

**Students Entering  
Sixth Grade**

**Summer Math Packet**

Name \_\_\_\_\_

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**Review**  
**4**

## Multiplying with Decimals

Find  $4.3 \times 2.7$ .

<p><i>Multiply as you would with whole numbers.</i></p> $  \begin{array}{r}  2 \\  4.3 \\  \times 2.7 \\  \hline  301 \\  860 \\  \hline  1161  \end{array}  $	<p><i>Count the number of decimal places in both factors. The total is the number of decimal places in the product.</i></p> $  \begin{array}{rcl}  4.3 & \leftarrow & 1 \text{ decimal place} \\  \times 2.7 & \leftarrow & + 1 \text{ decimal place} \\  \hline  11.61 & \leftarrow & 2 \text{ decimal places}  \end{array}  $
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Find each product.

1. 
$$\begin{array}{r}
 14 \\
 \times 8.8 \\
 \hline
 112 \\
 1120 \\
 \hline
 \end{array}$$

2. 
$$\begin{array}{r}
 1.6 \\
 \times .9 \\
 \hline
 \end{array}$$

3. 
$$\begin{array}{r}
 0.4 \\
 \times 3.2 \\
 \hline
 \end{array}$$

4. 
$$\begin{array}{r}
 0.05 \\
 \times 0.3 \\
 \hline
 \end{array}$$

5. 
$$\begin{array}{r}
 2.15 \\
 \times 8.3 \\
 \hline
 \end{array}$$

6. 
$$\begin{array}{r}
 3.3 \\
 \times 0.12 \\
 \hline
 \end{array}$$

7. 
$$\begin{array}{r}
 0.51 \\
 \times 4.2 \\
 \hline
 \end{array}$$

8. 
$$\begin{array}{r}
 1.35 \\
 \times 13 \\
 \hline
 \end{array}$$

9.  $23 \times 0.47 =$  \_\_\_\_\_

10.  $0.9 \times 5 =$  \_\_\_\_\_

11.  $168 \times 2.25 =$  \_\_\_\_\_

12.  $0.8 \times 0.11 =$  \_\_\_\_\_

13.  $20 \times 20.2 =$  \_\_\_\_\_

14.  $4.9 \times 0.3 =$  \_\_\_\_\_

15. A roll of paper towels contained 250 sheets.

Each sheet was 8.75 inches long. How long was the roll? \_\_\_\_\_

16. Tania bought 3 new sweaters. Each sold for \$19.99.

How much did she spend? \_\_\_\_\_

Name \_\_\_\_\_

**Review**  
**6**

# Dividing with Decimals

Find  $36.8 \div 16$ .

$\begin{array}{r} \downarrow \\ 2. \\ 16 \overline{) 36.8} \end{array}$ <p>Place the decimal point.</p> <p>← Think: <math>20 \overline{) 40}</math></p> <p>Try 2 in the quotient.</p>	$\begin{array}{r} 2.3 \\ 16 \overline{) 36.8} \\ \underline{-32} \phantom{0} \\ 48 \\ \underline{-48} \\ 0 \end{array}$ <p>Multiply <math>2 \times 16</math>. Subtract. Bring down 8. Multiply <math>3 \times 16</math>. Subtract.</p>
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Find each quotient.

1.  $6 \overline{) 13.8}$


2.  $6 \overline{) 131.4}$

3.  $9 \overline{) 141.3}$

4.  $5 \overline{) 388.5}$

5.  $7 \overline{) 669.2}$

6.  $28 \overline{) 263.2}$

7.  $41 \overline{) 274.7}$

8.  $7 \overline{) 34.23}$

9.  $269.12 \div 8 =$  \_\_\_\_\_

10.  $311.56 \div 4 =$  \_\_\_\_\_

11.  $2,229.62 \div 46 =$  \_\_\_\_\_

12.  $1,449.09 \div 81 =$  \_\_\_\_\_

13. A photographer bought 36 rolls of film for \$136.44.  
What was the price of one roll?

14. Four students each ran 100 m in a 400-m relay race.  
The team's total time was 49.44 sec. Find the average  
time of each runner.

Name \_\_\_\_\_

## Review

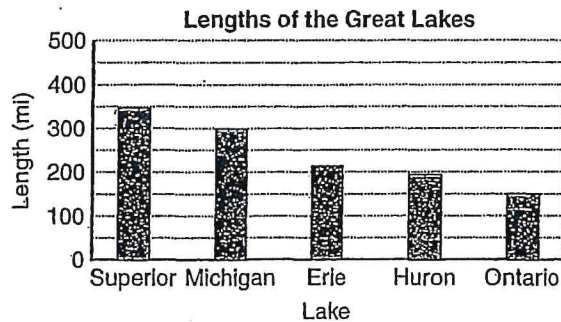
## 8

### Interpreting Data

The **bar graph** shows the lengths in miles of the Great Lakes. Lengths of bars represent lengths of lakes.

