

Multiplying Whole Numbers and Decimals

Find each product.

$$\begin{array}{r} 1. \quad 5.4 \\ \times \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 3.8 \\ \times \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 0.55 \\ \times \quad 8 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 8.19 \\ \times \quad 5 \\ \hline \end{array}$$

Insert a decimal point in each answer to make the equation true.

$$5. \quad 5 \times 6.3 = 315$$

$$6. \quad 3.001 \times 9 = 27009$$

$$7. \text{ Algebra } \text{ If } 4n = 3.60, \text{ which is the value of } n?$$

Multiplying Decimals by Decimals

Find each product.

$$\begin{array}{r} 1. \quad 3.7 \\ \times \quad 0.3 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 4.4 \\ \times \quad 0.2 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 0.61 \\ \times \quad 6.8 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 1.9 \\ \times \quad 0.005 \\ \hline \end{array}$$

$$5. \quad 0.61 \times 6.8 =$$

$$6. \quad 0.79 \times 0.005 =$$

Insert a decimal point in each answer to make the equation true.

$$7. \quad 0.2 \times 4.4 = 088$$

$$8. \quad 8.81 \times 5.2 = 45812$$

Multiplying Fractions

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

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

7. $\frac{7}{10} \times \frac{1}{3} =$

2. $\frac{1}{3} \times \frac{6}{11} =$

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

8. $\frac{9}{10} \times \frac{5}{12} =$

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

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

7. $5 \times \frac{2}{5} =$

Write each of the following as a mixed number in simplest form.

4. $\frac{9}{8}$

5. $\frac{24}{16}$

6. $1\frac{5}{15}$

4. $\frac{16}{3}$

5. $\frac{18}{4}$

6. $5\frac{8}{6}$

Change the following mixed numbers to improper fractions.

7. $3\frac{4}{5}$

8. $2\frac{3}{8}$

9. $1\frac{5}{12}$

10. $2\frac{5}{8}$

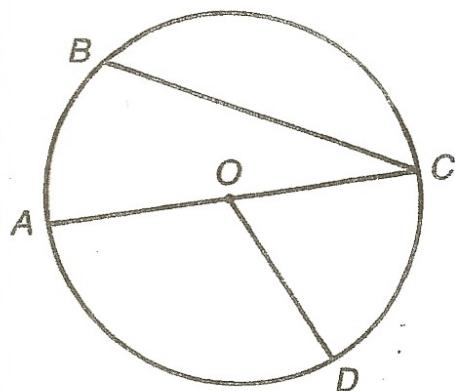
11. $5\frac{3}{4}$

12. $8\frac{1}{9}$

What Did the Waitress Mean When She Yelled to the Cook: “1 + 1”? (10)

Fill in each blank with one of the answers at the bottom of the page. Then write the letter of the exercise above its correct answer.

The figure at the right is a circle with center at O .



- E The points on a circle are all the same distance from the _____.
- S A line segment from the center to any point on the circle is a _____.
- U A line segment with both endpoints on the circle is a _____.
- I A chord that passes through the center of a circle is a _____.
- O A diameter of the circle in the drawing above is the segment _____.
- E Which of the following is *not* a radius: \overline{OA} , \overline{OD} , or \overline{BC} ? _____.
- S Which of the following is *not* a chord: \overline{BC} , \overline{OA} , or \overline{AC} ? _____.
- N Part of a circle, such as between points B and C , is an _____.
- E An angle whose vertex is at the center of a circle is a _____.
- P Which of the following is *not* a central angle: $\angle AOD$, $\angle COD$, or $\angle BCA$? _____.
- S Points A , B , C , and D are all the same _____ from point O .
- O If the length of \overline{AC} is 20 cm, then the length of \overline{OC} is _____.
- N If the length of \overline{OA} is 20 cm, then the length of \overline{OD} is _____.
- W If the length of \overline{OD} is 20 cm, then the length of \overline{AC} is _____.
- L The length of a radius is _____ the length of a diameter.
- T The set of points in a plane at a fixed distance from a given point is a _____.

10 cm	arc	center	ray	$\angle BCA$	half	chord	\overline{OA}	$\angle COD$	\overline{AC}	20 cm	central angle	\overline{OD}	diameter	distance	80 cm	radius	circle	\overline{BC}	40 cm
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Dividing Decimals by Whole Numbers

Find each quotient. Check by multiplying.

