

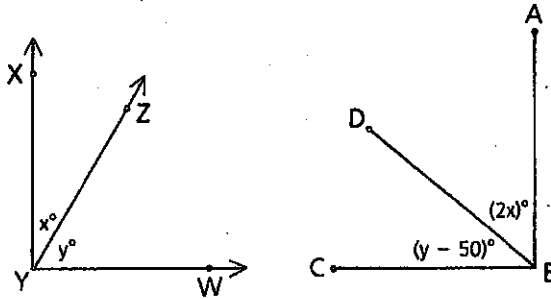
16 Two supplementary angles are in the ratio 11:7. Find the measure of each.

18 The larger of two supplementary angles exceeds 7 times the smaller by  $4^\circ$ . Find the measure of the larger angle.

19 One of two complementary angles added to one-half the other yields  $72^\circ$ . Find half the measure of the larger.

20 Given:  $\overline{XY} \perp \overline{YW}$ ,  
 $\overline{AB} \perp \overline{BC}$

Find:  $m\angle DBC$



21 The supplement of an angle is four times the complement of the angle. Find the measure of the complement.

22 Five times the complement of an angle less twice the angle's supplement is  $40^\circ$ . Find the measure of the supplement.

23 The measure of the supplement of an angle is  $30^\circ$  less than five times the measure of the complement. Find two-fifths the measure of the complement.

24 Arnex has a  $30^\circ$ , a  $60^\circ$ , a  $150^\circ$ , a  $45^\circ$ , and a  $135^\circ$  angle in his pocket. He takes out two of the five angles. Find the probability that

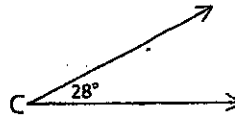
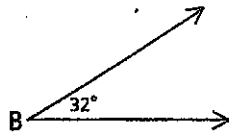
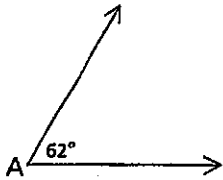
- a The two angles are supplementary
- b The two angles are complementary

### Problem Set C

25 The supplement of an angle is  $60^\circ$  less than twice the supplement of the complement of the angle. Find the measure of the complement.

## Problem Set A

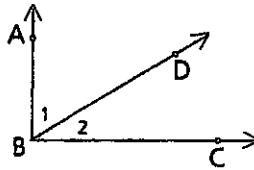
- 1 Which two angles are complementary?



- 2 What is the supplement of a  $70^\circ$  angle?
- 3  $\angle 1$  is complementary to  $\angle 3$ . If  $\angle 3 = y^\circ$ , how large is  $\angle 1$ ?
- 4 Find the complement of a  $61^\circ 21' 13''$  angle.
- 5 One of two complementary angles is twice the other. Find the measures of the angles.
- 6 Copy the figure and the proof below. Then complete the proof by filling in the missing statements.

Given:  $\angle 1$  is comp. to  $\angle 2$ .

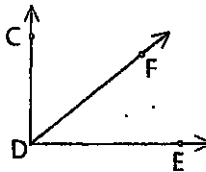
Prove:  $\overleftrightarrow{AB} \perp \overleftrightarrow{BC}$



Statements	Reasons
1 _____	1 Given
2 _____	2 If a ray divides an $\angle$ into two comp. $\angle$ s, then the original $\angle$ is a right $\angle$ .
3 _____	3 If two lines intersect to form a right $\angle$ , the two lines are $\perp$ .

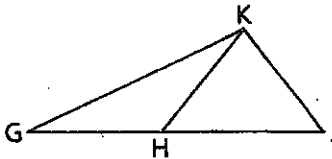
- 7 Given:  $\overleftrightarrow{CD} \perp \overleftrightarrow{DE}$

Prove:  $\angle CDF$  is comp. to  $\angle FDE$ . (Hint: This proof takes more than two steps.)



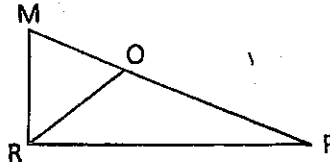
- 8 Given: Diagram as shown

Prove:  $\angle GHK$  is supp. to  $\angle KHJ$ . (Hint: This proof takes more than two steps.)

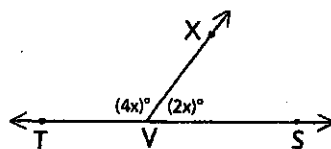


- 9 Given:  $\angle MRO$  is comp. to  $\angle PRO$ .

Prove:  $\angle MRP$  is a right angle.



- 10 Find the measure of  $\angle XVS$ .



- 11 One of two supplementary angles is  $70^\circ$  greater than the second. Find the measure of the larger angle.