Which is the shortest Great Lake?

The shortest lake is Lake Ontario.



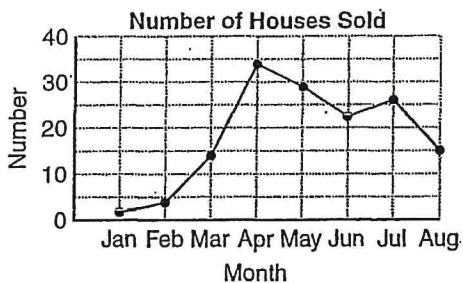
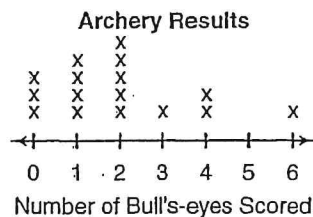
Use the graphs to answer each question.

1. How many archers scored 4 bull's eyes?

\_\_\_\_\_

2. What was the most common number of bull's-eyes scored?

\_\_\_\_\_



3. In which month were the most houses sold?

\_\_\_\_\_

4. In which month were about the same number sold as were sold in August?

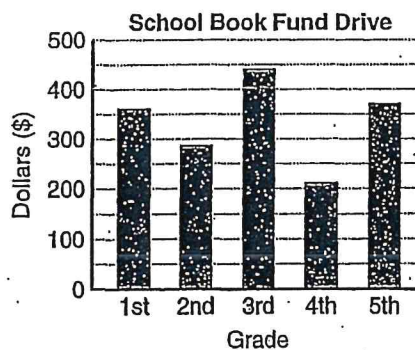
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5. Which grades raised about the same amount for the school book drive?

\_\_\_\_\_

6. The school's goal was to raise \$1,500. About how much did they raise in all?

\_\_\_\_\_



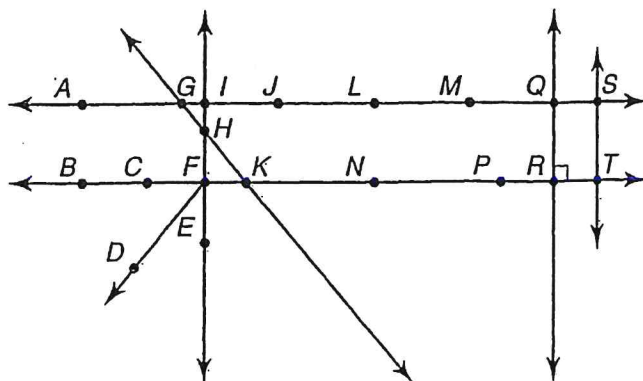


Name \_\_\_\_\_

# Geometric Ideas

R 9-1

- A **line** is a straight path of points that goes on forever in two directions. Examples:  $\overleftrightarrow{AS}$ ,  $\overleftrightarrow{GK}$ .
- A **ray** is a part of a line with one endpoint, extending forever in only one direction. Examples:  $\overrightarrow{FD}$ ,  $\overrightarrow{FB}$ .
- A **line segment** is part of a line with two endpoints. Examples:  $\overline{CF}$ ,  $\overline{MQ}$ .
- A **midpoint** is the point halfway between the endpoints of a line segment. Example: Point  $L$  is halfway between points  $J$  and  $M$  on  $\overline{JM}$ .
- **Congruent line segments** are line segments that have the same length. Example:  $\overline{QR}$  is congruent to  $\overline{ST}$ .
- **Parallel lines** are in the same plane but do not intersect. Example:  $\overleftrightarrow{AS}$  is parallel to  $\overleftrightarrow{BT}$ .



Use the diagram at the right. Name the following.

