

# Did You Hear About...

A	B	C	D	E	F	G	H	I
J	K	L	M	N	O	P	Q	?

$1\frac{5}{24}$  INSTRUMENTS

$\frac{3}{24}$  BRUSH

$\frac{111}{1,000}$  NEW

$\frac{19}{30}$  BECAUSE

$\frac{3}{4}$  A

$\frac{17}{20}$  THE

$1\frac{5}{8}$  NEVER

$\frac{13}{20}$  HAVE

$\frac{1}{2}$  MUSICAL

$1\frac{1}{8}$  BOUGHT

$\frac{13}{14}$  EARS

$\frac{1}{4}$  THOUGHT

Do each exercise and find your answer in one of the answer columns.  
Notice the word next to the answer. Write this word in the box containing the letter of the exercise.

(A)  $\frac{1}{4}$

(B)  $\frac{5}{6}$

(C)  $\frac{9}{10}$

(D)  $\frac{2}{3}$

$\frac{3}{5} + \frac{5}{9}$

$\frac{4}{9} - \frac{2}{9}$

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

$\frac{5}{5} - \frac{12}{12}$

(E)  $\frac{3}{8} + \frac{9}{16}$

(F)  $\frac{7}{10} - \frac{1}{5}$

(G)  $\frac{1}{3} + \frac{7}{8}$

(H)  $\frac{3}{4} - \frac{1}{10}$

(I)  $\frac{1}{2} + \frac{2}{7}$

(J)  $\frac{4}{5} - \frac{1}{6}$

(K)  $\frac{9}{16} + \frac{15}{16}$

(L)  $\frac{7}{10} - \frac{8}{15}$

(M)  $\left(\frac{7}{8} - \frac{1}{4}\right) + \frac{1}{2}$

(N)  $\frac{19}{20} - \left(\frac{1}{2} - \frac{3}{10}\right)$

(O)  $\frac{1}{10} + \frac{1}{100} + \frac{1}{1,000}$

(P) A BigBurger has  $\frac{1}{4}$  pound of meat. A SuperBurger has  $\frac{1}{3}$  pound of meat. How much more meat is used for the SuperBurger?

(Q) Kent walked  $\frac{3}{4}$  of a mile on Monday. On Tuesday, he walked  $\frac{1}{8}$  of a mile less than on Monday. How far did he walk altogether?

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

$1\frac{2}{5}$  WHO

$\frac{1}{6}$  MOTHER

$\frac{2}{3}$  BIG

$\frac{11}{14}$  TEETH

$\frac{13}{30}$  WHEN

$\frac{7}{18}$  KID

$1\frac{1}{2}$  HIS

$\frac{15}{16}$  THAT

$\frac{3}{10}$  SHARP

$\frac{1}{12}$  TUBA

$1\frac{1}{24}$  SHOWS

# Why Did the Boy Sheep Plunge Off a Cliff While Chasing the Girl Sheep?

For each exercise, write an estimate of the answer. On the number line under the exercise, find a point near your estimate. Write the letter of the exercise on the number line at that point.

(N)  $3\frac{9}{10} + 2\frac{13}{16}$

(E)  $1\frac{1}{8} + \frac{11}{13}$

(T)  $2\frac{4}{9} + 5\frac{1}{2}$

(E)  $3\frac{11}{12} + 7\frac{3}{8}$

(D)  $5\frac{1}{3} - 1\frac{2}{7}$

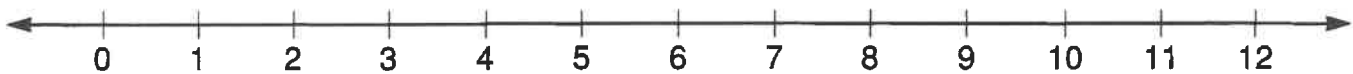
(H)  $12\frac{5}{6} - 11\frac{8}{9}$

(I)  $1\frac{3}{4} + 3\frac{3}{16} + \frac{1}{9}$

(S)  $3\frac{7}{10} + 4\frac{1}{15} + 2\frac{2}{13}$

(E) Betsy needed some fabric to make flags. She bought  $4\frac{1}{8}$  yd of red fabric,  $4\frac{2}{3}$  yd of white fabric, and  $3\frac{1}{4}$  yd of blue fabric. About how much fabric did she buy altogether? \_\_\_\_\_ yd