1. $13\overline{)68.9}$

2. $35\overline{)412.3}$

3. $90\overline{)14.4}$

4. $60\overline{)53.4}$

5. $123.08 \div 34 =$ _____

6. $0.57 \div 30 =$ _____

7. $562.86 \div 59 =$ _____

8. $24.4 \div 80 =$ _____

9. If a package of granola bars with 12 bars costs \$3.48, how much does each granola bar cost? _____

10. John paid \$7.99 for 3 boxes of cereal. The tax was \$1.69. Excluding tax, how much did John pay for each box of cereal if they all were the same price? _____

Test Prep

11. $64.82 \div 11$ is

A. a little more than 6. B. a little less than 6.

C. a little more than 60. D. a little less than 60.

12. Writing in Math Explain how to divide 0.12 by 8.

Adding and Subtracting Decimals

Add.

$$\begin{array}{r} 58.0 \\ + 3.6 \\ \hline \end{array}$$

$$\begin{array}{r} 40.5 \\ + 22.3 \\ \hline \end{array}$$

$$\begin{array}{r} 34.587 \\ + 21.098 \\ \hline \end{array}$$

$$\begin{array}{r} 43.1000 \\ + 8.4388 \\ \hline \end{array}$$

$$5. \quad 16.036 + 7.009 = \underline{\hspace{2cm}}$$

$$6. \quad 92.30 + 0.32 = \underline{\hspace{2cm}}$$

In science class, students weighed different amounts of tin.

Carmen weighed 4.361 g, Kim weighed 2.704 g, Simon weighed 5.295 g, and Angelica weighed 8.537 g.

How many grams of tin did Carmen and Angelica have combined?

8. How many grams of tin did Kim and Simon have combined?

Subtract.

$$\begin{array}{r} 92.1 \\ - 32.6 \\ \hline \end{array}$$

$$\begin{array}{r} 52.7 \\ - 36.9 \\ \hline \end{array}$$

$$\begin{array}{r} 85.76 \\ - 12.986 \\ \hline \end{array}$$

$$\begin{array}{r} 32.7 \\ - 2.328 \\ \hline \end{array}$$

$$13. \quad 8.7 - 0.3 = \underline{\hspace{2cm}}$$

$$14. \quad 23.3 - 1.32 = \underline{\hspace{2cm}}$$

At a local swim meet, the second place swimmer of the 100 m freestyle had a time of 9.33 sec. The first place swimmer's time was 1.32 sec faster than the second place swimmer. The third place time was 13.65 sec.

15. What was the time for the first place swimmer?

16. What was the difference in time between the second and third place swimmers?

Order of Operations

Use the order of operations to evaluate each expression.

1. $4 \times 4 + 3 =$ _____

2. $3 + 6 \times 2 \div 3 =$ _____

3. $24 - (8 \div 2) + 6 =$ _____

4. $(15 - 11) \times (25 \div 5) =$ _____

5. $26 - 4 \times 5 + 2 =$ _____

6. $15 \times (7 - 7) + (5 \times 2) =$ _____

7. $(8 \div 4) \times (7 \times 0) =$ _____

8. $5 \times (6 - 3) + 10 \div (8 - 3) =$ _____

9. Number Sense Which is a true statement,

$5 \times 4 + 1 = 25$ or $3 + 7 \times 2 = 17?$ _____

Insert parentheses to make each statement true.

10. $25 \div 5 - 4 = 25$ _____

11. $7 \times 4 - 4 \div 2 = 26$ _____

12. $3 + 5 \times 2 - 10 = 6$ _____

13. Insert parentheses in the expression $6 + 10 \times 2$ so that:

a. the expression equals 32. _____

b. the expression equals $(12 + 1) \times 2.$ _____

Test Prep

14. Solve $(25 - 7) \times 2 \div 4 + 2.$

A. 6

B. 11

C. 5

D. 18

15. Writing in Math Write two order of operation problems.

Then trade with a classmate and solve the problems.

Standard Length

1 foot (ft.) is equal to 12 inches (in.).

1 yard (yd.) is equal to 3 feet.

