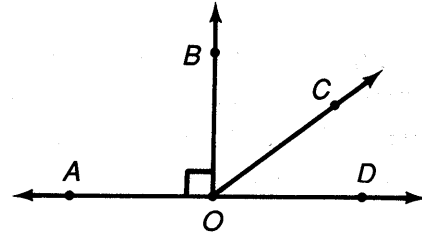# What Did Mrs. Claus Say During the Thunderstorm?

Find each answer at the bottom of the page and write the letter of the exercise above it.
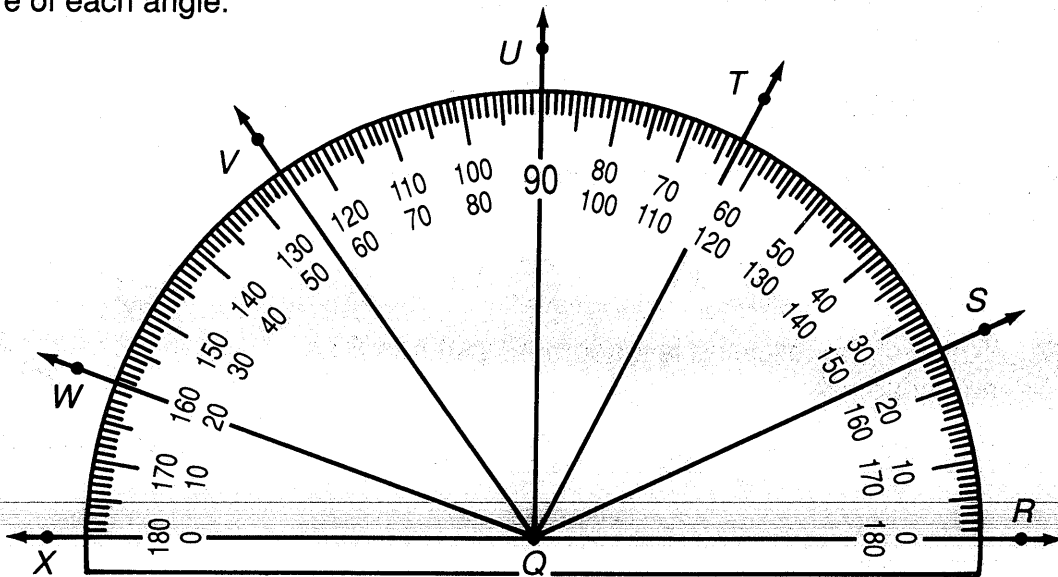
I. Complete each statement.

(T) The figure formed by two rays from the same endpoint is an _____ .

(O) The intersection of the two sides of an angle is called its _____ .

(I) The vertex of ∠COD in the drawing above is point _____ .

(A) The instrument used to measure angles is called a _____ .

(E) The basic unit in which angles are measured is the _____ .

(O) ∠AOB has a measure of 90° and is called a _____ angle.

(A) An angle whose measure is between 0° and 90° is an _____ angle.

(T) Two acute angles in the figure are ∠BOC and _____ .

(L) An angle whose measure is between 90° and 180° is an _____ angle.

(N) An obtuse angle in the figure is _____ .

II. Give the measure of each angle.

(A) ∠RQS _____

(T) ∠RQT _____

(R) ∠RQU _____

(H) ∠RQV _____

(A) ∠RQW _____

(K) ∠XQW _____

(D) ∠XQT _____

(R) ∠UQV _____

Answer choices: obtuse, vertex, right, 20°, 25°, angle, ∠DOC, 125°, protractor, 63°, 35°, 160°, O, ∠AOC, 117°, degree, acute, 90°
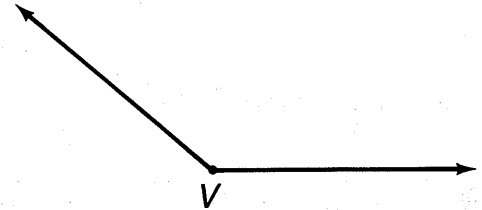
Why Did the Brontosaurus Need Band-Aids?