(D) Diane went salmon fishing with her father. Diane caught a fish that weighed  $16\frac{3}{8}$  lb. Her father caught one that weighed  $10\frac{1}{16}$  lb. About how much heavier was Diane's fish? \_\_\_\_\_ lb



(E)  $12\frac{1}{5} + 8\frac{2}{11}$

(T)  $3\frac{5}{12} + 10\frac{4}{7}$

(U)  $7\frac{1}{6} + 15\frac{7}{9}$

(N)  $27\frac{7}{8} - 2\frac{4}{5}$

(E)  $20\frac{3}{10} - 4\frac{1}{3}$

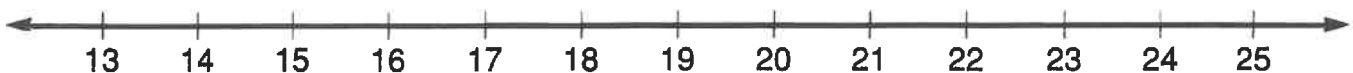
(W)  $59\frac{9}{16} - 40\frac{1}{2}$

(H)  $9\frac{2}{3} + \frac{3}{20} + 5\frac{1}{4}$

(T)  $11\frac{6}{7} + (13\frac{1}{5} - 3\frac{1}{11})$

(R) A plumber had a piece of pipe that was  $27\frac{7}{8}$  in. long. He cut off a piece  $3\frac{3}{4}$  in. long and used it to repair the sink. About how long was the remaining piece of pipe? \_\_\_\_\_ in.

(E) Mario is training for the track team. He ran  $4\frac{1}{4}$  mi on Monday,  $5\frac{9}{10}$  mi on Wednesday, and  $7\frac{4}{5}$  mi on Friday. About how far did he run altogether on the three days? \_\_\_\_\_ mi



# How's Business?



1. Muffler salesman:

“

$$\frac{5}{16} \quad 5\frac{5}{7} \quad 1\frac{5}{12} \quad 3\frac{7}{10} \quad 1\frac{1}{14} \quad 2\frac{2}{9} \quad 10\frac{1}{4} \quad 16 \quad 3\frac{3}{4} \quad 5\frac{1}{2}$$

2. Fireworks salesman:

“

$$7\frac{1}{2} \quad \frac{5}{16} \quad 3\frac{7}{10} \quad \frac{3}{8} \quad \frac{3}{8} \quad 4\frac{3}{5} \quad \frac{5}{6} \quad 18 \quad \frac{7}{15} \quad \frac{7}{15} \quad \frac{11}{15} \quad 16 \quad 3\frac{3}{4} \quad 5\frac{1}{2}$$

3. Lumber salesman:

“

$$16 \quad 5\frac{3}{4} \quad 9\frac{4}{5} \quad \frac{7}{15} \quad \frac{7}{15} \quad 8\frac{9}{16} \quad \frac{5}{16} \quad 3\frac{3}{4} \quad 9\frac{1}{2} \quad 5\frac{7}{18} \quad 3\frac{3}{4} \quad \frac{7}{15} \quad 9\frac{4}{5}$$

Each of these salesmen is answering the question, "HOW'S BUSINESS?"  
To decode their answers:

Do each exercise below and find your answer in the code. Each time the answer appears, write the letter of the exercise above it.