1 mile (mi.) is equal to 5,280 feet.

$$3 \text{ ft.} = \underline{\hspace{2cm}} \text{ in.}$$

if $1 \text{ ft.} = 12 \text{ in.}$
then $3 \text{ ft.} = (3 \times 12) \text{ in.} = 36 \text{ in.}$

$$48 \text{ in.} = \underline{\hspace{2cm}} \text{ ft.}$$

if $12 \text{ in.} = 1 \text{ ft.}$
then $48 \text{ in.} = (48 \div 12) \text{ ft.} = 4 \text{ ft.}$

$$3 \text{ ft.} = \underline{\hspace{2cm}} \text{ in.}$$

$$48 \text{ in.} = \underline{\hspace{2cm}} \text{ ft.}$$

$$6 \text{ yd. } 4 \text{ ft.} = \underline{\hspace{2cm}} \text{ ft.}$$

if $1 \text{ yd.} = 3 \text{ ft.}$
then $6 \text{ yd.} = (6 \times 3) \text{ ft.} = 18 \text{ ft.}$
so $6 \text{ yd. } 4 \text{ ft.} = 18 + 4 \text{ ft.}$

$$6 \text{ yd. } 4 \text{ ft.} = \underline{\hspace{2cm}} \text{ ft.}$$

Circle the best answer.

1. The length of a desk

3 in.

3 ft.

3 yd.

3 mi.

2. The height of an adult

68 in.

68 ft.

68 yd.

68 mi.

3. The length of a pencil

8 in.

8 ft.

8 yd.

8 mi.

4. The distance around 10 blocks

2 in.

2 ft.

2 yd.

2 mi.

5. The height of a full-grown oak tree

5 in.

5 ft.

5 yd.

5 mi.

Complete.

6. $60 \text{ in.} = \underline{\hspace{2cm}} \text{ ft.}$

$5 \text{ ft.} = \underline{\hspace{2cm}} \text{ in.}$

7. $2 \text{ yd.} = \underline{\hspace{2cm}} \text{ ft.}$

$4 \text{ yd. } 2 \text{ ft.} = \underline{\hspace{2cm}} \text{ ft.}$

8. $2 \text{ mi.} = \underline{\hspace{2cm}} \text{ ft.}$

$72 \text{ in.} = \underline{\hspace{2cm}} \text{ ft.}$

9. $6 \text{ yd. } 2 \text{ ft.} = \underline{\hspace{2cm}} \text{ ft.}$

$2 \text{ ft. } 10 \text{ in.} = \underline{\hspace{2cm}} \text{ in.}$

10. $7 \text{ ft. } 3 \text{ in.} = \underline{\hspace{2cm}} \text{ in.}$

$36 \text{ in.} = \underline{\hspace{2cm}} \text{ ft.}$

11. $8 \text{ yd. } 7 \text{ ft.} = \underline{\hspace{2cm}} \text{ ft.}$

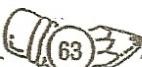
$3 \text{ mi. } 310 \text{ ft.} = \underline{\hspace{2cm}} \text{ ft.}$

12. $84 \text{ in.} = \underline{\hspace{2cm}} \text{ ft.}$

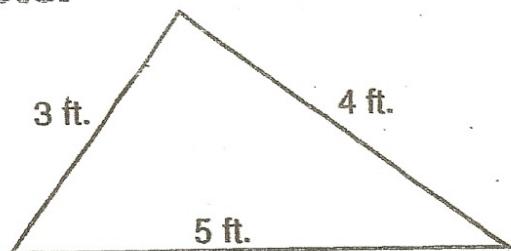
$13 \text{ ft. } 2 \text{ in.} = \underline{\hspace{2cm}} \text{ in.}$

13. $5 \text{ mi. } 143 \text{ ft.} = \underline{\hspace{2cm}} \text{ ft.}$

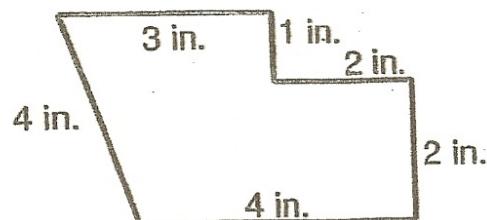
$21 \text{ yd. } 6 \text{ ft.} = \underline{\hspace{2cm}} \text{ ft.}$



Perimeter



Perimeter = $3 + 4 + 5$
= 12 feet

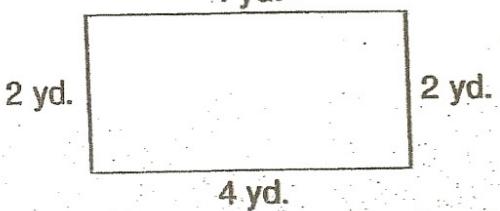


Perimeter = $4 + 3 + 1 + 2 + 2 + 4$
= 16 inches

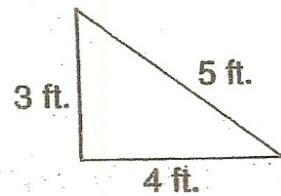


Find the perimeter of the following objects.