For each exercise, circle the letter of the best estimate. Write this letter in the box containing the number of the exercise.
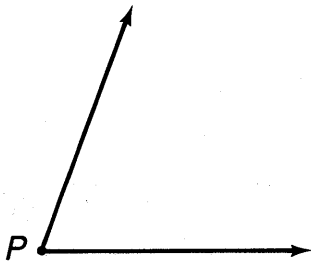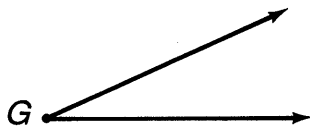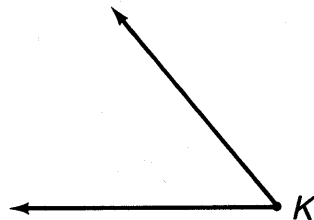
1. $m\angle P$ is about
   B 35° **S** 70°
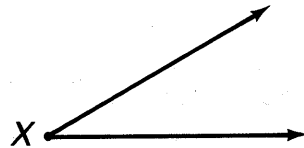
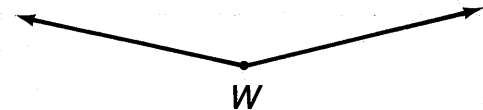2. $m\angle X$ is about
   T 65° **O** 30°

3. $m\angle V$ is about
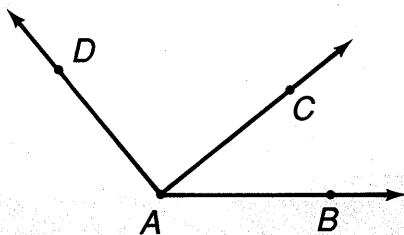   **E** 140° **J** 95°

4. $m\angle G$ is about
   L 55° **I** 25°

5. $m\angle K$ is about
   O 50° **F** 80°

6. $m\angle W$ is about
   R 155° **C** 110°

7. $m\angle BAC$ is about
   S 40° **P** 15°
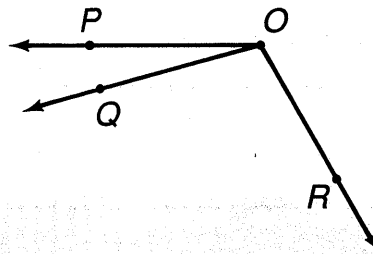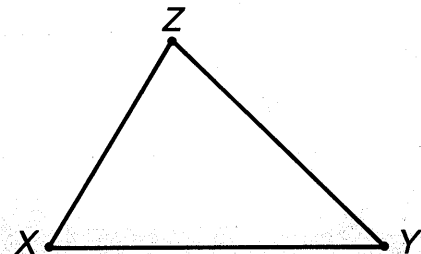
8. $m\angle CAD$ is about
   U 65° **I** 90°

