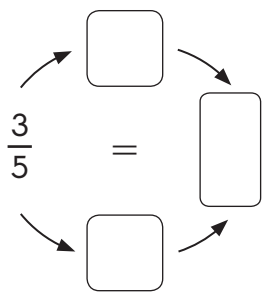
11. $1 - \frac{4}{12} - \frac{1}{4}$

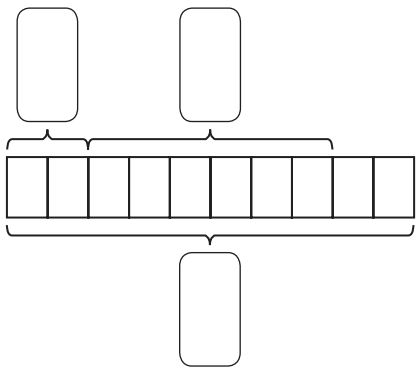




$1 - \frac{4}{12} - \frac{1}{4} = \square - \frac{4}{12} - \square = \square$

12. $1 - \frac{2}{10} - \frac{3}{5}$





$1 - \frac{2}{10} - \frac{3}{5} = \square - \square - \square = \square = \square$

Name: _____ **Date:** _____

Find each difference. Express your answer in simplest form.

Example

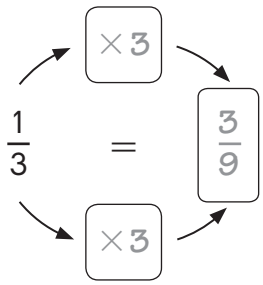
$1 - \frac{2}{9} - \frac{1}{3} = ?$

$1 - \frac{2}{9} - \frac{1}{3}$

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

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

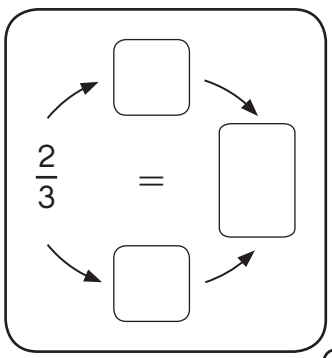
So, $1 - \frac{2}{9} - \frac{1}{3} = \frac{4}{9}$.



13. $\frac{17}{21} - \frac{2}{3} = \frac{17}{21} - \boxed{}$

$= \boxed{}$

$= \boxed{}$

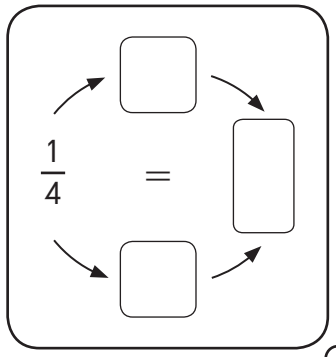


Name: _____ **Date:** _____

14. $1 - \frac{1}{4} - \frac{5}{12} = \square - \square - \frac{5}{12}$

$= \square$

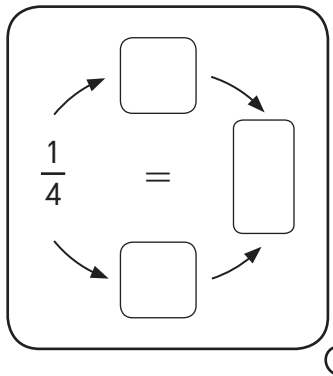
$= \square$



15. $1 - \frac{1}{4} - \frac{3}{20} = \square - \square - \frac{3}{20}$

$= \square$

$= \square$



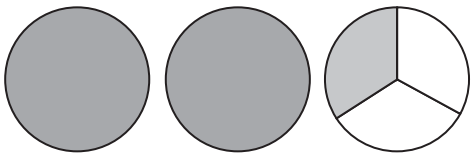
Name: _____ Date: _____

Worksheet 3 Mixed Numbers

Shade the model to show each mixed number.

Example

$2 + \frac{1}{3} = ?$

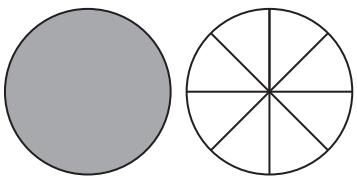


1 whole 1 whole $\frac{1}{3}$

So, $2 + \frac{1}{3} =$ $2\frac{1}{3}$.

When you add a whole number and a fraction, you get a **mixed number**. $2\frac{1}{3}$ is a mixed number.

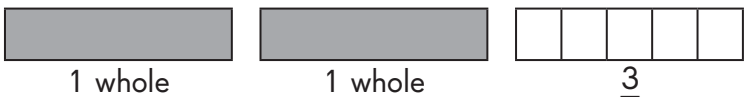
1.



1 whole $\frac{3}{8}$

$\square + \square = 1\frac{3}{8}$

2.



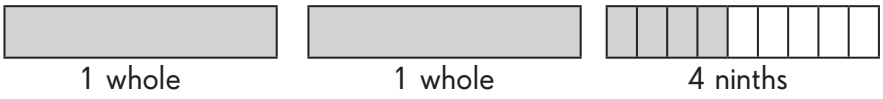
1 whole 1 whole $\frac{3}{5}$

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

Name: _____ **Date:** _____

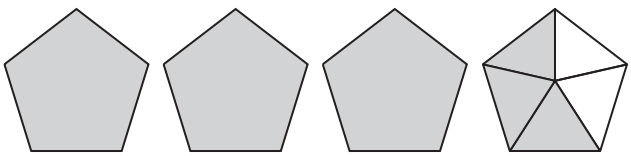
Find the mixed number that describes each model.

Example



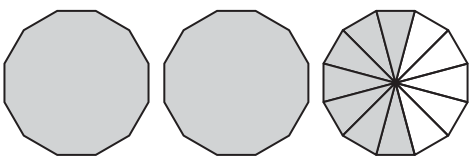
$2 + \boxed{\frac{4}{9}} = \boxed{2\frac{4}{9}}$

3.



$\square + \square = \square$

4.

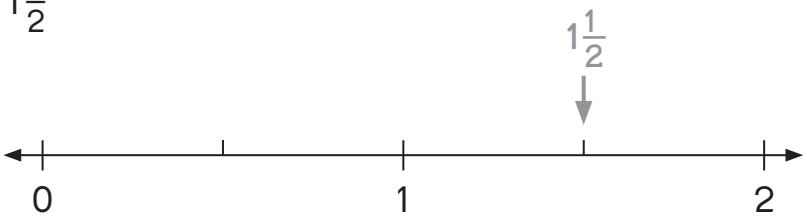


$\square + \square = \square$

Write each mixed number on the number line.

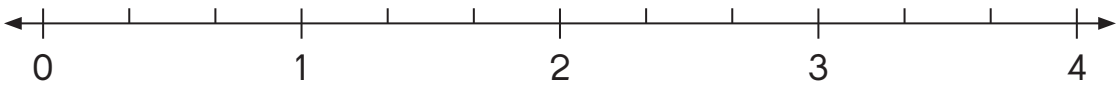
Example

$1\frac{1}{2}$



Name: _____ **Date:** _____

5. $1\frac{1}{3}$ **6.** $2\frac{2}{3}$ **7.** $3\frac{2}{3}$



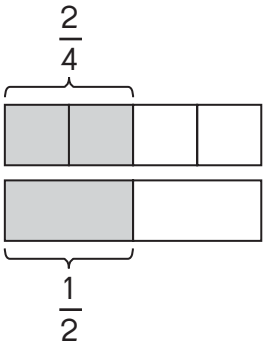
Express each mixed number in simplest form.