1.

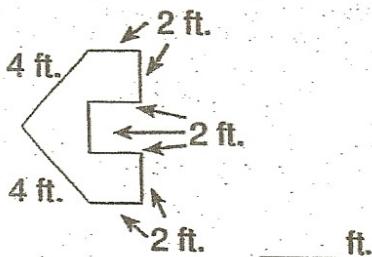


2.

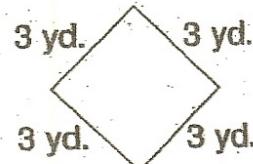


ft.

3.

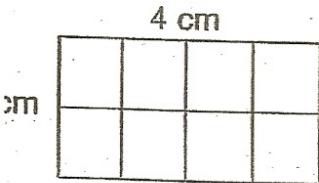


4.



yd.

The area of a rectangle is equal to its *length* times its *width*.



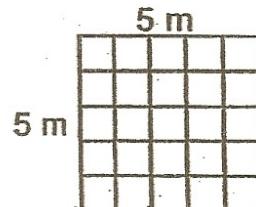
$$\text{Area} = \frac{4}{x 2} = 8 \text{ square cm}$$

length
 \times width
area

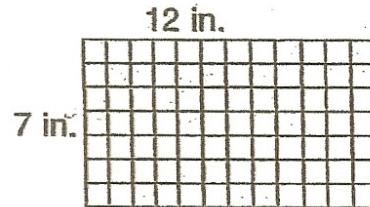
$$\text{Area} = \frac{3}{x 1} = 3 \text{ square units}$$



Find the area.



square meters



12 in.

7 in. square inches

Fill in the blanks.

Length	Width	Area
3 feet	6 feet	square feet
1 inch	4 inches	square inches
5 cm	6 cm	square cm
3 km	5 km	square km
4 mm	mm	square mm

Add.

Simplify if possible.

$$1. \quad \begin{array}{r} \frac{3}{7} \\ + \frac{1}{7} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{7}{12} \\ + \frac{5}{12} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{4}{9} \\ + \frac{2}{9} \\ \hline \end{array}$$

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

$$2. \quad \begin{array}{r} 2 \frac{3}{10} \\ + 1 \frac{1}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 8 \frac{1}{3} \\ + \frac{2}{3} \\ \hline \end{array}$$

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

$$\begin{array}{r} 1 \frac{5}{12} \\ + 3 \frac{1}{12} \\ \hline \end{array}$$

$$3. \quad \begin{array}{r} \frac{2}{3} \\ + \frac{1}{8} \\ \hline \end{array}$$

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

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

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

Subtract.

Simplify if possible.

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

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

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

$$\begin{array}{r} 7 \frac{3}{12} \\ - 3 \frac{7}{12} \\ \hline \end{array}$$

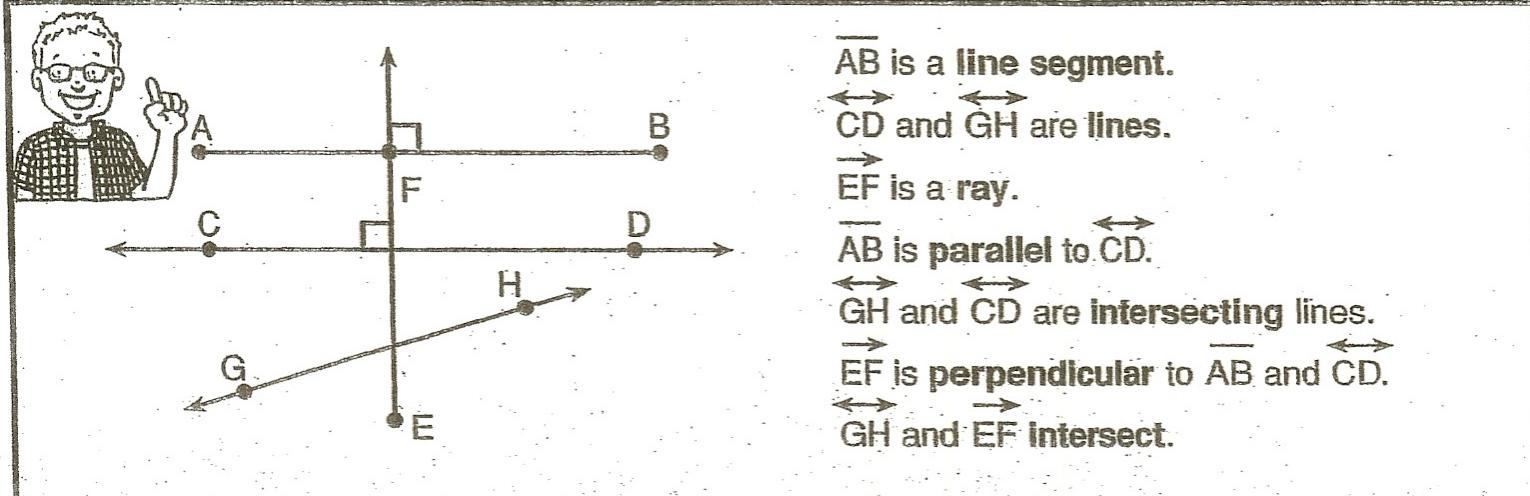
$$5. \quad \begin{array}{r} \frac{2}{3} \\ - \frac{1}{6} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{11}{12} \\ - \frac{5}{6} \\ \hline \end{array}$$