1. three line segments

\_\_\_\_\_

2. two parallel lines

\_\_\_\_\_

3. two lines that intersect  $\overleftrightarrow{DT}$

\_\_\_\_\_

4. two congruent line segments

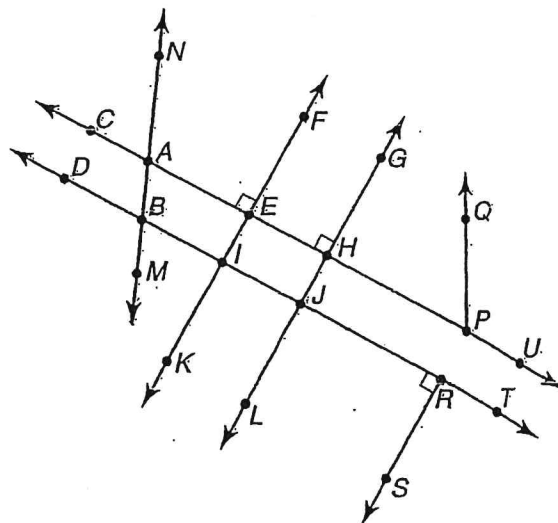
\_\_\_\_\_

5. two lines perpendicular to  $\overleftrightarrow{BR}$

\_\_\_\_\_

6. two midpoints of line segments

\_\_\_\_\_



Name \_\_\_\_\_

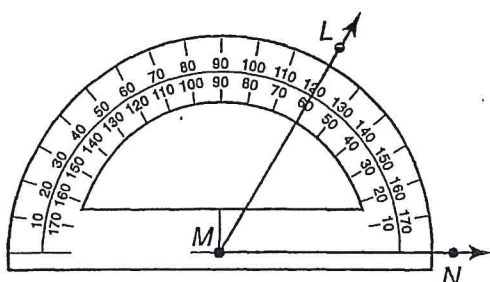
# Measuring and Drawing Angles

R 9-2

## How to measure an angle:

**Step 1** Place the protractor's center on the angle's vertex.

**Step 2** Place the  $0^\circ$  mark on one side of the angle.



$$\angle MN = 60^\circ$$

**Step 3** Use the scale beginning with the  $0^\circ$  mark to read the measurement where the other side of the angle crosses the protractor.

## How to draw an angle:

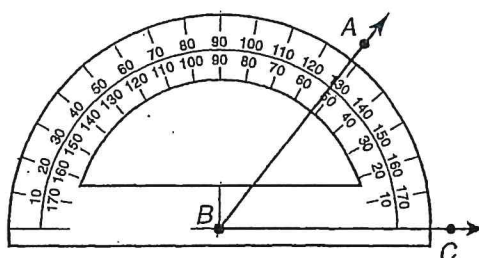
Draw an angle of  $52^\circ$ .

**Step 1** Draw a ray.

**Step 2** Place the protractor's center on the endpoint. Line up the ray with the  $0^\circ$  mark.

**Step 3** Using the scale with the  $0^\circ$  mark, place a point at  $52^\circ$ .

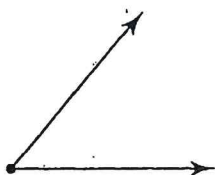
**Step 4** Draw the other ray.



$$\angle ABC = 52^\circ$$

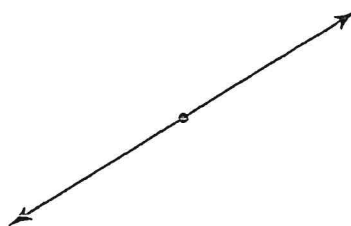
Classify each angle as acute, right, obtuse, or straight. Then measure the angle.

1.



\_\_\_\_\_

2.



\_\_\_\_\_

Draw an angle with each measure.

3.  $45^\circ$

4.  $120^\circ$





Name \_\_\_\_\_

**Review**  
**10**

# Adding and Subtracting Fractions

Find  $\frac{2}{3} + \frac{1}{6}$ .

Find  $\frac{1}{4} - \frac{1}{5}$ .

3	6	9	12	15	Multiples of 3
6	12	18	24	30	Multiples of 6

The least common denominator is 6.

Write equivalent fractions.  $\frac{2}{3} = \frac{4}{6}$

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

4	8	12	16	20	Multiples of 4
5	10	15	20	25	Multiples of 5

The least common denominator is 20.

Write equivalent fractions.  $\frac{1}{4} = \frac{5}{20}$

Subtract. 
$$\begin{array}{r} \frac{1}{4} = \frac{5}{20} \\ - \frac{1}{5} = \frac{4}{20} \\ \hline \frac{1}{20} \end{array}$$

Find each sum or difference.

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

4			
3			

2.  $\frac{11}{12} - \frac{5}{6} =$  \_\_\_\_\_

12			
6			

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


4.  $\frac{3}{7} + \frac{2}{7} =$  \_\_\_\_\_

5.  $\frac{11}{12} - \frac{5}{12} =$  \_\_\_\_\_

6.  $\frac{1}{2} + \frac{1}{3} =$  \_\_\_\_\_

7.  $\frac{1}{3} - \frac{1}{5} =$  \_\_\_\_\_

8.  $\frac{3}{8} - \frac{1}{6} =$  \_\_\_\_\_

9.  $\frac{3}{5} + \frac{3}{10} =$  \_\_\_\_\_

10.  $\frac{1}{2} + \frac{2}{5} =$  \_\_\_\_\_

11.  $\frac{2}{3} - \frac{1}{4} =$  \_\_\_\_\_

12. Meg practiced the piano for  $\frac{5}{12}$  hr. She did homework for  $\frac{3}{4}$  hr. How much longer did she do homework than she practiced the piano?
- \_\_\_\_\_

Name \_\_\_\_\_

# Adding Mixed Numbers

R 4-5

To add mixed numbers, you can add the fractional parts to the whole number parts, and then simplify.

Find  $2\frac{2}{4} + 3\frac{1}{4}$ .