(M)  $\frac{1}{3}$   
 $+\frac{2}{5}$

(L)  $\frac{7}{8}$   
 $-\frac{1}{2}$

(H)  $\frac{3}{4}$   
 $+\frac{2}{3}$

(D)  $3\frac{5}{16}$   
 $+\frac{1}{4}$

(G)  $9\frac{7}{10}$   
 $-4\frac{1}{5}$

(T)  $7\frac{2}{3} + 2\frac{7}{12}$

(K)  $13\frac{5}{9} - 8\frac{1}{6}$

(Y)  $6\frac{1}{2} - 1\frac{9}{10}$

(E)  $\frac{3}{8} \times \frac{5}{6}$

(U)  $\frac{3}{4} \div \frac{7}{10}$

(I)  $\frac{2}{5}$  of 40

(R)  $4\frac{1}{2} \times 1\frac{2}{3}$

(S)  $8\frac{1}{3} \div 3\frac{3}{4}$

(B)  $2\frac{5}{8} \times \frac{4}{7} \times 12$

(X)  $20 \div 3\frac{1}{2}$

(A)  $1\frac{3}{5} \times 2\frac{5}{16}$

(O)  $4\frac{2}{3} \div 10$

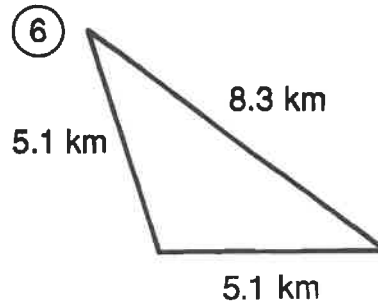
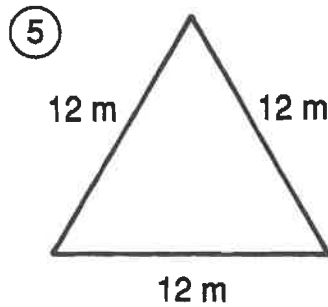
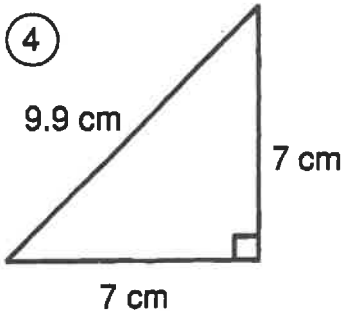
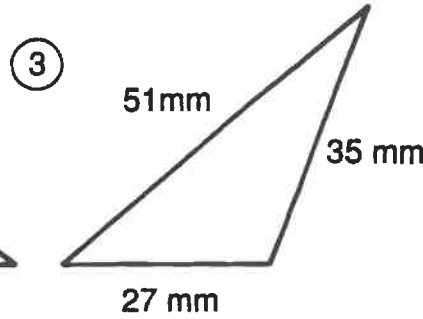
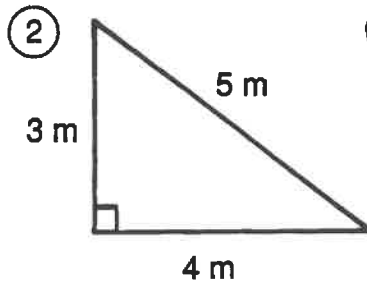
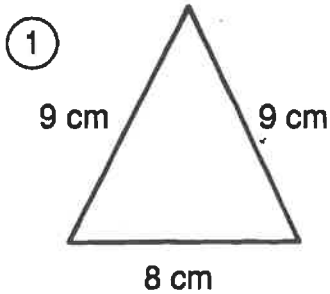
(N) George is making 8 gallons of Tropical Trip punch. He has already poured in  $1\frac{3}{4}$  gal of pineapple juice and  $2\frac{1}{2}$  gal of orange juice. The only other ingredient is 7-Up. How much 7-Up does George need? \_\_\_\_\_ gal

(W) Martha likes to walk around a park near her house. The park is square,  $\frac{7}{10}$  mi on each side. One morning she walked around the park  $3\frac{1}{2}$  times before stopping to rest. How far had she walked? \_\_\_\_\_ mi