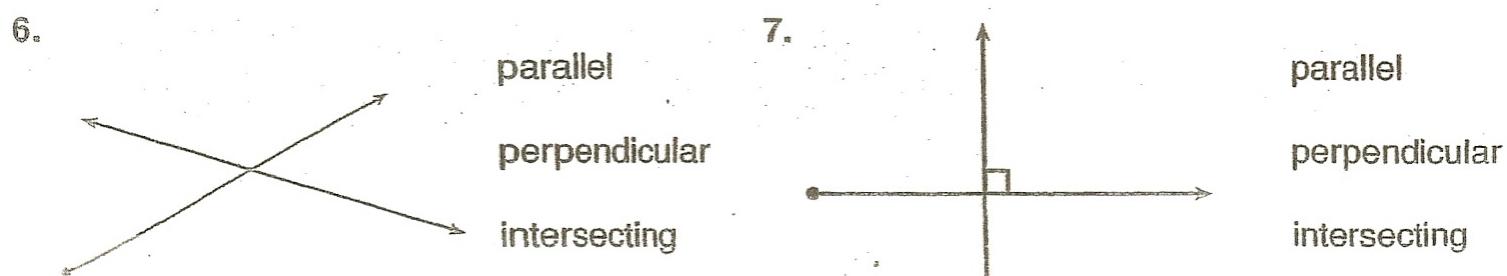
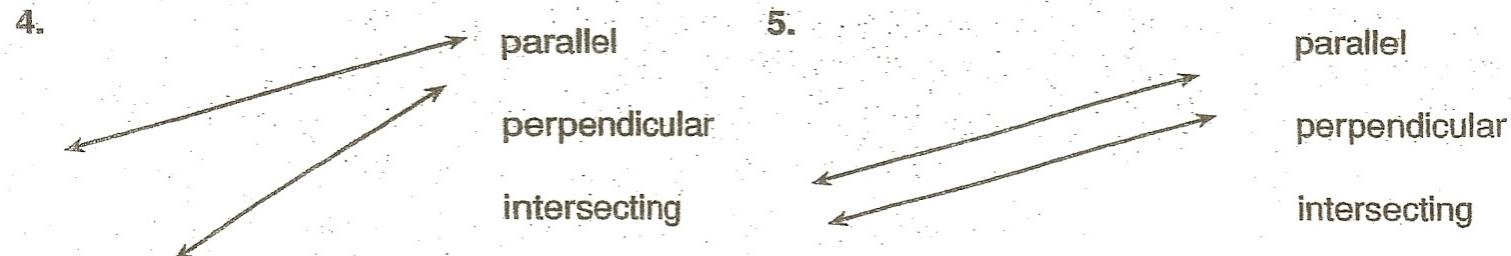
$$\begin{array}{r} 7 \\ - \frac{3}{7} \\ \hline \end{array}$$

$$\begin{array}{r} 21 \frac{2}{15} \\ - 8 \frac{4}{5} \\ \hline \end{array}$$

Geometry: Lines



Classify each. Circle the best answer. (*One of the problems has two good answers.*)



What Is The Biggest Problem of Miners?