The fractions have a common denominator. Add the fractions. Then add the whole numbers.

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

Find  $3\frac{2}{3} + 4\frac{1}{9}$ .

Write equivalent fractions with the LCD.

$$\begin{array}{r} 3\frac{2}{3} = 3\frac{6}{9} \\ + 4\frac{1}{9} = 4\frac{1}{9} \\ \hline \end{array}$$

Add the whole numbers.  
Add the fractions.  
Simplify if possible.

$$\begin{array}{r} 3\frac{6}{9} \\ + 4\frac{1}{9} \\ \hline 7\frac{7}{9} \end{array}$$

Find  $4 + 3\frac{3}{5}$ .

Add the whole numbers; then add the fraction.

$$\begin{array}{r} 4 \\ + 3\frac{3}{5} \\ \hline 7\frac{3}{5} \end{array}$$

Find each sum. Simplify your answer.

1.  $2\frac{1}{5} + 2\frac{3}{5} =$  \_\_\_\_\_ 2.  $4\frac{2}{3} + 1\frac{1}{6} =$  \_\_\_\_\_

3.  $5\frac{3}{5} + \frac{3}{10} =$  \_\_\_\_\_ 4.  $8\frac{5}{8} + 1\frac{5}{12} =$  \_\_\_\_\_

5.  $6\frac{1}{4} + 11\frac{3}{8} =$  \_\_\_\_\_ 6.  $7 + 8\frac{1}{3} =$  \_\_\_\_\_

7. In 2001, the men's indoor pole vault record was  $20\frac{1}{6}$  ft.  
The women's record for the indoor pole vault was  $15\frac{5}{12}$  ft.  
What is the combined height of the two records? \_\_\_\_\_

8. **Writing in Math** How high is a stack of library books if one book is  $1\frac{3}{8}$  in. high, the second book is  $1\frac{5}{6}$  in. high, and the third is  $2\frac{1}{3}$  in. high? Explain how you solved this problem.

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Name \_\_\_\_\_

**Review**  
**12**

# Subtracting Mixed Numbers

Subtract  $3\frac{2}{3} - 2\frac{1}{6}$ .

Write equivalent fractions.	Subtract the fractions.	Subtract the whole numbers. Simplify.
$\begin{array}{r} 3\frac{2}{3} = 3\frac{4}{6} \\ - 2\frac{1}{6} = 2\frac{1}{6} \\ \hline \end{array}$ <p>The LCD of 3 and 6 is 6.</p>	$\begin{array}{r} 3\frac{2}{3} = 3\frac{4}{6} \\ - 2\frac{1}{6} = 2\frac{1}{6} \\ \hline 3\frac{3}{6} \end{array}$	$\begin{array}{r} 3\frac{2}{3} = 3\frac{4}{6} \\ - 2\frac{1}{6} = 2\frac{1}{6} \\ \hline 1\frac{3}{6} = 1\frac{1}{2} \end{array}$

Find each difference. Simplify.

1. 
$$\begin{array}{r} 3\frac{1}{3} = 3\frac{5}{15} \\ - 2\frac{1}{5} = 2\frac{3}{15} \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 2\frac{1}{3} = 2\frac{2}{6} \\ - 1\frac{1}{6} = 1\frac{1}{6} \\ \hline \end{array}$$

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

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

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

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

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

8. 
$$\begin{array}{r} 5\frac{5}{6} \\ - 1\frac{1}{8} \\ \hline \end{array}$$

9.  $2\frac{2}{3} - 1\frac{1}{4} = \underline{\hspace{2cm}}$

10.  $4\frac{3}{4} - 4\frac{2}{5} = \underline{\hspace{2cm}}$

11.  $2\frac{1}{3} - 1\frac{2}{3} = \underline{\hspace{2cm}}$

12.  $4\frac{4}{9} - 3\frac{2}{3} = \underline{\hspace{2cm}}$

13.  $3\frac{3}{8} - 2\frac{5}{6} = \underline{\hspace{2cm}}$

14.  $5\frac{1}{3} - 2\frac{5}{8} = \underline{\hspace{2cm}}$

15. Greg found two rocks for his collection. One weighed  $4\frac{1}{4}$  lb and the other weighed  $2\frac{7}{8}$  lb. Find the difference in weights. \_\_\_\_\_

Name \_\_\_\_\_

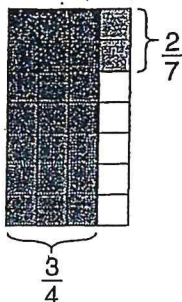
# Multiplying Fractions

R 5-2

Find  $\frac{3}{4} \times \frac{2}{7}$ .

## One Way

Draw a picture. Simplify if possible.



6 of the 28 squares have overlapping shading.

So,  $\frac{3}{4} \times \frac{2}{7} = \frac{6}{28}$ .

Simplify  $\frac{6}{28}$  to  $\frac{3}{14}$ .