# What Did the Boy Candy Say to the Girl Candy?

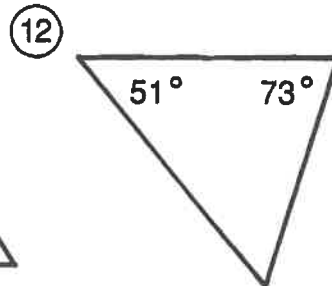
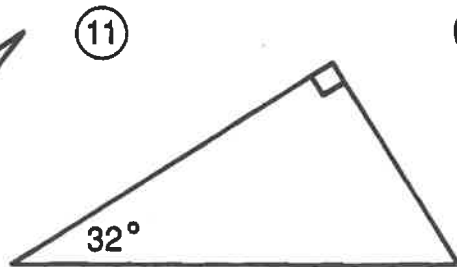
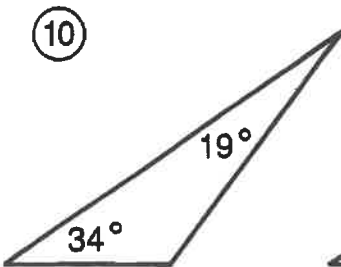
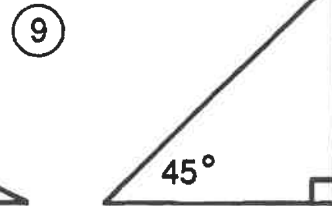
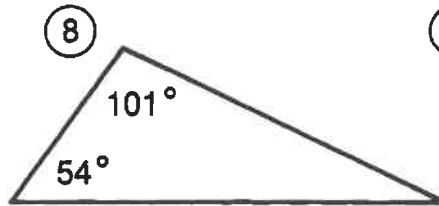
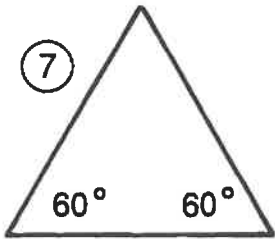
Do each exercise and find your answer in the set of answers to the right. Write the letter of the answer in each box containing the number of the exercise. If the answer has a ●, shade in each box containing that exercise number.

I. Classify each triangle two ways.



- Ⓢ acute; scalene
- Ⓛ acute; isosceles
- ⓗ acute; equilateral
- Ⓞ right; scalene
- Ⓜ right; isosceles
- ⓐ obtuse; scalene
- ⓕ obtuse; isosceles

II. Find the measure of the third angle in each triangle.



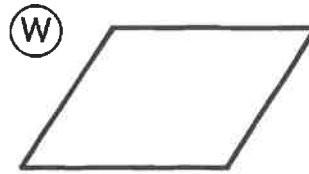
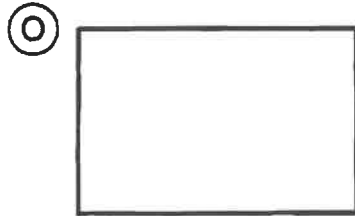
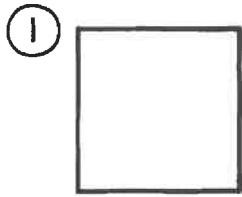
- Ⓡ 25°
- 116°
- ⓔ 56°
- Ⓣ 127°
- Ⓦ 60°
- Ⓝ 30°
- 58°
- ⓐ 45°
- Ⓛ 40°

⑬ Two angles of a triangle have equal measures. If the third angle measures  $120^\circ$ , what is the measure of each of the equal angles?

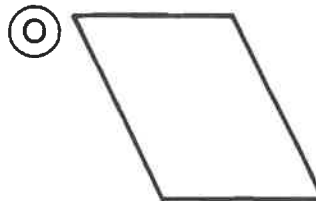
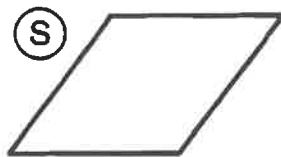
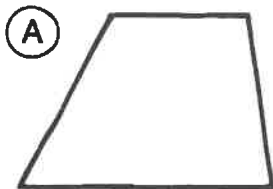
7	12	11	3	8	12	11	4	1	13	10	11	6	2	8	11	12	3	9	5	11	2	10	5	12	8
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# Can a Polar Bear Go On a Safari?