Example

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

Method 1

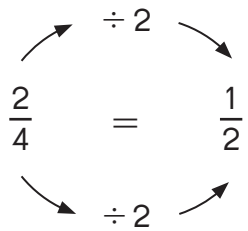
Draw models.



So, $1\frac{2}{4} = 1\frac{1}{2}$.

Method 2

Divide the numerator and the denominator by the same number.



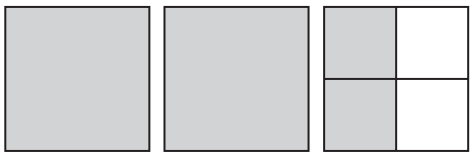
So, $1\frac{2}{4} = 1\frac{1}{2}$.

8. $2\frac{3}{12}$ **9.** $3\frac{6}{8}$

Name: _____ **Date:** _____

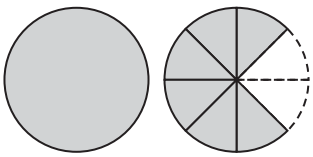
Find the number of wholes and parts that are shaded. Then write each sum as a mixed number in simplest form.

Example



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

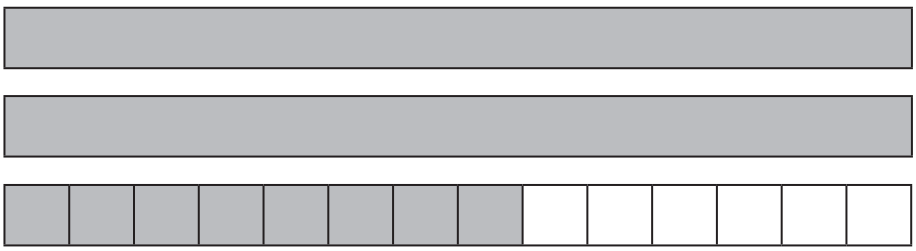
10.



$1 + \square = \square$

$= \square$

11.



$\square + \square = \square$

$= \square$

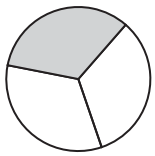
Name: _____ Date: _____

Worksheet 4 Improper Fractions

Write each description as a fraction.

Example

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



1. 3 quarters = ☐

2. 4 fifths = ☐

3. 5 sixths = ☐

4. 6 eighths = ☐

5. 7 tenths = ☐

Express each mixed number as an improper fraction.

Example

$1\frac{2}{3} = ?$

1 whole = 3 thirds

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

There are 5 thirds in $1\frac{2}{3}$.

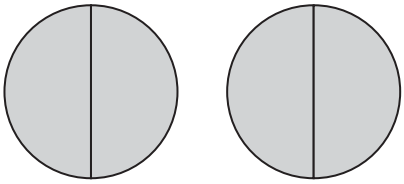
$1\frac{2}{3} = \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = \frac{5}{3}$

So, $1\frac{2}{3} = \frac{5}{3}$.

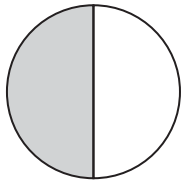
An **improper fraction** is equal to or greater than 1. $\frac{5}{3}$ is an improper fraction.

Name: _____ **Date:** _____

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



2 wholes = ☐ halves

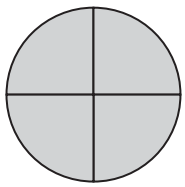


$\frac{1}{2}$ = ☐ half

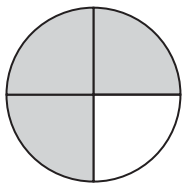
There are ☐ halves in $2\frac{1}{2}$.

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

7. $1\frac{3}{4}$



1 whole = ☐ quarters



$\frac{3}{4}$ = ☐ quarters

There are ☐ quarters in $1\frac{3}{4}$.

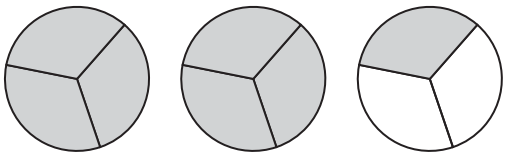
$1\frac{3}{4}$ = ☐ + ☐ + ☐ + ☐ + ☐ + ☐ + ☐ = ☐

Name: _____ Date: _____

Express each mixed number as an improper fraction.
Use the models to help you.

Example

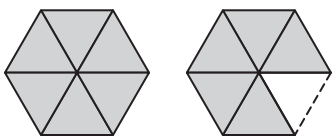
How many thirds are there in $2\frac{1}{3}$?



There are [7] thirds in $2\frac{1}{3}$.

$2\frac{1}{3} =$ [7] thirds $=$ [$\frac{7}{3}$]

8. How many sixths are there in $1\frac{5}{6}$?



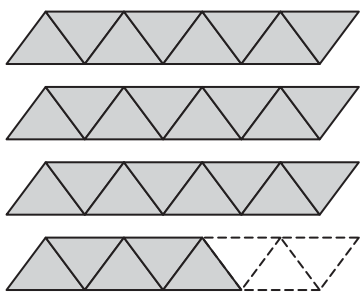
There are [ ] sixths in $1\frac{5}{6}$.

$1\frac{5}{6} =$ [ ] sixths $=$ [ ]

9. How many eighths are there in $3\frac{5}{8}$?

There are [ ] eighths in $3\frac{5}{8}$.

$3\frac{5}{8} =$ [ ] eighths $=$ [ ]



Name: _____ **Date:** _____

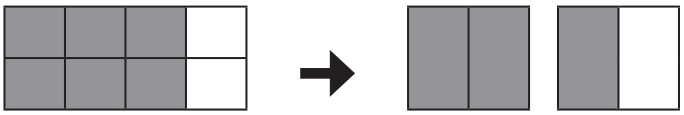
Express each improper fraction in simplest form.

Example

$\frac{6}{4} = ?$

Method 1

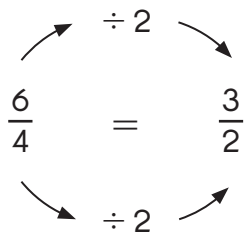
Simplify the fractions shown by the shaded parts.



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

Method 2

Divide the numerator and the denominator by the same number.



So, $\frac{6}{4} = \boxed{\frac{3}{2}}$.

10. $\frac{12}{8} = \square$

11. $\frac{24}{15} = \square$

12. $\frac{30}{8} = \square$

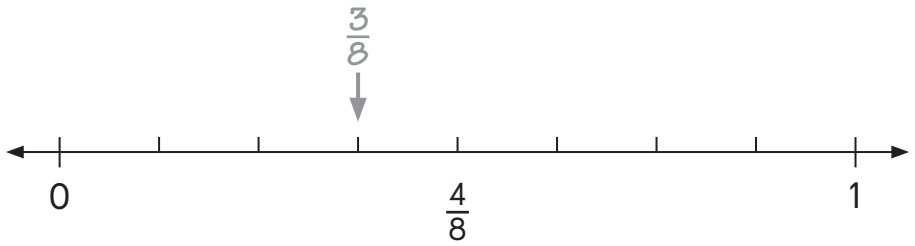
13. $\frac{48}{36} = \square$

Name: _____ **Date:** _____

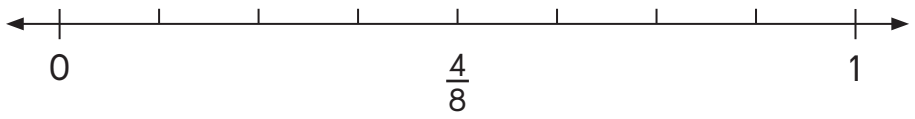
Write each fraction on the number line.