## Another Way

Multiply the numerators and denominators. Simplify if possible.

$$\begin{aligned} & \frac{3}{4} \times \frac{2}{7} \\ &= \frac{3 \times 2}{4 \times 7} = \frac{6}{28} \\ &= \frac{3}{14} \end{aligned}$$

## Simplify First

Find the GCF of any numerator and any denominator.

The GCF of 2 and 4 is 2. Divide 2 and 4 by the GCF.

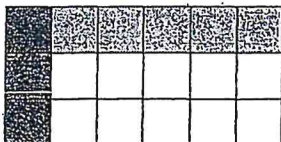
$$\frac{3}{\cancel{4}^2} \times \frac{\cancel{2}_1}{7} = \frac{3}{14}$$

Write an equation for each picture.

1.



2.



Find each product. Simplify if possible.

3.  $\frac{6}{8} \times \frac{1}{3} =$  \_\_\_\_\_

4.  $\frac{5}{6} \times \frac{7}{10} =$  \_\_\_\_\_

5.  $\frac{4}{5} \times \frac{3}{8} =$  \_\_\_\_\_

6.  $\frac{1}{2} \times \frac{4}{9} =$  \_\_\_\_\_

7. **Number Sense** Can you simplify before multiplying  $14 \times \frac{25}{27}$ ? Explain.

\_\_\_\_\_

\_\_\_\_\_

10



Name \_\_\_\_\_

# Multiplying Mixed Numbers

R 5-4

How to find the product of two mixed numbers:

Find  $3\frac{2}{3} \times 4\frac{1}{2}$ .

## Step 1

Estimate by rounding.

$$\begin{array}{r} 3\frac{2}{3} \times 4\frac{1}{2} \\ \downarrow \quad \downarrow \\ 4 \times 5 = 20 \end{array}$$

Then write each mixed number as an improper fraction.

$$\begin{array}{r} 3\frac{2}{3} \times 4\frac{1}{2} \\ \downarrow \quad \downarrow \\ \frac{11}{3} \times \frac{9}{2} \end{array}$$

## Step 2

Look for common factors and simplify.

$$\frac{11}{\cancel{3}^1} \times \frac{\cancel{9}^3}{2} = \frac{11}{1} \times \frac{3}{2}$$

## Step 3

Multiply. Write the product as a mixed number.

$$\frac{11}{1} \times \frac{3}{2} = \frac{33}{2} = 16\frac{1}{2}$$

$16\frac{1}{2}$  is close to 20, so the answer is reasonable.

Find each product. Simplify if possible.

1.  $2\frac{3}{4} \times 3\frac{1}{2} =$  \_\_\_\_\_ 2.  $2\frac{1}{5} \times 2\frac{2}{3} =$  \_\_\_\_\_

3.  $6 \times 3\frac{1}{4} =$  \_\_\_\_\_ 4.  $1\frac{2}{5} \times 3\frac{1}{4} =$  \_\_\_\_\_

5.  $4\frac{1}{2} \times 16 =$  \_\_\_\_\_ 6.  $1\frac{3}{8} \times 2\frac{1}{2} =$  \_\_\_\_\_

7. **Number Sense** Is  $2 \times 17\frac{5}{6}$  greater than or less than 36? Explain.

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Name \_\_\_\_\_

**Review**  
**14**

## Problem Solving: Strategies

A computer store has 25 printers and computers.  
There are 7 more printers than computers.  
How many of each are there?

	Printers	Computers	Check
Guess 1	20	5	$20 - 5 = 1$
Guess 2	14	11	$14 - 11 = 3$
Guess 3	16	9	$16 - 9 = 7\checkmark$

Solution: There are 16 printers and 9 computers.

### Problem Solving Strategies

- Act It Out
- Draw a Picture
- Look For a Pattern
- **Try, Check, and Revise**
- Make an Organized List
- Make a Table
- Solve a Simpler Problem
- Work Backward

Use any strategy to solve.

1. At the veterinarian's office, Terri learned that her dog weighed 4 times as much as her cat. Together the pets weighed 40 lbs. How much did the dog weigh? \_\_\_\_\_

2. Yasmin arrived home from play practice at 4:25 P.M. The walk home took 15 minutes. Practice began 20 minutes after the final bell and lasted for a half hour. When did school end? \_\_\_\_\_

3. Vanessa, Diego, Rose and Randy stood in line for lunch. Rose was just behind Vanessa. Diego was not next to Rose or Randy. Write the line order. \_\_\_\_\_

4. Students played dodge ball and volleyball for 45 minutes. They played dodge ball for 11 more minutes than they played volleyball. How long did they play dodge ball? \_\_\_\_\_

5. Mr. Jones has 4 shirts, 2 ties, and 3 pair of pants. How many days in a row can he wear a different outfit? \_\_\_\_\_