9. $m\angle BAD$ is about
   G 100° **O** 130°

10. $m\angle POR$ is about
    M 160° **F** 120°

11. $m\angle POQ$ is about
    V 40° **N** 15°

12. $m\angle QOR$ is about
    R 105° **B** 140°

13. $m\angle X$ is about
    P 35° **H** 60°

14. $m\angle Y$ is about
    S 45° **L** 25°

15. $m\angle Z$ is about
    D 75° **G** 40°

10	2	6	13	8	1	15	4	11	9	14	5	12	3	7

Books Never Written

Beginning Your Exercise Program by _____   _____

57° 99° 119°   137° 173° 85° 99° 33°

Checking Your Homework by ____   ____   _____

33°   76°   156° 33° 47° 125° 28° 14°
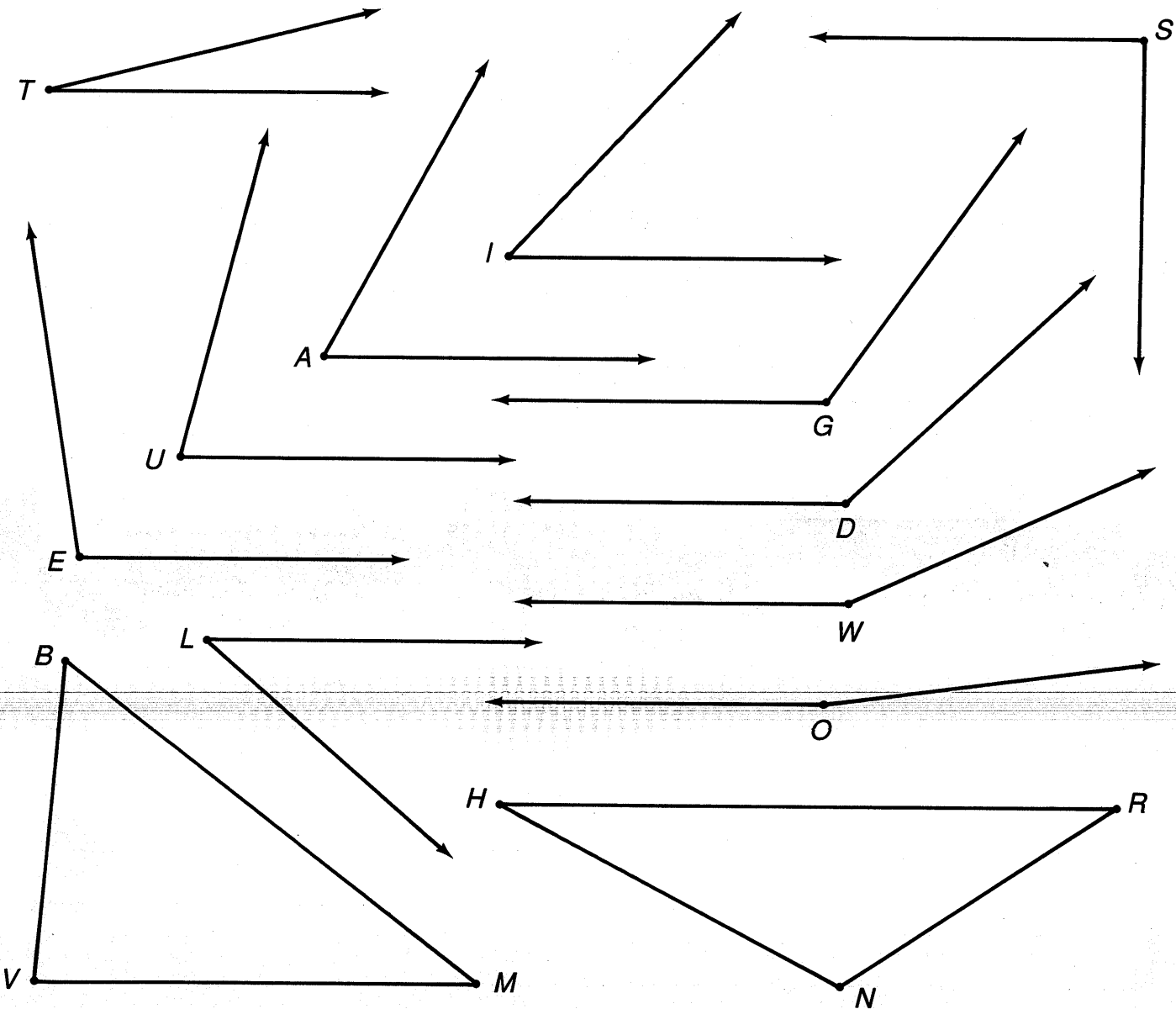
How to Lead the Band by _____   _____

38° 62° 33° 90° 28° 62°   41° 173° 119° 125°

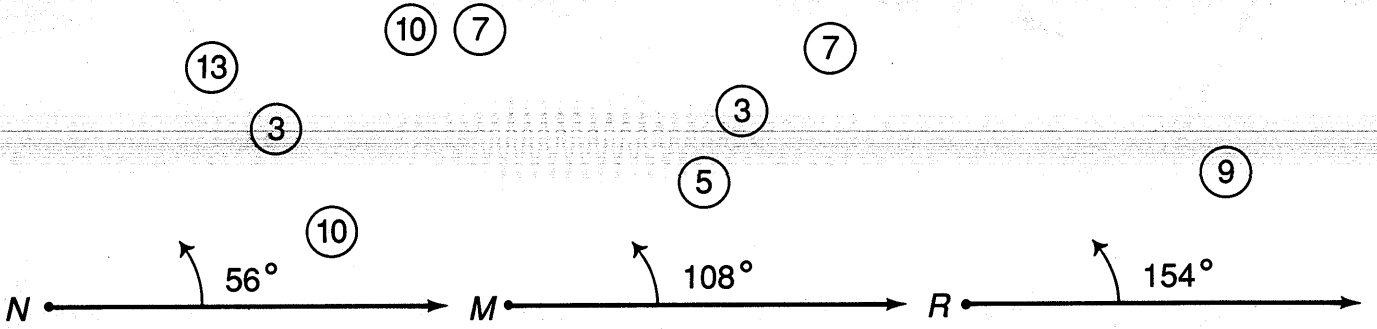**ABOVE ARE THE TITLES OF THREE "BOOKS NEVER WRITTEN." TO DECODE THE NAMES OF THEIR AUTHORS:**