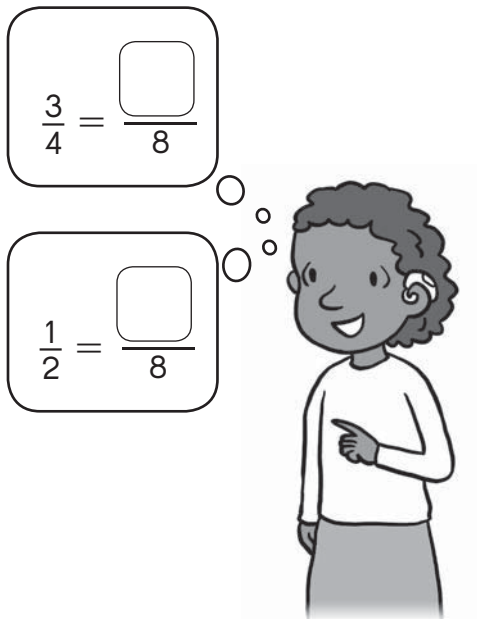
Example

$\frac{3}{8}$



14. $\frac{3}{4}$ **15.** $\frac{7}{8}$ **16.** $\frac{1}{2}$

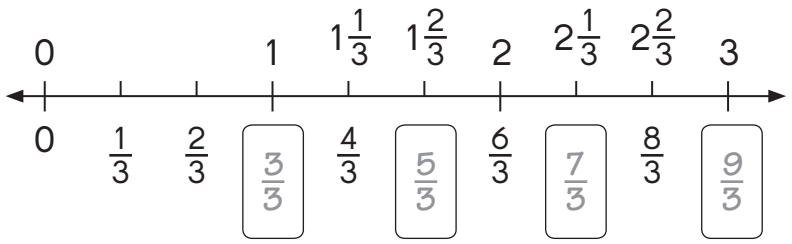




Name: _____ **Date:** _____

Write the missing improper fraction in each box.

Example



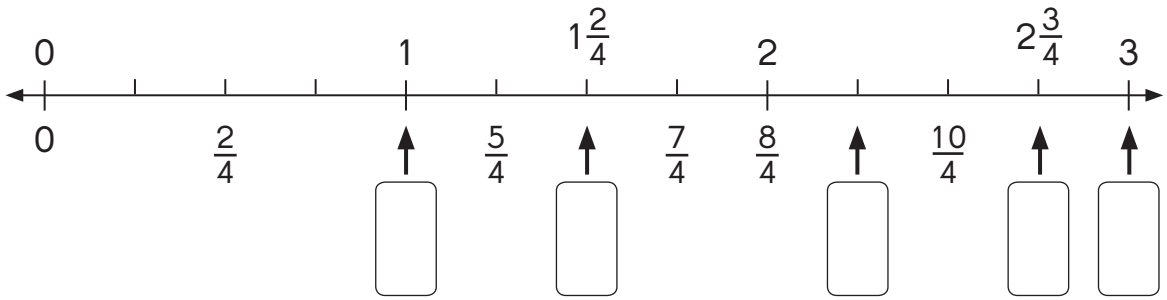
$1 = 3 \text{ thirds} = \frac{3}{3}$

$1\frac{2}{3} = 1 + \frac{2}{3}$

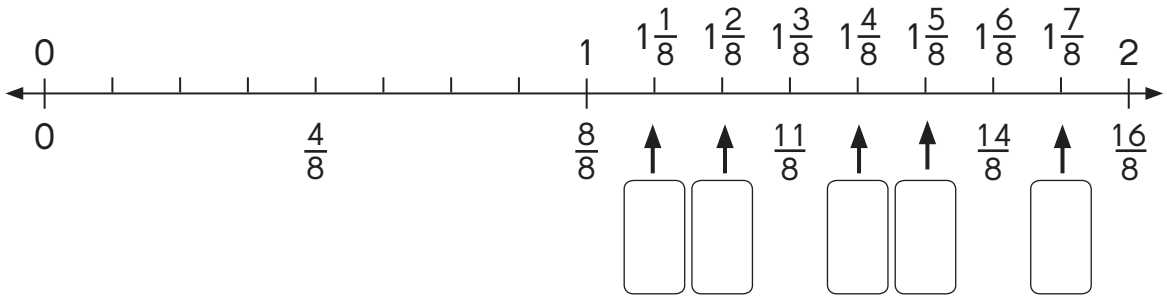
$= \frac{3}{3} + \frac{2}{3}$

$= \frac{5}{3}$

17.



18.



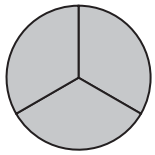
Name: _____ Date: _____

Worksheet 5 Renaming Improper Fractions and Mixed Numbers

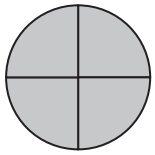
Complete each statement.

Example

3 thirds is 1 whole.

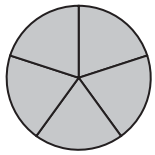


1.



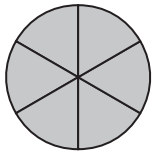
4 quarters is _____ whole.

2.



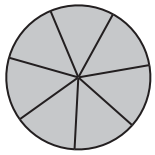
5 fifths is _____ whole.

3.



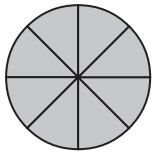
_____ sixths is 1 whole.

4.



_____ sevenths is 1 whole.

5.



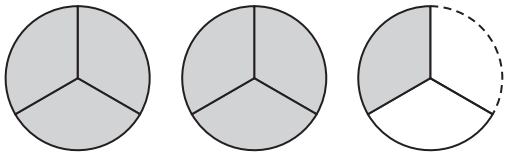
_____ eighths is 1 whole.

Name: _____ Date: _____

Rename each improper fraction as a mixed number. Use models to help you.

Example

$\frac{7}{3} = ?$



$\frac{7}{3} = \boxed{7}$ thirds

$= \boxed{6}$ thirds $+ \boxed{1}$ third

$= \boxed{\frac{6}{3}} + \boxed{\frac{1}{3}} = \boxed{2\frac{1}{3}}$

So, $\frac{7}{3} = 2\frac{1}{3}$.

6. $\frac{14}{5} = \square$ fifths

$= \square$ fifths $+ \square$ fifths

$= \square + \square$

$= \square$

7. $\frac{23}{6} = \square$ sixths

$= \square$ sixths $+ \square$ sixths

$= \square + \square$

$= \square$

Name: _____ **Date:** _____

Use the division rule to rename each improper fraction as a mixed number.

Example

$\frac{12}{5} = ?$

$$5\overline{)\begin{array}{r}2\\1\ 2\\1\ 0\\\hline 2\end{array}}$$

Division Rule:
Divide the numerator by the denominator.
$12 \div 5 = 2$ R 2

There are [2] wholes and [2] fifths in $\frac{12}{5}$.