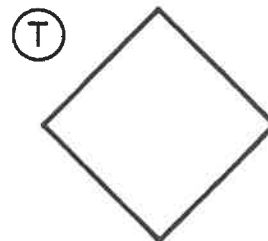
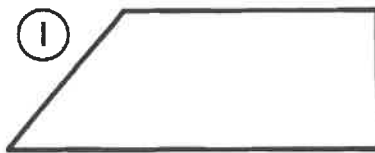
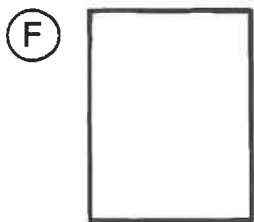
Write the name that best describes each quadrilateral. (Put each quadrilateral in the smallest or most exact class to which it belongs.) Write the letter of the exercise in the box containing the number of the answer.



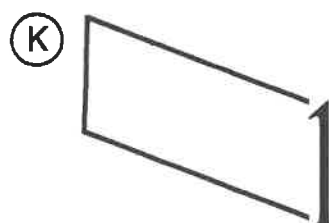
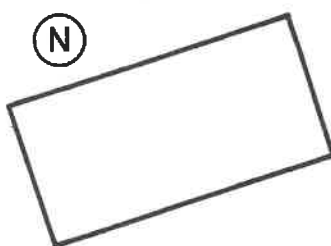
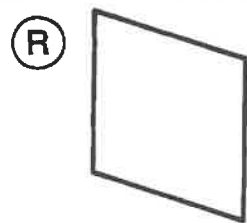
- ② rectangle
- ⑮ trapezoid
- ⑩ square
- ⑱ parallelogram



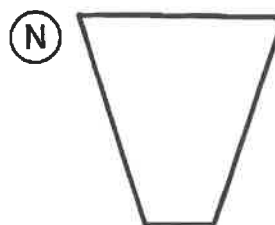
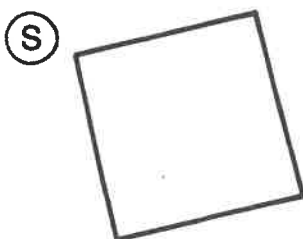
- ⑨ rectangle
- ⑥ trapezoid
- ⑰ parallelogram
- ⑪ rhombus



- ③ square
- ⑬ trapezoid
- ④ parallelogram
- ⑦ rectangle



- ⑮ parallelogram
- ① rectangle
- ⑨ rhombus
- ⑫ trapezoid



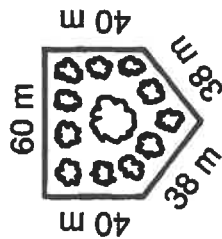
- ⑯ trapezoid
- ⑤ square
- ⑭ rectangle
- ⑧ rhombus

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
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# When Is a Chair Like the Fabric Used to Make It?

Write the correct formula to use in solving each problem. Find your answer in the Code Key and notice the letter next to it. Write this letter in the box containing the number of the problem.

4	9	7	5	3	10	1	12	6	2	8	11
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1 A botanical garden was designed in the shape of a pentagon. How many meters of fencing are needed to go around the garden?

2 How many square feet of wallpaper are needed to cover a wall 8 ft high by 15 ft wide?

3 The diameter of a circular running track is 140 yd. How far would you run in one lap?

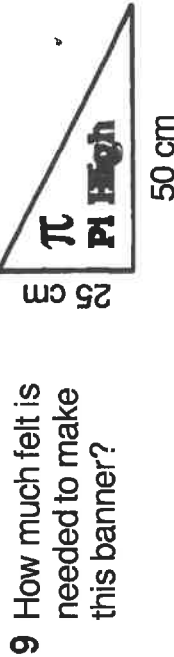
4 How much weather stripping is needed to go around a square window measuring 42 in. on a side?

5 A dangerous criminal has escaped from prison. The police believe he could not have traveled more than 10 mi in any direction from the prison. How many square miles must be searched?

6 How much lace edging is needed to go around a rectangular tablecloth measuring 52 in. by 70 in.?

7 How many tiles are needed to cover a square patio measuring 18 ft on a side if each tile covers 1 sq ft?

8 The orbit of the earth around the sun is approximately a circle with a radius of 93,000,000 mi. How far do we travel in one orbit around the sun?