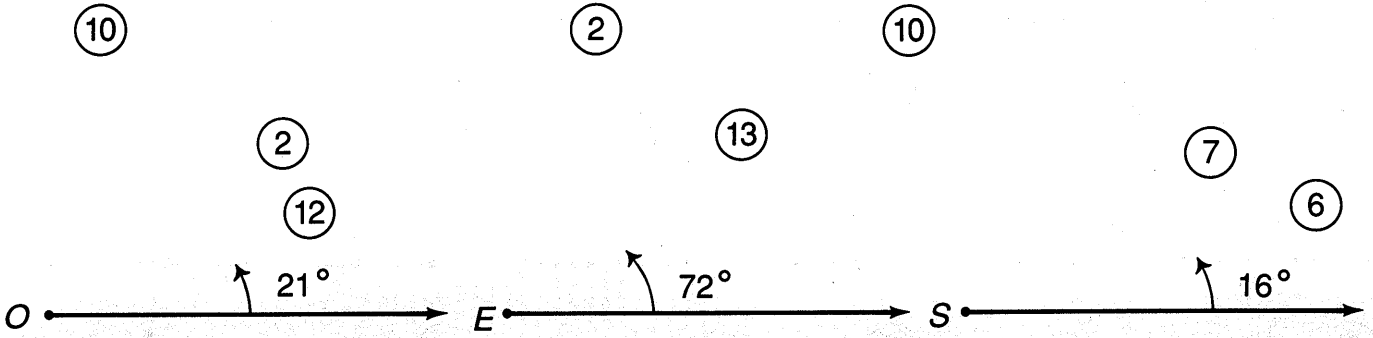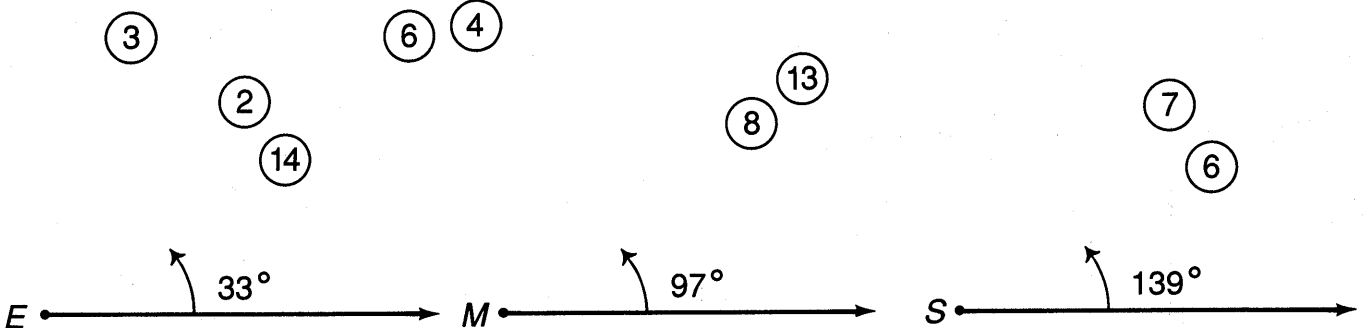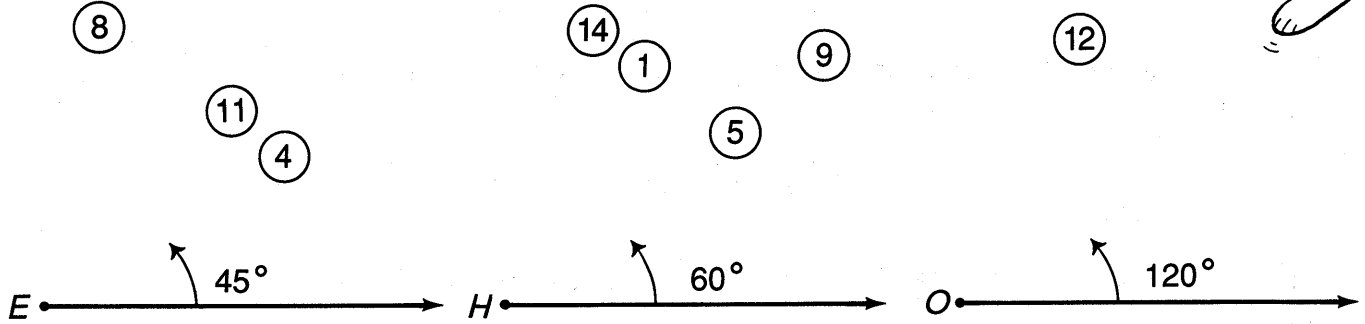Measure each angle below and find your answer in the code. Each time the answer appears in the code, write the vertex letter of that angle above it.

D-28

What Happens When Cupid Shoots an Arrow?

Use a protractor to construct the angles below. Each side you draw will pass through a number. Write the vertex letter of the angle in the box containing this number.