Name \_\_\_\_\_

# Customary Measurement

R 10-1

## Units of Length

foot (ft)     1 ft = 12 in.  
yard (yd)     1 yd = 3 ft  
                  1 yd = 36 in.  
mile (mi)     1 mi = 5,280 ft  
                  1 mi = 1,760 yd

## Units of Capacity

cup (c)       1 c = 8 fluid ounces (oz)  
pint (pt)     1 pt = 2 c  
quart (qt)    1 qt = 2 pt  
gallon (gal)   1 gal = 4 qt

### How to change from one unit of measurement to another:

To change from larger units to smaller units in the customary system, you have to multiply.

$$120 \text{ yd} = \underline{\hspace{2cm}} \text{ ft}$$

$$1 \text{ yd} = 3 \text{ ft}$$

$$120 \times 3 \text{ ft} = 360 \text{ ft}$$

$$120 \text{ yd} = 360 \text{ ft}$$

To change from smaller units to larger ones, you have to divide.

$$256 \text{ oz} = \underline{\hspace{2cm}} \text{ c}$$

$$1 \text{ c} = 8 \text{ oz}$$

$$256 \div 8 = 32$$

$$256 \text{ oz} = 32 \text{ c}$$

Complete.

1. 36 in. = \_\_\_\_\_ ft

2. 4 qt = \_\_\_\_\_ c

3. 5 lb = \_\_\_\_\_ oz

4. 39 ft = \_\_\_\_\_ yd

5. 1.5 mi = \_\_\_\_\_ ft

6. 3.5 gal = \_\_\_\_\_ qt

7. 2 T = \_\_\_\_\_ lb

8. 16 pt = \_\_\_\_\_ qt

9. 64 oz = \_\_\_\_\_ lb

10. 3 yd = \_\_\_\_\_ in.

11. 4 gal = \_\_\_\_\_ pt

12. 55 yd = \_\_\_\_\_ ft

13. 6.5 lb = \_\_\_\_\_ oz

14. 20 pt = \_\_\_\_\_ gal

15. 4.5 qt = \_\_\_\_\_ c

16. 205 yd = \_\_\_\_\_ ft

17. **Reasoning** A vendor at a festival sells soup for \$1.25 per cup or \$3.75 per quart. Which is the better buy?
- \_\_\_\_\_

Name \_\_\_\_\_

# Metric Measurement

R 10-2

## Changing from one metric unit to another:

To change from a larger unit to a smaller unit, multiply by a power of ten.

$$3.8 \text{ L} = \underline{\hspace{2cm}} \text{ mL}$$

A liter is a larger unit than a milliliter. To change from liters to milliliters, multiply.

$$1 \text{ L} = 1,000 \text{ mL}$$

$$3.8 \times 1,000 = 3,800$$

$$3.8 \text{ L} = 3,800 \text{ mL}$$

To change from a smaller unit to a larger unit, divide by a power of ten.

$$100 \text{ m} = \underline{\hspace{2cm}} \text{ km}$$

The meter is a smaller unit than the kilometer. To change from meters to kilometers, divide.

$$1,000 \text{ m} = 1 \text{ km}$$

$$100 \div 1000 = 0.1$$

$$100 \text{ m} = 0.1 \text{ km}$$

Name the most appropriate metric unit for each measurement.

1. mass of a cow

2. length of a carrot

3. capacity of a thimble

\_\_\_\_\_

Complete.

4.  $45 \text{ g} = \underline{\hspace{2cm}} \text{ mg}$

5.  $3450 \text{ mL} = \underline{\hspace{2cm}} \text{ L}$

6.  $4.5 \text{ m} = \underline{\hspace{2cm}} \text{ mm}$

7.  $1.68 \text{ L} = \underline{\hspace{2cm}} \text{ mL}$

8.  $28 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$

9.  $7,658 \text{ g} = \underline{\hspace{2cm}} \text{ kg}$

10.  $600 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$

11.  $5,000 \text{ mg} = \underline{\hspace{2cm}} \text{ g}$

12.  $5.1 \text{ km} = \underline{\hspace{2cm}} \text{ m}$

13.  $1.780 \text{ L} = \underline{\hspace{2cm}} \text{ mL}$

14.  $0.780 \text{ L} = \underline{\hspace{2cm}} \text{ mL}$

15.  $4,300 \text{ m} = \underline{\hspace{2cm}} \text{ km}$

16.  $9,000 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$

17.  $8,000 \text{ mg} = \underline{\hspace{2cm}} \text{ g}$

18. **Reasoning** It is recommended that people have 1 g of calcium each day. How many milligrams of calcium is that?