So, $\frac{12}{5} = 2\frac{2}{5}$.

8. $\frac{8}{3}$

$$3\overline{)\begin{array}{r}\square\\8\\\square\\\hline\square\end{array}}$$

There are [ ] wholes and

[ ] thirds in $\frac{8}{3}$.

So, $\frac{8}{3} =$ _____.

9. $\frac{37}{7}$

$$7\overline{)\begin{array}{r}\square\\3\ 7\\\square\\\hline\square\end{array}}$$

There are [ ] wholes and

[ ] sevenths in $\frac{37}{7}$.

So, $\frac{37}{7} =$ _____.

Name: _____ **Date:** _____

Rename the improper fraction as a mixed number in simplest form. Then check your answer using the division rule.

Example

$\frac{45}{6} = ?$

$\frac{45}{6} = \boxed{45}$ sixths $= \boxed{42}$ sixths $+ \boxed{3}$ sixths

$= \boxed{\frac{42}{6}} + \boxed{\frac{3}{6}}$

$= \boxed{7} + \boxed{\frac{3}{6}}$

$= \boxed{7} + \boxed{\frac{1}{2}} = \boxed{7\frac{1}{2}}$

So, $\frac{45}{6} = 7\frac{1}{2}$.

Check

$6\overline{)4\ 5}$ → $\boxed{7}$, $4\ 2$, $\boxed{3}$

$45 \div 6 = \boxed{7}$ R $\boxed{3}$

$\frac{45}{6} = \boxed{7\frac{3}{6}} = \boxed{7\frac{1}{2}}$

10. $\frac{26}{4} =$ ☐ quarters $=$ ☐ quarters $+$ ☐ quarters

$=$ ☐ $+$ ☐

$=$ ☐ $+$ ☐

$=$ ☐ $+$ ☐ $=$ ☐

Check

$4\overline{)2\ 6}$ → ☐, ☐, ☐

$26 \div 4 =$ ☐ R ☐

$\frac{26}{4} =$ ☐ $=$ ☐

Name: _____ **Date:** _____

11. $\frac{48}{9} = \square$ ninths

$= \square$ ninths $+ \square$ ninths

$= \square + \square$

$= \square + \square$

$= \square + \square$

$= \square$

Check

$48 \div 9 = \square$ R $\square$

$\begin{array}{r} \square \\ 9\overline{)4\ 8} \\ \square \\ \hline \square \end{array}$

$\frac{48}{9} = \square = \square$

Name: _____ **Date:** _____

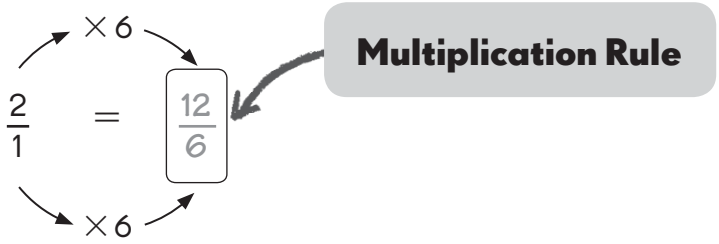
Use the multiplication rule to rename each mixed number as an improper fraction.

Example

$2\frac{1}{6} = ?$

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

$= \boxed{\frac{12}{6}} + \frac{1}{6} = \boxed{\frac{13}{6}}$

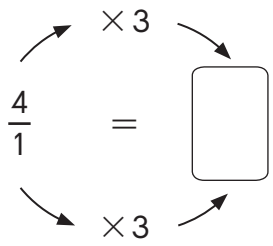


So, $2\frac{1}{6} = \frac{13}{6}$.

12. $4\frac{1}{3} = 4 + \frac{1}{3}$

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

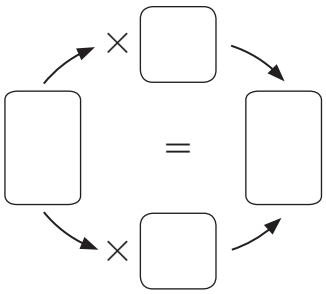
$= \boxed{}$



13. $6\frac{2}{5} = 6 + \boxed{}$

$= \boxed{} + \boxed{}$

$= \boxed{}$



Name: _____ Date: _____

Rename each mixed number as an improper fraction in simplest form. Check your answer.

Example

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

$2\frac{3}{4} = 2 + \boxed{\frac{3}{4}}$

$= \boxed{\frac{8}{4}} + \boxed{\frac{3}{4}}$

$= \boxed{\frac{11}{4}}$

So, $2\frac{3}{4} = \frac{11}{4}$.

Check

Step 1 Multiply the whole number by the denominator.

$2 \times \boxed{4} = \boxed{8}$

Step 2 Add the product to the numerator.

$\boxed{8} + 3 = \boxed{11}$

There are $\boxed{11}$ quarters in $2\frac{3}{4}$.

14. $5\frac{1}{2} = 5 + \boxed{}$

$= \boxed{} + \boxed{}$

$= \boxed{}$

Check

$5 \times \boxed{} = \boxed{}$

$\boxed{} + \boxed{} = \boxed{}$

There are $\boxed{}$ halves in $5\frac{1}{2}$.

Name: _____ **Date:** _____

15. $7\frac{5}{6} = \square + \square$

$= \square + \square$

$= \square$

Check

$7 \times \square = \square$

$\square + \square = \square$

There are $\square$ sixths in $7\frac{5}{6}$.

16. $8\frac{8}{9} = \square + \square$

$= \square + \square$

$= \square$

Check

$\square \times \square = \square$

$\square + \square = \square$

There are $\square$ ninths in $8\frac{8}{9}$.

Name: _____ Date: _____

Worksheet 6 Renaming Whole Numbers when Adding and Subtracting Fractions

Add. Express each answer as a mixed number in simplest form.

Example

$\frac{3}{4} + \frac{3}{4} = ?$

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

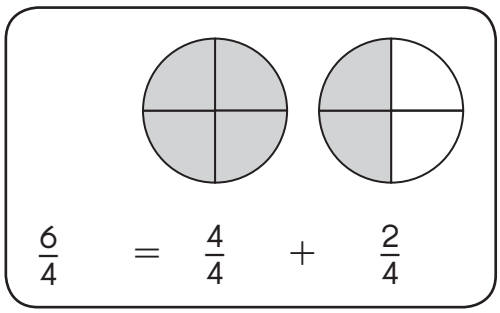
$= \frac{4}{4} + \frac{2}{4}$

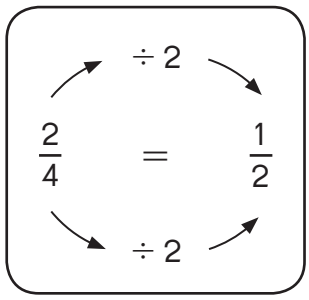
$= 1 + \frac{2}{4}$

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

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

So, $\frac{3}{4} + \frac{3}{4} = 1\frac{1}{2}$.





Name: _____ **Date:** _____

1. $\frac{4}{5} + \frac{3}{5} = \square$

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

$= 1 + \square$

$= \square$

2. $\frac{7}{12} + \frac{11}{12} = \square$

$= \square + \square$

$= \square + \square$

$= \square$

$= \square$

Name: _____ **Date:** _____

Find the equivalent fraction. Then add. Express each answer in simplest form.