⑧   ⑭ ①   ⑨   ⑫

⑪   ⑤
  ④

E ———— 45° ————→   H ———— 60° ————→   O ———— 120° ————→

③   ⑥ ④

  ②   ⑬   ⑦
  ⑭   ⑧
                                    ⑥

E ———— 33° ————→   M ———— 97° ————→   S ———— 139° ————→

⑩   ②   ⑩

  ②   ⑬   ⑦

  ⑫   ⑥

O ———— 21° ————→   E ———— 72° ————→   S ———— 16° ————→

⑬   ⑩ ⑦   ⑦

  ③   ③   ⑨
                ⑤
          ⑩

N ———— 56° ————→   M ———— 108° ————→   R ———— 154° ————→

1	2	3	4	5	6	7	8	9	10	11	12	13	14

Why Is a Party Like Pouring Oil Into a Car?

Do each exercise and find your answer at the bottom of the page. Write the letter of the exercise in the box above or below the answer.
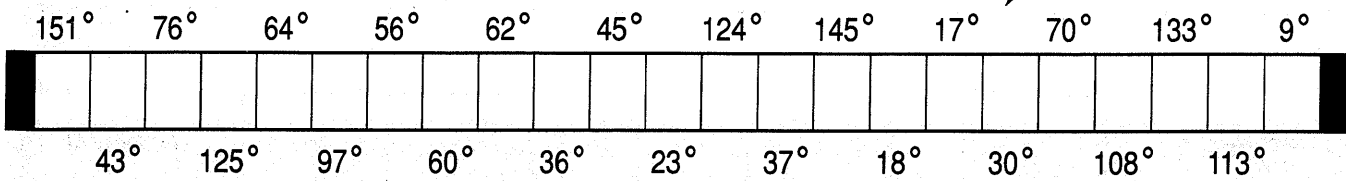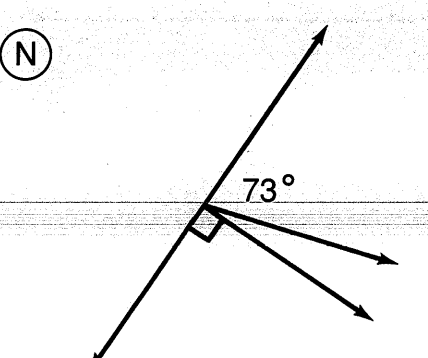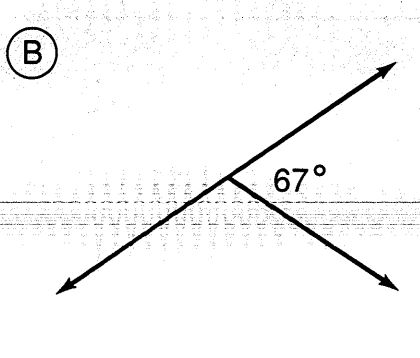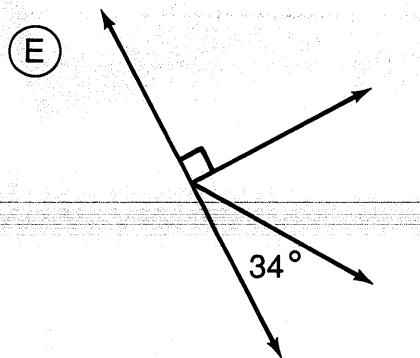
I. Find the measure of the angle that is complementary to the angle having the measure given.