\_\_\_\_\_

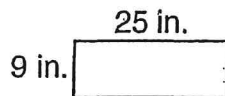
Name \_\_\_\_\_

# Review 16

## Perimeter

**Perimeter** is the distance around a shape.

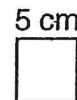
You can add the lengths of all the sides or you can multiply the sum of the length and the width by 2 to find the perimeter of a rectangle.



$$p = 25 \text{ in.} + 9 \text{ in.} + 25 \text{ in.} + 9 \text{ in.} = 68 \text{ in.}$$

$$\text{or } p = 2 \times (25 \text{ in.} + 9 \text{ in.}) = 68 \text{ in.}$$

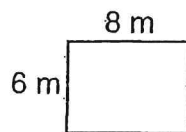
If only one side of a figure is given, then all sides have the same length.



$$p = 5 \text{ cm} + 5 \text{ cm} + 5 \text{ cm} + 5 \text{ cm} = 20 \text{ cm}$$

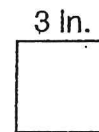
$$\text{or } p = 4 \times 5 \text{ cm} = 20 \text{ cm}$$

1. Find the perimeter of the rectangle.



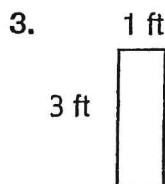
$$p = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \text{ m}$$

2. Find the perimeter of the square.

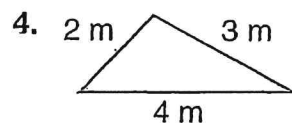


$$p = \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \text{ in.}$$

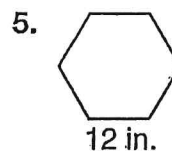
Find the perimeter of each figure.



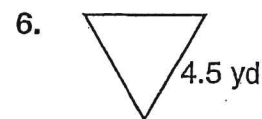
\_\_\_\_\_



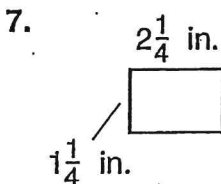
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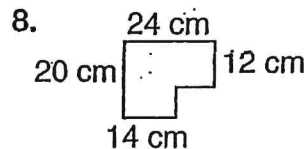
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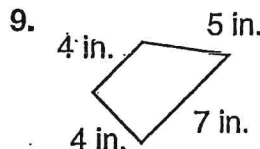
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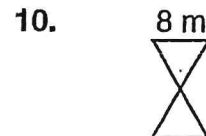
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

11. A flower garden is in the shape of an equilateral triangle.

Each side measures  $15\frac{3}{8}$  ft. What is the garden's perimeter?

\_\_\_\_\_



Name \_\_\_\_\_

# Area of Squares and Rectangles

R 10-8

You can use formulas to find the area of a square or rectangle.

Find the area of a square that is 7.2 m on each side.

Use the formula  $A = s^2$ .

$$A = (7.2)^2$$

$$A = 51.84$$

The area is 51.84 m<sup>2</sup>.

Find the area of a rectangle with a length ( $l$ ) of 4 cm and a width ( $w$ ) of 12 cm.

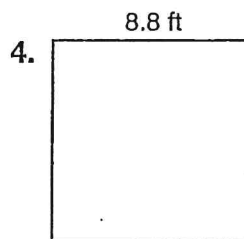
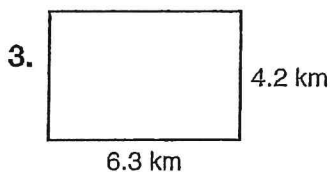
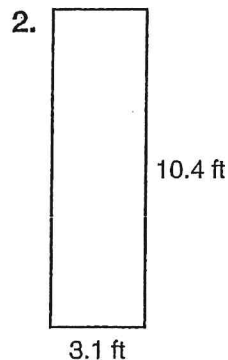
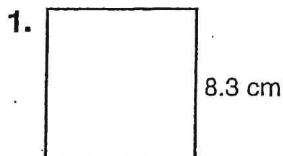
Use the formula  $A = l \times w$ .

$$A = 4 \times 12$$

$$A = 48$$

The area is 48 cm<sup>2</sup>.

Find the area of each figure.



5. **Reasoning** What is the length of a rectangle that has an area of 120 ft<sup>2</sup> and a width of 8 ft? \_\_\_\_\_

6. **Number Sense** What is the area of a square that is 12.4 cm on each side? \_\_\_\_\_

16

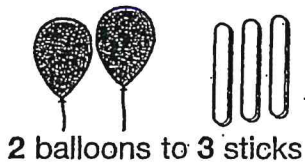


Name \_\_\_\_\_

**Review  
18**

# Ratio and Proportion

You can use **ratios** to compare two quantities.



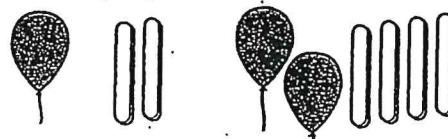
You can write ratios as:

words      2 to 3

with a colon   2:3

as a fraction    $\frac{2}{3}$

A statement that two ratios are equal is called a **proportion**.



$$\frac{1 \text{ balloon}}{2 \text{ sticks}} = \frac{2 \text{ balloons}}{4 \text{ sticks}}$$

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

$\frac{1}{2} = \frac{2}{4}$  is a proportion.