Example

$\frac{2}{3} + \frac{7}{12} = ?$

$\frac{2}{3} + \frac{7}{12} = \frac{8}{12} + \frac{7}{12}$

$= \frac{15}{12}$

$\frac{15}{12} = \frac{5}{4}$ (÷ 3)

$= \frac{5}{4} = 1\frac{1}{4}$

So, $\frac{2}{3} + \frac{7}{12} = 1\frac{1}{4}$.

3. $\frac{4}{5} + \frac{7}{10} = \square + \square$

$= \square$

$= \square$

$= \square$

4. $\frac{8}{9} + \frac{1}{3} = \square + \square$

$= \square$

$= \square$

Name: _____ **Date:** _____

Find the sum. Express each answer in simplest form.

Example

$\frac{2}{3} + \frac{5}{9} + \frac{4}{9} = ?$

$\frac{2}{3} + \frac{5}{9} + \frac{4}{9} = \boxed{\frac{6}{9}} + \boxed{\frac{5}{9}} + \boxed{\frac{4}{9}}$

$= \boxed{\frac{15}{9}}$

$= \boxed{\frac{5}{3}} = \boxed{1\frac{2}{3}}$

So, $\frac{2}{3} + \frac{5}{9} + \frac{4}{9} = 1\frac{2}{3}$.

5. $\frac{2}{3} + \frac{7}{12} + \frac{11}{12} = \boxed{} + \boxed{} + \boxed{}$

$= \boxed{}$

$= \boxed{}$

$= \boxed{}$

Name: _____ **Date:** _____

6. $1 + \frac{3}{4} + \frac{7}{12} = \square + \square + \square$

$= \square$

$= \square$

$= \square$

Express each whole number as a mixed number.

Example

$2 = \square\frac{\square}{3}$ (1, 3)

7. $3 = 2\frac{\square}{8}$

8. $4 = \square\frac{\square}{12}$

9. $2 = 1\frac{5}{\square}$

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

Name: _____ Date: _____

Subtract each fraction from a whole number to get a mixed number.

Example

$2 - \frac{3}{4} = ?$

Method 1

$2 = 1 + 1$

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

$2 - \frac{3}{4} = 1\frac{4}{4} - \frac{3}{4}$

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

Method 2

$2 = \frac{4}{4} + \frac{4}{4} = \frac{8}{4}$ or $2 = \frac{2}{1} \xrightarrow{\times 4} \frac{8}{4}$

$2 - \frac{3}{4} = \frac{8}{4} - \frac{3}{4}$

$= \frac{5}{4}$

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

So, $2 - \frac{3}{4} = 1\frac{1}{4}$.

11. $1 - \frac{3}{8} = \square - \square$

$= \square$

12. $3 - \frac{5}{12} = \square - \square$

$= \square$

Name: _____ **Date:** _____

13. $3 - \frac{5}{9} = \square - \square$

$= \square$

$= \square$

14. $4 - \frac{2}{3} = \square - \square$

$= \square$

$= \square$

Subtract. Express your answer in simplest form.

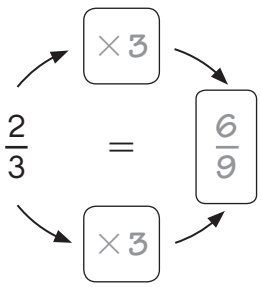
Example

$\frac{2}{3} - \frac{5}{9} = ?$

$\frac{2}{3} - \frac{5}{9} = \frac{6}{9} - \frac{5}{9}$

$= \frac{1}{9}$

So, $\frac{2}{3} - \frac{5}{9} = \frac{1}{9}$.

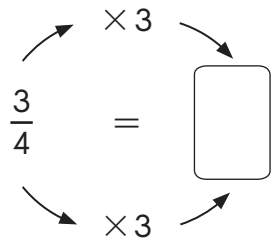


Name: _____ **Date:** _____

15. $\frac{3}{4} - \frac{7}{12} = \square - \square$

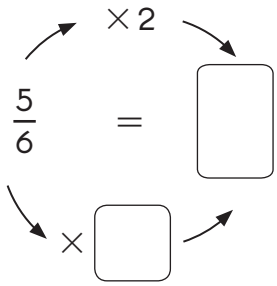
$= \square$

$= \square$



16. $\frac{5}{6} - \frac{5}{12} = \square - \square$

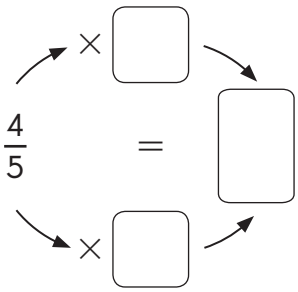
$= \square$



17. $\frac{4}{5} - \frac{3}{10} = \square - \square$

$= \square$

$= \square$



Name: _____ Date: _____

Worksheet 7 Fraction of a Set

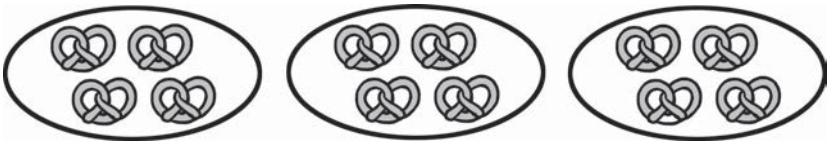
Find the fraction of each set.

Example

$\frac{1}{3}$ of 12 = ?

12 pretzels are divided into 3 equal groups.

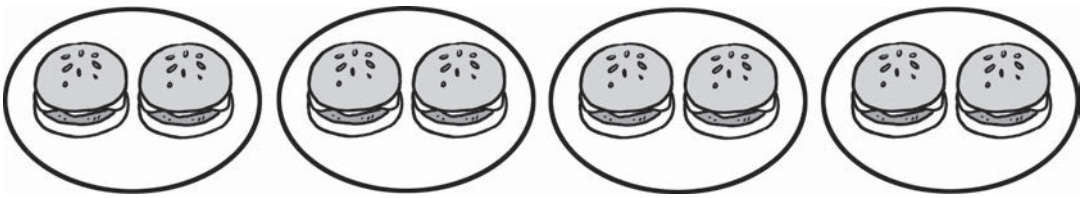
$\frac{1}{3}$ of 12 means 1 of the 3 groups of pretzels.



3 groups of pretzels → 12 pretzels
1 group of pretzels → 4 pretzels

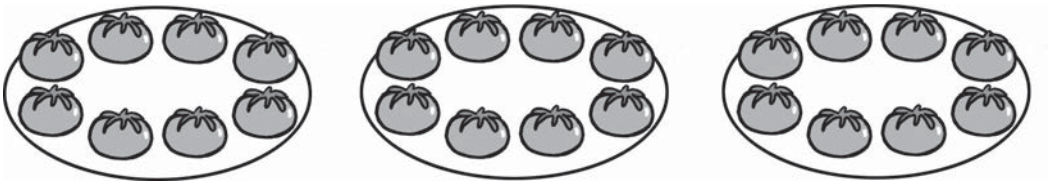
So, $\frac{1}{3}$ of 12 is 4.