9 How much felt is needed to make this banner?

10 If each bag of fertilizer covers 2,000 sq ft, how many bags are needed to fertilize a rectangular lawn measuring 100 ft by 160 ft?

11 A lighthouse beacon can be seen 24 mi in all directions. What is the area over which the beacon can be seen?

12 Popeye put colorful plastic tape around the edge of a triangular sail. The sail had sides of 10 ft, 15 ft, and 18 ft. How many feet of tape did he use?

## Code Key

**Perimeter**  
**Circumference**

(S)  $P = \text{sum of lengths the side}$

(A)  $P = 2l + 2w$

(W)  $P = 4s$

(I)  $C = \pi d$  or  $C = 2\pi r$

## Area

(T)  $A = \ell w$

(E)  $A = s^2$

(H)  $A = \frac{1}{2}bh$

(N)  $A = \pi r^2$

# What Lies on the Ground 100 Feet In the Air?

Solve each problem below. Find your solution and notice the two letters next to it. Write these letters in the two boxes above the exercise number at the bottom of the page.

- ① A bicycle weighs 32.5 pounds. The box for it weighs 7.8 pounds. What is the total shipping weight for the bicycle and its box? \_\_\_\_\_ lb
- ② The members of the Pedal Pushers Bicycle Club have traveled 134.8 miles of a 200-mile trip. How many more miles do they have to go? \_\_\_\_\_ mi
- ③ A stone dropped from a tower falls 4.9 meters the first second and 14.7 meters the next second. How far does it fall during the two seconds? \_\_\_\_\_ m
- ④ Last week, Maria worked 1.75 hours on Monday, 2.5 hours on Wednesday, and 4 hours on Friday. How many hours did she work last week? \_\_\_\_\_ h
- ⑤ Bill's normal temperature is  $98.6^{\circ}\text{F}$ . Today Bill is sick and has a temperature of  $102.3^{\circ}\text{F}$ . How many degrees above his normal temperature is this? \_\_\_\_\_  $^{\circ}\text{F}$
- ⑥ At the beginning of a trip, the odometer in Mr. Kilowatt's car read 9,651.4 miles. At the end of the trip, it read 10,475.9 miles. How many miles was the trip? \_\_\_\_\_ mi
- ⑦ At a restaurant, Mr. Fudge ordered a fish platter for \$12.75 and a piece of cheesecake for \$2.50. The tax was \$0.97. If he left a \$3 tip, how much did Mr. Fudge spend in all? \$ \_\_\_\_\_
- ⑧ Mike drove a nail 2.5 in. long through a board 0.75 in. thick into a post. How far did the nail go into the post? \_\_\_\_\_ in.
- ⑨ At the 1984 Olympics, the United States team set a record in the 400-meter relay. Each racer ran 100 meters. Their times were 10.29, 9.19, 9.41, and 8.94 seconds. What was the record time for the relay? \_\_\_\_\_ s
- ⑩ U.S. coins have precise measurements. For example, a quarter has a diameter of 24.3 mm and weighs 5.67 g. A dime has a diameter of 17.9 mm and weighs 2.27 g. What is the difference in the diameters of these two coins? \_\_\_\_\_ mm

- Ⓐ 841.5
- Ⓑ 49.6
- Ⓒ 65.2
- Ⓓ 6.4
- Ⓔ 1.45
- Ⓕ 19.22
- Ⓖ 40.3
- Ⓗ 4.4
- Ⓙ 8.25
- Ⓚ 37.83
- Ⓛ 824.5
- Ⓜ 18.62
- Ⓝ 19.6
- Ⓟ 1.75
- Ⓢ 3.7
- Ⓣ 38.43