Write each ratio. Use words, a colon, or a fraction.

1. Write the ratio of squares to circles.



2. The Computer Club has 20 girls and 15 boys. Write the ratio of girls to boys in the club.

Tell if the ratios form a proportion. Write yes or no.

3.  $\frac{3}{4}$   $\frac{9}{12}$  \_\_\_\_\_      4.  $\frac{1}{3}$   $\frac{2}{9}$  \_\_\_\_\_      5.  $\frac{3}{5}$   $\frac{6}{10}$  \_\_\_\_\_      6.  $\frac{4}{6}$   $\frac{8}{18}$  \_\_\_\_\_

Complete each table so that all ratios are equal.

7.

3	6	9	12
5			

8.

2			
7	21	42	63

9.

4		20	
5	10		50

10. The ratio of the width to the length of a painting is 3 to 7. If the painting is 42 in. long, how wide is it? \_\_\_\_\_

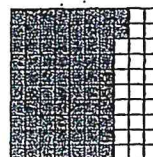
11. The ratio of the number of moons the planet Neptune has to the number that Saturn has is 4 to 9. Saturn has 18 moons. How many moons does Neptune have? \_\_\_\_\_

Name \_\_\_\_\_

# Fractions, Decimals, and Percents

R 7-2

Fractions, decimals, and percents all name parts of a whole. The grid to the right has 72 out of 100 squares shaded.



72 out of 100 are shaded. As a fraction, that is  $\frac{72}{100}$ .  
As a decimal, that is 0.72. As a percent, that is 72%.

Write 40% as a fraction and decimal.

$$40\% = \frac{40}{100} = 0.40$$

The decimal point moves two places to the left.

Write 0.3% as a fraction and decimal.

$$0.3\% = \frac{0.3}{100} = 0.003$$

The decimal point moves two places to the left. Fill in any spaces with zeros.

Write 0.47 as a fraction and percent.

$$0.47 = \frac{47}{100} = 47\%$$

Write  $\frac{3}{4}$  as a decimal and percent.

You can use a proportion:

$$\frac{3}{4} = \frac{n}{100}$$

$$\frac{4n}{4} = \frac{300}{4}$$

$$n = 75$$

$$\text{So, } \frac{3}{4} = 0.75 = 75\%.$$

Write each in two other ways.

1.  $\frac{2}{10}$  \_\_\_\_\_; \_\_\_\_\_

2.  $\frac{23}{100}$  \_\_\_\_\_; \_\_\_\_\_

3.  $\frac{7}{10}$  \_\_\_\_\_; \_\_\_\_\_

4. 97% \_\_\_\_\_; \_\_\_\_\_

5. 16% \_\_\_\_\_; \_\_\_\_\_

6. 52% \_\_\_\_\_; \_\_\_\_\_

7. 0.04 \_\_\_\_\_; \_\_\_\_\_

8. 0.35 \_\_\_\_\_; \_\_\_\_\_

9. **Number Sense** Sheila got 87% of the problem correct.  
Patrick got  $\frac{91}{100}$  correct. Who scored higher? \_\_\_\_\_

18

Name \_\_\_\_\_

**Review**  
**20**

## Probability

What is the probability  
of spinning an A?

$\frac{2}{4}$  ← number of As  
4 ← total possible outcomes

The probability is  $\frac{2}{4}$  or  $\frac{1}{2}$ .



What is the probability  
of spinning a B?

$\frac{1}{4}$  ← number of Bs  
4 ← total possible outcomes

The probability is  $\frac{1}{4}$ .

Complete.

1. What is the probability  
of spinning a 1?

← number of 1s  
 ← total possible outcomes



The probability is \_\_\_\_\_.

2. What is the probability  
of spinning a 3?

← number of 3s  
 ← total possible outcomes

The probability is \_\_\_\_\_.

Give the probability of each outcome.



3. spinning an N \_\_\_\_\_

4. spinning an S \_\_\_\_\_

5. spinning an S or G \_\_\_\_\_

6. spinning an S, G, or N \_\_\_\_\_

A number cube has 6 sides numbered 1, 2, 3, 4, 5, and 6. Find each probability.

7. rolling a 3 \_\_\_\_\_

8. rolling an even number \_\_\_\_\_

9. rolling 3, 4, 5, or 6 \_\_\_\_\_

10. rolling anything but 1 \_\_\_\_\_

11. A hat contains 26 cards, each printed with a different letter  
of the alphabet. What is the probability that you will pick a  
vowel (A, E, I, O, U, or Y)? \_\_\_\_\_

12. There are 6 blue socks, 7 white socks, and 8 gray socks  
in a drawer. If you pick a sock without looking, what is the  
probability that it will be blue? \_\_\_\_\_