(E) 20°   (H) 67°   (S) 14°   (E) 81°   (T) 45°

II. Find the measure of the angle that is supplementary to the angle having the measure given.

(R) 120°   (E) 56°   (I) 29°   (U) 162°   (H) 83°

III. Find the angle measure that is not given.

(N) 60°   (E) 28°   (T) 47°

(L) 72°   (W) 116°   (F) 35°

(E) 34°   (B) 67°   (N) 73°

| 151° | 76° | 64° | 56° | 62° | 45° | 124° | 145° | 17° | 70° | 133° | 9° |

| | | | | | | | | | | | | |

| 43° | 125° | 97° | 60° | 36° | 23° | 37° | 18° | 30° | 108° | 113° |
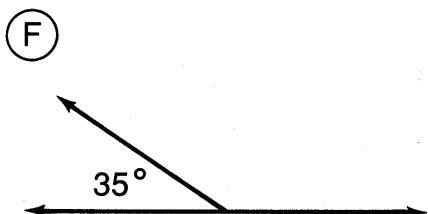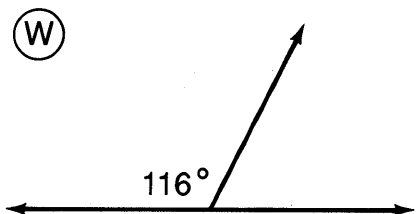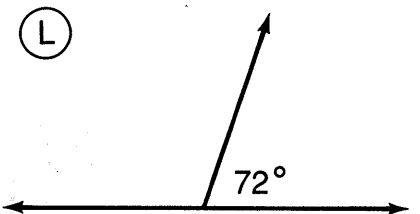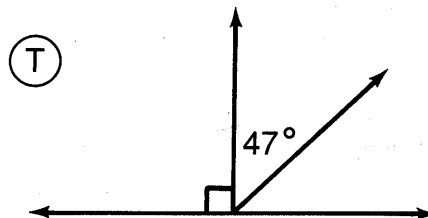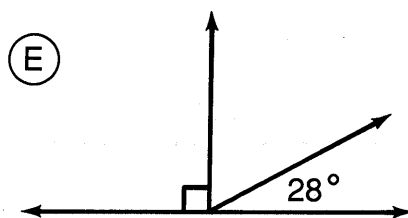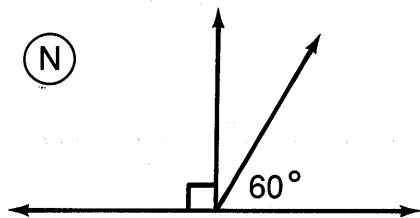
How Did the Judge Find Out About the Rotten Milk?

Do each exercise and find your answer in the Code Key. Notice the letter next to the answer. Write this letter in the box containing the number for the exercise.

I. Complete each statement.

(1) Two angles are *complementary* if the sum of their measures is _____.

(2) Two angles are *supplementary* if the sum of their measures is _____.

(3) The *complement* of a 30° angle has a measure of _____.

(4) The *supplement* of a 65° angle has a measure of _____.

II. Find the measure of each numbered angle.

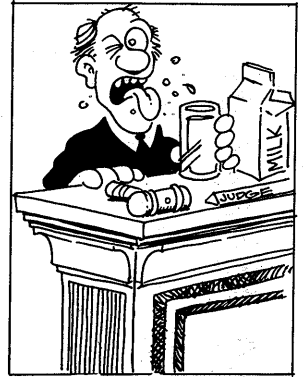| CODE KEY	
23°	D
30°	Q
36°	T
52°	A
60°	R
65°	U
80°	I
90°	O
100°	H
107°	S
115°	E
144°	W
180°	N

128° 5

6 73°

80° 7 9 8

10 11 65° 12

13 144° 14 15

16 38°

67° 17 18

30° 19 24°

20 21 120° 22

13	7	12	3	10	14	16	6	18	17	1	20	8	2	19	9	4	21	11	5	22	15

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.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

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

7-E $\overleftrightarrow{EF}$ intersects $\overleftrightarrow{AD}$ 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   ∠EBC is a right angle.

18-G   ∠DCE is a right angle.

3-E   m∠HCB = 90°.

8-T   ∠FCH is an acute angle.

16-E   ∠ECH is an obtuse angle.

14-P   ∠ABE is an acute angle.

4-Y   Perpendicular lines intersect to form right angles.

18-T   Parallel lines never intersect.

6-L   m∠DCH = m∠EBH

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.

9-N   Elm Avenue is perpendicular to Oak Avenue.

10-C   Elm Avenue is parallel to Oak Avenue.