Circle the number-letter pair of each TRUE statement. For these pairs, write the letter in the matching numbered box at the right.

- I. Use the figure below, in which $\overleftrightarrow{EF} \parallel \overleftrightarrow{BH}$. You should find 11 true statements.

7-E \overleftrightarrow{EF} intersects \overrightarrow{AD} at C.

11-O $\overleftrightarrow{EB} \perp \overleftrightarrow{AC}$

2-H $\overleftrightarrow{FC} \parallel \overleftrightarrow{HG}$

17-E $\overleftrightarrow{HC} \perp \overleftrightarrow{DB}$

1-T $\overleftrightarrow{EB} \parallel \overleftrightarrow{CH}$

3-A $\overleftrightarrow{BG} \perp \overleftrightarrow{CH}$

16-S $\overleftrightarrow{CF} \parallel \overleftrightarrow{BE}$

12-A $\angle EBC$ is a right angle.

18-G $\angle DCE$ is a right angle.

$$m\angle HCB = 90^\circ$$

3-E $\angle FCH$ is an acute angle.

8-T $\angle ECH$ is an obtuse angle.

16-E $\angle ABE$ is an acute angle.

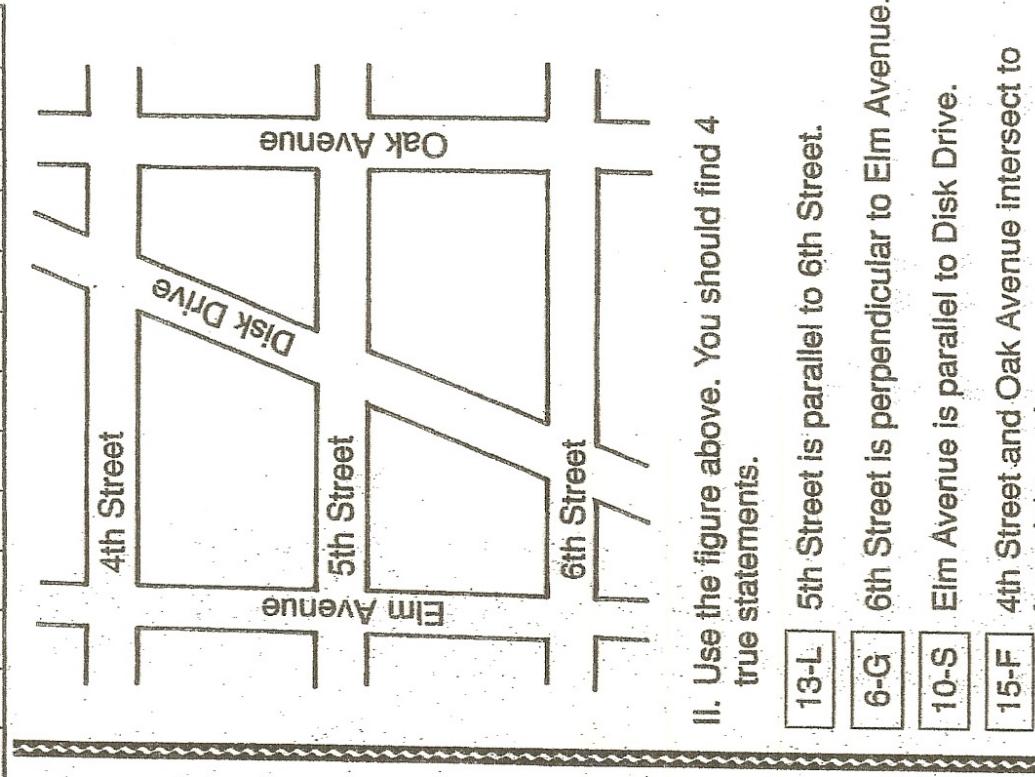
4-Y Perpendicular lines intersect to form right angles.

18-T Parallel lines never intersect.

$$m\angle DCH = m\angle EBH$$

9-N Elm Avenue is perpendicular to Oak Avenue.

10-C Elm Avenue is parallel to Oak Avenue.