1. $\frac{1}{4}$ of 8 = ☐



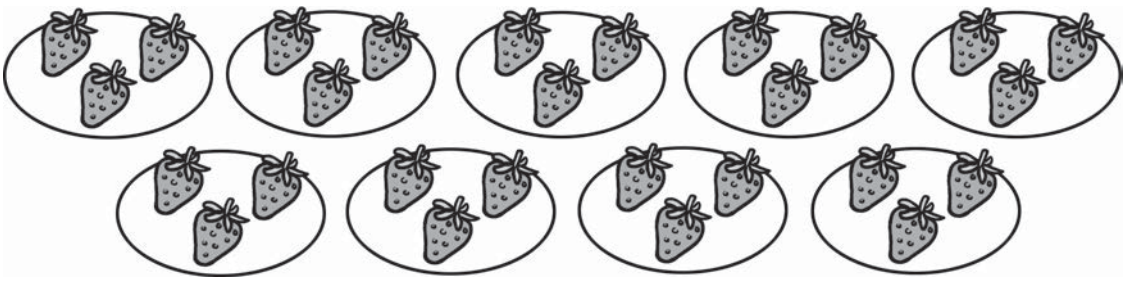
Name: _____ **Date:** _____

2. $\frac{2}{3}$ of 24 = ☐

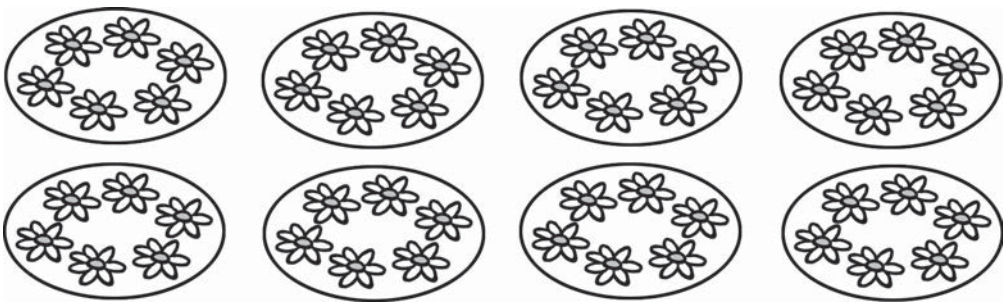


3. $\frac{3}{4}$ of 28 = ☐

4. $\frac{5}{9}$ of 27 = ☐

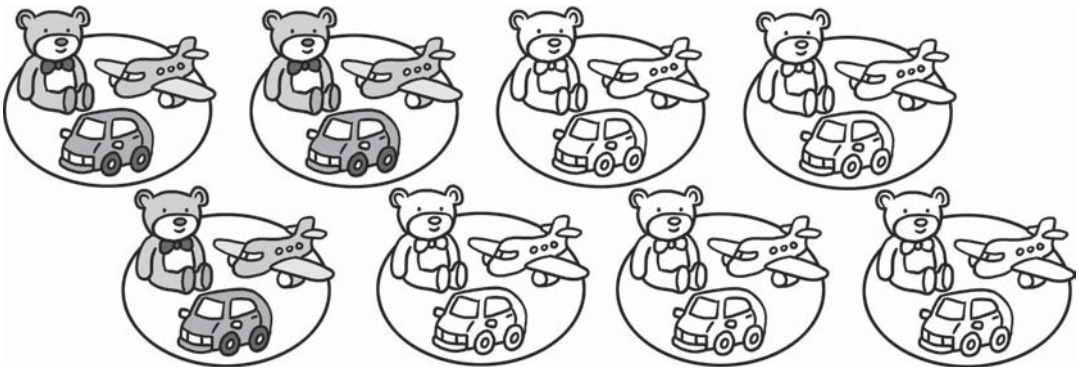


5. $\frac{3}{8}$ of 48 = ☐



Name: _____ **Date:** _____

Answer the questions.



Example

How many toys are shaded?

9 toys are shaded.

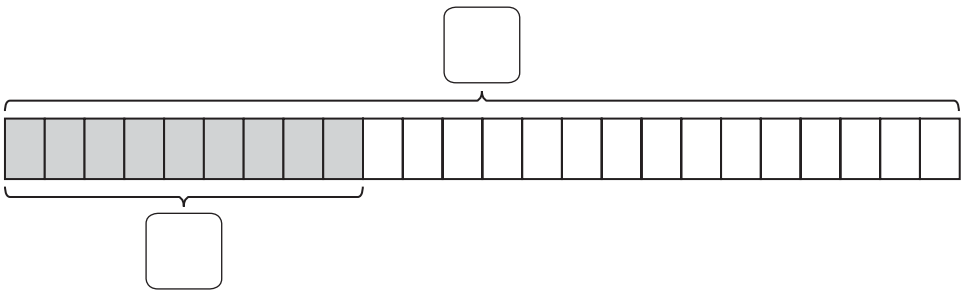
6. 24 toys are divided into equal groups.

There are _____ groups of toys, and _____ groups are shaded.

7. What fraction of the set of toys are shaded?

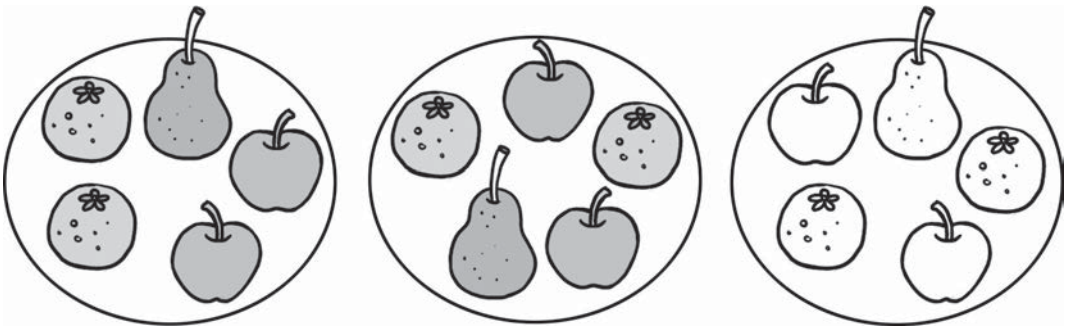
The shaded parts $=$ $\frac{\square}{\square}$ of the set.

8. Write the missing numbers on the model.



Name: _____ **Date:** _____

Write the missing numbers.



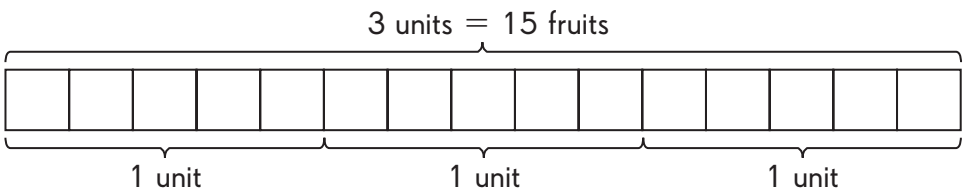
Example

15 fruits are divided into 3 groups.

9. There are _____ fruits in each group.

10. _____ out of the 15 fruits in the set are shaded.

11. Color the parts of the model to show the number of fruits that are shaded.



12. What fraction of the fruits are shaded?

The shaded parts = $\frac{\square}{\square}$ of the set.