TOPIC 3-h: Parallel and Perpendicular Lines

D-32

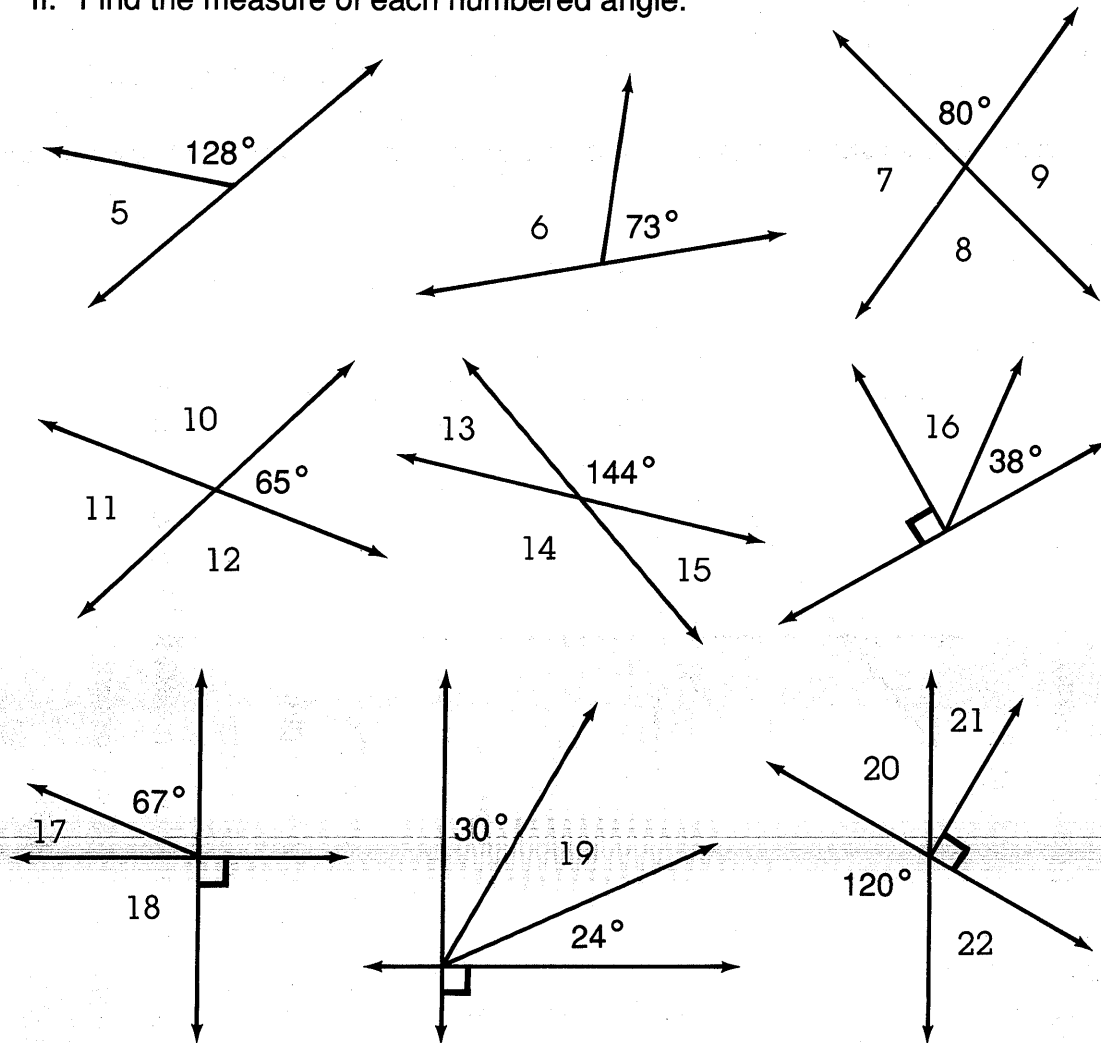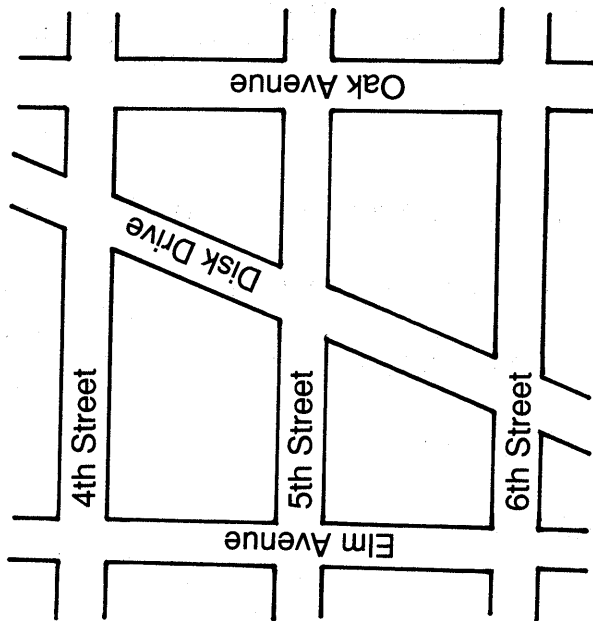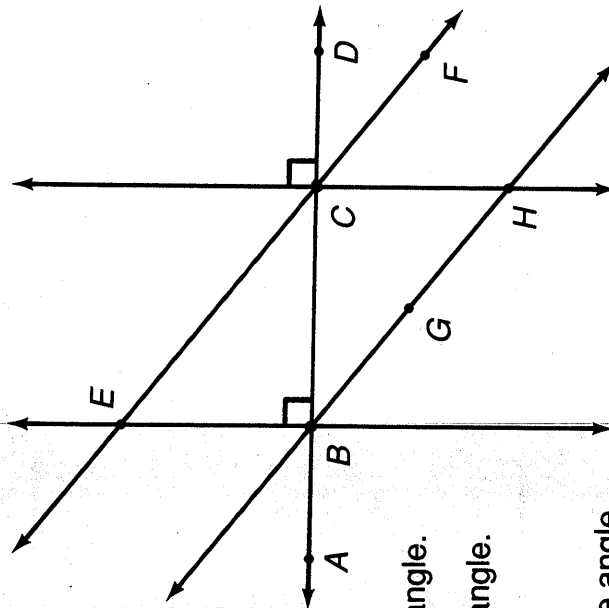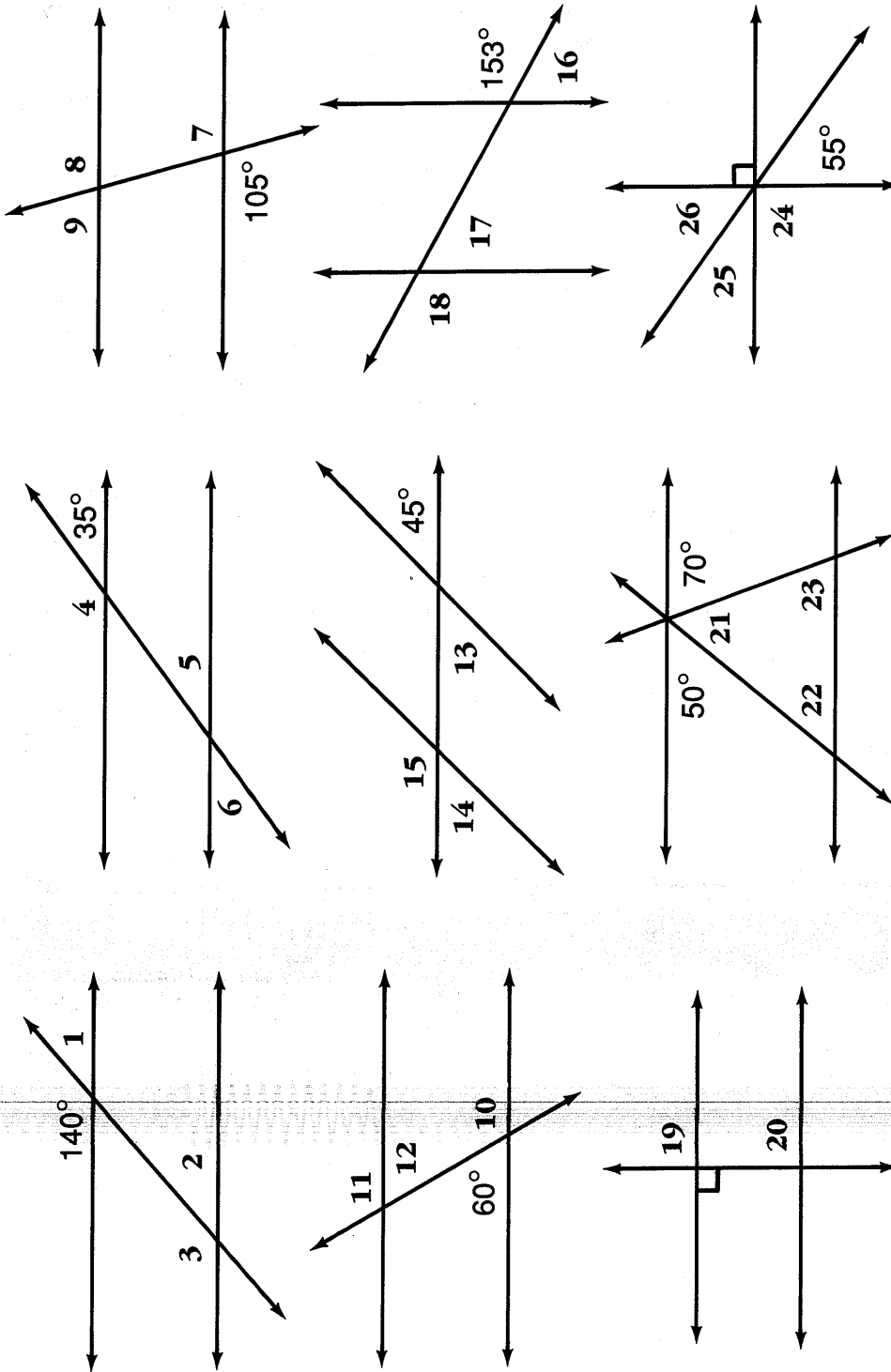# Why Couldn't the Two Elephants Go Swimming Together?

Give the measure of each numbered angle. 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 angle. (Assume that lines in each figure that do not intersect are parallel.)

CODE KEY	
A	27°
O	35°
R	40°
Y	45°
I	50°
P	55°
T	60°
U	70°
F	75°
N	90°
H	105°
E	120°
K	135°
L	140°
S	145°
D	153°

12	14	8	18	6	20	3	13	25	19	11	26	17	22	1	5	9	21	2	23	24	15	4
7	10	16																				