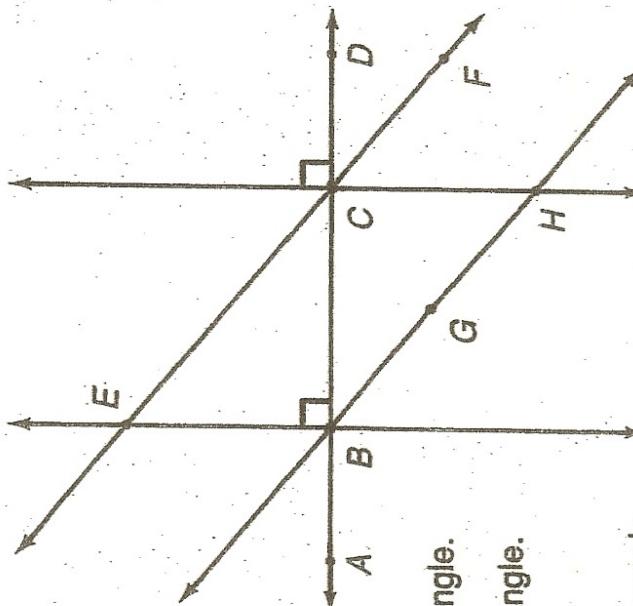
- II. Use the figure above. You should find 4 true statements.

13-L 5th Street is parallel to 6th Street.

6-G 6th Street is perpendicular to Elm Avenue.

10-S Elm Avenue is parallel to Disk Drive.

15-F 4th Street and Oak Avenue intersect to form right angles.



Standard Capacity and Weight

1 pint (pt.) is equal to 2 cups.
1 quart (qt.) is equal to 2 pints.
1 gallon (gal.) is equal to 4 quarts.
1 pound (lb.) is equal to 16 ounces.

$$3 \text{ pt.} = \underline{\quad} \text{ cups}$$

if $1 \text{ pt.} = 2 \text{ cups}$
then $3 \text{ pt.} = (3 \times 2) \text{ cups} = 6 \text{ cups}$

$$3 \text{ pt.} = \underline{6} \text{ cups}$$

$$8 \text{ qt.} = \underline{\quad} \text{ gal.}$$

if $4 \text{ qt.} = 1 \text{ gal.}$
then $8 \text{ qt.} = (8 \div 4) \text{ gal.} = 2 \text{ gal.}$

$$8 \text{ qt.} = \underline{2} \text{ gal.}$$

$$2 \text{ gal. } 3 \text{ qt.} = \underline{\quad} \text{ qt.}$$

if $1 \text{ gal.} = 4 \text{ quarts}$
then $2 \text{ gal.} = (2 \times 4) \text{ qt.} = 8 \text{ qt.}$
so $2 \text{ gal. } 3 \text{ qt.} = 8 + 3 \text{ qt.}$

$$2 \text{ gal. } 3 \text{ qt.} = \underline{11} \text{ qt.}$$

Circle the best answer.

1. the capacity of a glass

2 cups 2 pt. 2 qt. 2 gal.

2. the capacity of a tub

60 cups 60 pt. 60 qt. 60 gal.

3. the capacity of a sink

2 cups 2 pt. 2 qt. 2 gal.

4. the capacity of a pitcher

2 cups 2 pt. 2 qt. 2 gal.

Complete.

5. $5 \text{ pt.} = \underline{\quad} \text{ cups}$

$$4 \text{ pt.} = \underline{\quad} \text{ qt.}$$

6. $2 \text{ qt.} = \underline{\quad} \text{ pt.}$

$$32 \text{ oz.} = \underline{\quad} \text{ lb.}$$

7. $3 \text{ gal.} = \underline{\quad} \text{ qt.}$

$$8 \text{ cups} = \underline{\quad} \text{ pt.}$$

8. $5 \text{ lb. } 8 \text{ oz.} = \underline{\quad} \text{ oz.}$

$$4 \text{ pt. } 1 \text{ cup} = \underline{\quad} \text{ cups}$$

9. $4 \text{ qt. } 1 \text{ pt.} = \underline{\quad} \text{ pt.}$

$$16 \text{ qt.} = \underline{\quad} \text{ gal.}$$

10. $5 \text{ pt. } 1 \text{ cup} = \underline{\quad} \text{ cups}$

$$12 \text{ pt.} = \underline{\quad} \text{ cups}$$

11. $22 \text{ pt.} = \underline{\quad} \text{ qt.}$

$$8 \text{ lb. } 7 \text{ oz.} = \underline{\quad} \text{ oz.}$$

12. $14 \text{ qt. } 1 \text{ pt.} = \underline{\quad} \text{ pt.}$

$$20 \text{ cups} = \underline{\quad} \text{ pt.}$$