13. From the model, 1 unit → _____ fruits

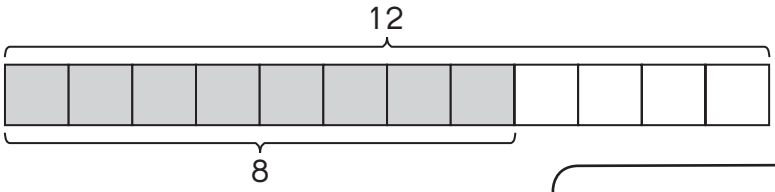
2 units → _____ fruits

Name: _____ **Date:** _____

Find the fractional part of each number. Use models to help you.

Example

$\frac{2}{3}$ of 12 = ?



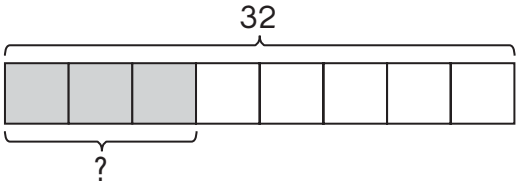
3 units = 12

1 unit = 4

2 units = 4 × 2 = 8

So, $\frac{2}{3}$ of 12 is 8.

14. $\frac{3}{8}$ of 32



_____ units = _____

1 unit = _____ ÷ _____ = _____

3 units = _____ × _____ = _____

So, $\frac{3}{8}$ of 32 = _____.

Name: _____ **Date:** _____

Find the fractional part of each number. Show your work.

Example

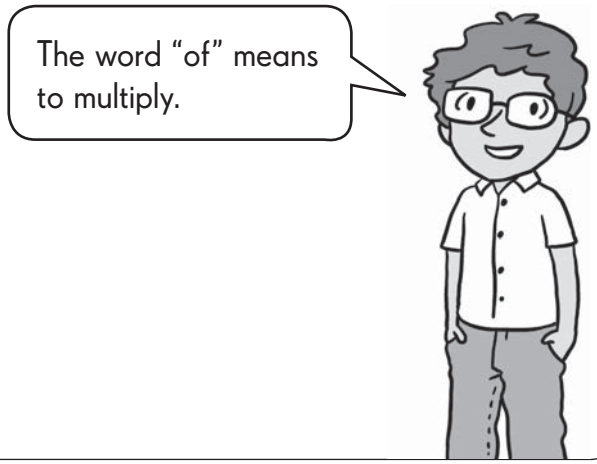
$\frac{3}{5}$ of 35 = ?

$\frac{3}{5} \times 35 = \frac{3 \times 35}{5}$

$= \frac{105}{5}$

$= 21$

So, $\frac{3}{5}$ of 35 = 21.



15. $\frac{3}{4}$ of 28

$\frac{3}{4} \times 28 = \frac{\square \times \square}{4}$

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

$= \square$

16. $\frac{2}{7}$ of 56

$\frac{2}{7} \times 56 = \frac{\square \times \square}{\square}$

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

$= \square$

17. $\frac{3}{8}$ of 64

18. $\frac{7}{11}$ of 44

Name: _____ Date: _____

Worksheet 8 Real-World Problems: Fractions

Solve. Show your work.

Example

Three friends shared a pie. Susan ate $\frac{1}{4}$ of the pie.

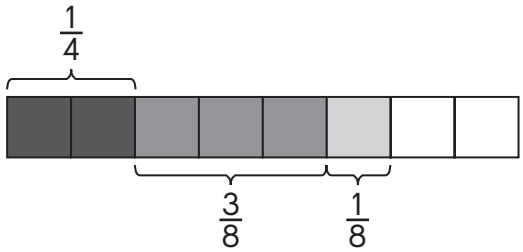
Daniel ate $\frac{3}{8}$ of the pie. Joe ate $\frac{1}{8}$ of the pie.

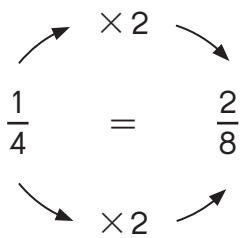
What fraction of the pie did they eat altogether?

$\frac{1}{4} + \frac{3}{8} + \frac{1}{8} = \boxed{\frac{2}{8}} + \frac{3}{8} + \frac{1}{8}$

$= \boxed{\frac{6}{8}} = \boxed{\frac{3}{4}}$

They ate $\frac{3}{4}$ of the pie.





1. Lisa, Sam, and Marco each bought some dried fruit.

Lisa bought $\frac{2}{3}$ pound of dried fruit. Sam and Marco each bought $\frac{5}{6}$ pound of dried fruit. How much dried fruit did they buy altogether?

$\frac{2}{3} + \frac{5}{6} + \frac{5}{6} = \boxed{} + \frac{5}{6} + \frac{5}{6}$

$= \boxed{} = \boxed{} = \boxed{}$

They bought _____ pounds of dried fruit altogether.

Name: _____ **Date:** _____

2. Mrs. Jackson baked muffins one day. She used $\frac{1}{4}$ kilogram of flour to bake the first batch of muffins. She used $\frac{7}{12}$ kilogram of flour to bake the second batch, and another $\frac{11}{12}$ kilogram of flour for the third batch. How much flour did she use altogether?

$$\frac{1}{4} + \frac{7}{12} + \frac{11}{12} = \square + \frac{7}{12} + \frac{11}{12}$$

$$= \square = \square$$

She used _____ kilograms of flour altogether.

3. Edison made a fruit salad. He mixed $\frac{7}{12}$ pound of apples and $\frac{3}{4}$ pound of strawberries. He then added $\frac{5}{12}$ pound of banana. What was the total weight of the fruit salad?

Name: _____ **Date:** _____

Example

Kathy has 1 loaf of whole grain bread.

She cuts $\frac{2}{3}$ of it for her friend and $\frac{1}{12}$ for herself.

What fraction of the bread is left?

Method 1

$1 - \frac{2}{3} - \frac{1}{12}$

$= \frac{12}{12} - \frac{8}{12} - \frac{1}{12}$

$= \frac{3}{12}$

$= \frac{1}{4}$

$\frac{1}{4}$ loaf of bread is left.

Method 2

$\frac{2}{3} + \frac{1}{12} = \frac{8}{12} + \frac{1}{12}$

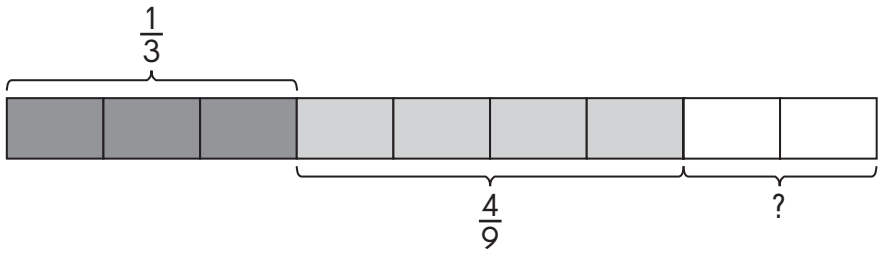
$= \frac{9}{12}$

$\frac{12}{12} - \frac{9}{12} = \frac{3}{12}$

$= \frac{1}{4}$

$\frac{1}{4}$ loaf of bread is left.

4. Sam spent $\frac{1}{3}$ of his time playing soccer and $\frac{4}{9}$ of his time doing homework. He spent the rest of his time playing computer games. How much of his time did Sam spend playing computer games?