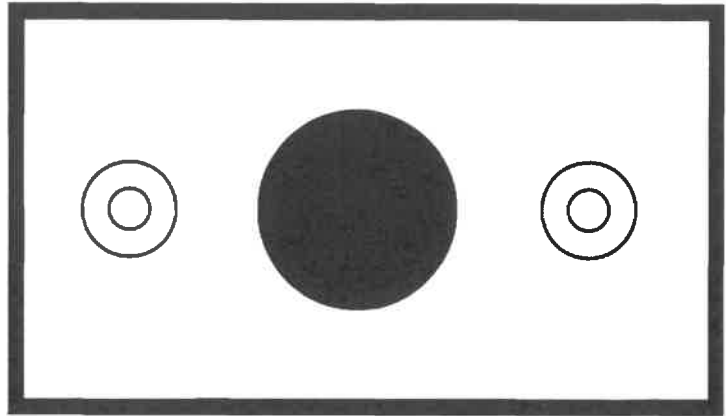
7	2	10	5	1	8	3	6	9	4										

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# What Is the Title?

TO DECODE THE TITLE  
OF THIS PICTURE:

Do each exercise and find your answer  
in the appropriate answer column.  
Notice the symbol next to the answer.  
Each time this symbol appears in the  
code, write the letter of the exercise  
above it.



CODED TITLE:

zz ¢¢ \$\$ \\ ## == ?? \*\* [] ¢¢ :: () >< ¢¢ \*\* // == @@ && [] >< xx // //

|| == -- -- == @@ && )( xx <> ++ == :: :: == || " // zz ][ -- %% ¢¢ zz

Answers for W – N:	
[ ]	67.66
& &	0.95
**	32.25
xx	36.63
)(	0.5385
" "	2.508
	4.75
<>	0.98
::	2.8
%%	22.777
\\	4.66
@@	13.6
??	63.86
][	37.53
\$\$	0.5175
()	24.677

(W)  $7.2 + 16.6 + 8.45$

(U)  $4.18 \times 0.6$

(A)  $0.33 + 33 + 3.3$

(F)  $7 \overline{)19.6}$

(C)  $38 \div 8$

(M)  $0.83 \times 0.12$

(T)  $0.6 \overline{)3.24}$

(O)  $\frac{16.7}{0.5}$

(I)  $(2.5 + 0.187) \times 10$

(S) The paper feed on a copying machine has room for a stack of paper 4.0 cm high. If 10 sheets of paper are 0.08 cm thick, how many sheets will fit? (*HINT How thick is 1 sheet?*)

(H)  $32.067 - 9.29$

(P)  $57.5 \times 0.009$

(E)  $90 - 26.14$

(G)  $4 \overline{)3.8}$

(N)  $340 \div 25$

(D)  $0.7 \times 0.6 \times 0.5$

(V)  $0.09 \overline{)1.863}$

(B)  $\frac{2.6}{0.16}$

(L)  $(100 - 19.2) \div 100$

Answers for M – S:	
##	20.7
][	12.7
!!	0.0996
<>	16.33
--	500
¢¢	33.4
\\	320
==	26.87
zz	5.4
()	21.5
@@	5.9
][	0.0876
><	16.25
++	0.21
)(	34.7
//	0.808

# Where Do Generals Keep Their Armies?

Solve each problem below and find your solution in the answer column. Write the letter of the answer in each box containing the number of the problem.