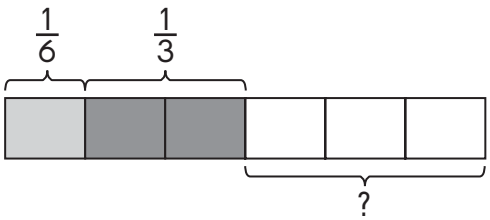
$\frac{1}{3} + \frac{4}{9} = \frac{\square}{9} + \frac{4}{9} = \frac{\square}{9}$

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

Sam spent _____ of his time playing computer games.

Name: _____ **Date:** _____

5. Latoya bought a pizza. She ate $\frac{1}{6}$ of the pizza and gave $\frac{1}{3}$ of it to her sister. She kept the rest of the pizza for her grandmother. How much of the pizza did Latoya keep for her grandmother?



$\frac{1}{6} + \frac{1}{3} = \square + \square = \square$

$1 - \square = \square - \square = \square = \square$

Latoya kept _____ of the pizza for her grandmother.

6. Pam made mixed juice from carrot juice and apple juice. She filled a jug with $\frac{7}{8}$ liter of carrot juice and $\frac{3}{4}$ liter of apple juice. Pam then drank $\frac{3}{8}$ liter of the mixed juice. Find the amount of mixed juice that was left in the jug.

$\square \bigcirc \square = \square$

$\square \bigcirc \square = \square = \square$

_____ liters of mixed juice was left in the jug.

Name: _____ **Date:** _____

Example

Ling bought a total of 12 apples. Of the apples she bought, 8 are red apples and 4 are green apples.

a. What fraction of the apples are red?

b. What fraction of the apples are green?

a. 8 out of 12 is $\frac{8}{12}$.

$\frac{8}{12} = \frac{2}{3}$ $\frac{2}{3}$ of the apples are red.

b. $1 - \frac{2}{3} = \frac{1}{3}$

$\frac{1}{3}$ of the apples are green.

7. Elan has a bag of 10 marbles. He gives 4 marbles to his brother.

a. What fraction of his marbles does Elan give away?

4 out of 10 is $\frac{\square}{\square}$.

$\frac{\square}{\square} = \frac{\square}{\square}$ Elan gives away _____ of his marbles.

b. What fraction of the marbles are left?

$1 -$ _____ $=$ _____

_____ of the marbles are left.

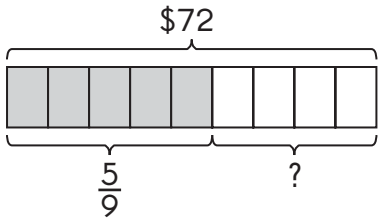
Name: _____ **Date:** _____

8. Bernice has a ribbon that is 12 centimeters long. She cuts 8 centimeters off the length of the ribbon. What fraction of the ribbon is left?

Example

Dianne has \$72. She uses $\frac{5}{9}$ of it to buy a present for her father.

How much money does Dianne have left?



Method 1

9 units = \$72

1 unit = \$72 ÷ 9

= \$8

4 units = \$8 × 4

= \$32

Dianne has \$32 left.

Method 2

$\frac{5}{9}$ of \$72 = $\frac{5}{9} \times$ \$72

= $\frac{\$360}{9}$

= \$40

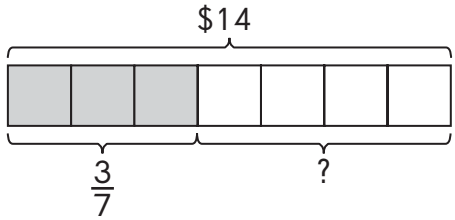
Dianne spent \$40.

\$72 − \$40 = \$32

Dianne has \$32 left.

Name: _____ **Date:** _____

9. Winton was given \$14 to spend at his school fair. He spent $\frac{3}{7}$ of the money playing games. How much money did Winton have left?



Method 1

____ units = \$____

1 unit = \$____

____ units = \$____ × ____

= \$____

\$14 − \$____ = \$____

Winton had \$____ left.

Method 2

$\frac{3}{7}$ of \$14 = ____ × \$____

= ____ × \$____

= \$____

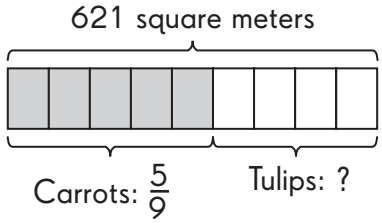
He spent \$____.

\$14 − \$____ = \$____

Winton had \$____ left.

10. Chris planted carrots on $\frac{5}{9}$ of his farm and tulips on the rest of the land. The total area of his farm is 621 square meters.

Find the area of the land on which he planted tulips.



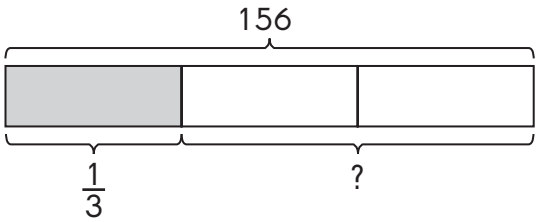
Method 1

Method 2

Name: _____ **Date:** _____

11. Of all the seats in an airplane, $\frac{1}{3}$ are business-class seats, and the rest are economy-class seats.

There are 156 seats in the airplane. Find the number of economy-class seats.



Method 1

Method 2

12. Sally cuts a pear into 8 equal pieces. She gives each of her 6 students one piece each. What fraction of the pear do they eat altogether?

13. Mr. Lee has 12 visitors. He prepares 12 glasses of orange juice for his visitors. Each glass contains $\frac{2}{9}$ liters of orange juice. How many liters of orange juice has Mr. Lee prepared altogether?

Name: _____ Date: _____

Worksheet 9 Line Plots with Fractions of a Unit

Solve.

1. Jeff went to a garden and collected some leaves. He measured the lengths of the leaves and recorded them as follows:
3 cm, 5 cm, 8 cm, 4 cm, 3 cm, 4 cm, 7 cm, 6 cm, 3 cm, 3 cm, 2 cm, 4 cm, 5 cm, 5 cm, 6 cm, 7 cm, 6 cm, 5 cm, 4 cm, 5 cm, 4 cm, 5 cm, 1 cm.

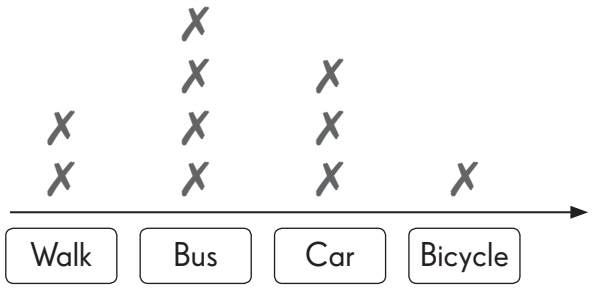
Draw a table and record the data.

Length of Leaves	Tally	Number of Leaves

From the table draw a graph below. Use an ✗ to represent one leaf.

Name: _____ **Date:** _____

2. The graph shows the mode of transportation of children to school daily.



a. Which is the most common way children go to school?

b. Why do you think so?

c. Which is the least common way children go to school?

d. Why do you think so?

e. How many more children go to school by bus than by bicycle?