- ① Daphne bought 3 paintbrushes at \$4.25 each, an easel for \$30.00, and 8 tubes of paint at \$2.95 each. How much money did she spend altogether?
- ② Roberto needs 10 kilograms of clay for a ceramics project. He already has three pieces that weigh 1.3 kg, 2.4 kg, and 0.9 kg. How much more clay does he need?
- ③ Sing Lu jogs around a park near her house 3 times a week. The distance around the park is 0.8 mile. How many laps around the park are necessary to run 6 miles?
- ④ Karen's hobby is chemistry. For one experiment she used 3 liters of water and 3 empty beakers. She poured 0.7 L into the first beaker and twice that amount into the second. How much water was left for the third beaker?
- ⑤ Mia makes decorative candies by pouring melted chocolate into molds. Each mold holds 0.4 oz of chocolate. Mia bought a 20-ounce bag of chocolate but has already used 10.4 oz. How many candies can she make with the chocolate she has left?
- ⑥ Luis bought two pieces of wax to make candles. One piece weighed 3.49 kg, and the other weighed 4.71 kg. If wax costs \$1.80 per kg, how much did Luis spend altogether?
- ⑦ Keo's model airplane uses 0.03 L of fuel each minute it flies. If the fuel tank holds 0.5 L, how long can the plane fly without refueling? (Round to the nearest 0.1 minute.)
- ⑧ A scale model of a train has an engine that is 17.2 cm long and 10 cars that are each 13.5 cm long. Each centimeter on the model represents 0.8 m on the actual train. How long is the actual train?
- ⑨ Roger made a leather belt in crafts class. He attached a buckle at one end and punched 5 equally spaced holes at the other. If the distance between the first hole and last hole is 10 cm, how far apart are the holes?

- ★ Answers
- ★ (G) 1.6 L
  - ★ (W) 4.9 kg
  - ★ (V) 24
  - ★ (D) 18
  - ★ (H) 16.7 min
  - ★ (P) 124.66 m
  - ★ (T) \$66.35
  - ★ (E) 2.5 cm
  - ★ (F) 9
  - ★ (N) 0.9 L
  - ★ (O) 1.8 cm
  - ★ (L) 5.4 kg
  - ★ (I) \$14.76
  - ★ (K) \$63.45
  - ★ (S) 121.76 m
  - ★ (A) 15.3 min
  - ★ (R) 7.5
  - ★ (U) \$17.66

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6	4	1	7	9	6	3	8	2	9	9	5	6	9	8
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# What Happened to the Guy Who Ate Ten Pounds of Powdered Food for Dinner?



Do each exercise mentally, then find your answer in the corresponding set of answers. Write the letter of the exercise in the box containing the answer.

$50\% = \frac{1}{2}$	$33\frac{1}{3}\% = \frac{1}{3}$	$25\% = \frac{1}{4}$	$20\% = \frac{1}{5}$	$12\frac{1}{2}\% = \frac{1}{8}$	$10\% = \frac{1}{10}$
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I. Use the chart above to find each percent mentally.

- |                             |                              |                |                             |                              |
|-----------------------------|------------------------------|----------------|-----------------------------|------------------------------|
| (H) 25% of 36               | (G) 20% of 15                | (T) 50% of 26  | (O) $33\frac{1}{3}\%$ of 60 | (G) $12\frac{1}{2}\%$ of 40  |
| (T) 10% of 70               | (A) 50% of 180               | (H) 25% of 200 | (T) $12\frac{1}{2}\%$ of 16 | (I) 20% of 60                |
| (G) $33\frac{1}{3}\%$ of 24 | (U) 10% of 360               | (T) 20% of 500 | (E) 50% of 48               | (H) $33\frac{1}{3}\%$ of 120 |
| (A) 25% of 44               | (C) $12\frac{1}{2}\%$ of 240 | (H) 10% of 800 | (T) 100% of 32              | (N) 100% of 999              |

13	50	11	100	25	999	12	5	80	2	15	9	24	42	8	20	32	18	30	90	36	3	40	7
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II. Use compatible numbers to estimate each percent.

- |               |                |                |                |                 |
|---------------|----------------|----------------|----------------|-----------------|
| (E) 19% of 30 | (A) 48% of 64  | (N) 26% of 80  | (D) 33% of 90  | (I) 9% of 600   |
| (T) 12% of 72 | (E) 24% of 280 | (L) 21% of 200 | (I) 51% of 72  | (N) 13% of 88   |
| (E) 9% of 40  | (A) 32% of 150 | (O) 14% of 640 | (D) 27% of 400 | (H) 53% of 900  |
| (X) 34% of 36 | (N) 18% of 75  | (D) 11% of 720 | (R) 99% of 18  | (P) 102% of 250 |

36	20	45	9	450	6	75	18	50	60	15	23	32	11	100	5	70	12	250	40	80	72	4	30
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