

Practice 1.5

Find the coordinates of the midpoint of a segment with the given endpoints.

3.  $A(-3, 5)$   
 $B(5, -1)$

4.  $C(-4, -3)$   
 $D(6, 3)$

5.  $E(5, 0)$   
 $F(-3, -5)$

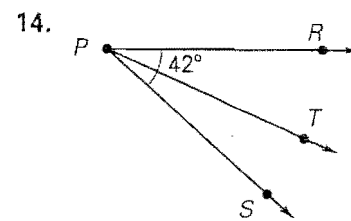
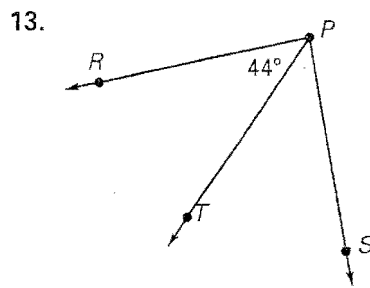
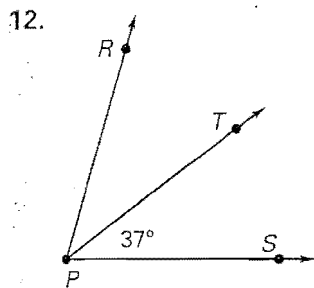
Find the coordinates of the other endpoint of the segment with the given endpoint and midpoint  $M$ .

6.  $T(6, 2)$   
 $M(2, 0)$

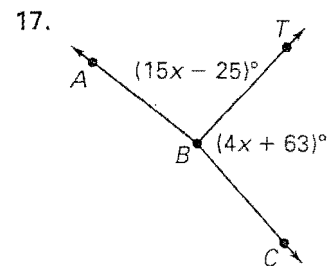
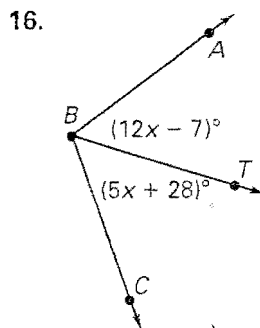
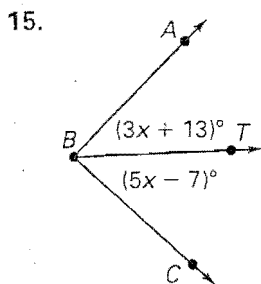
7.  $A(-4, 3)$   
 $M(-1, -1)$

8.  $P(7, 3)$   
 $M(2, 1)$

$\overrightarrow{PT}$  is the angle bisector of  $\angle RPS$ . Find the two angle measures not given in the diagram.



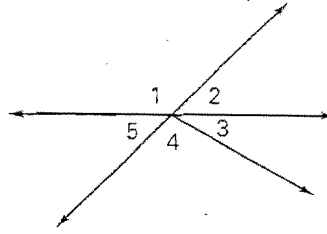
$\overrightarrow{BT}$  bisects  $\angle ABC$ . Find the value of  $x$ .



# Practice 1.6

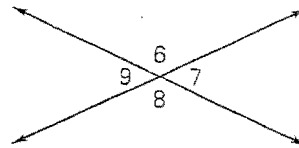
Use the figure at the right.

1. Are  $\angle 1$  and  $\angle 2$  a linear pair?
2. Are  $\angle 4$  and  $\angle 5$  a linear pair?
3. Are  $\angle 3$  and  $\angle 1$  vertical angles?
4. Are  $\angle 2$  and  $\angle 5$  vertical angles?



Use the figure at the right.

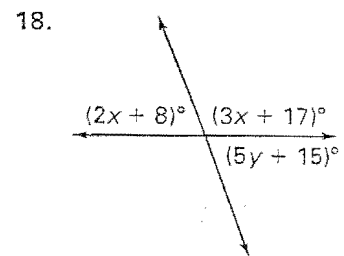
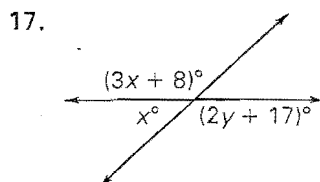
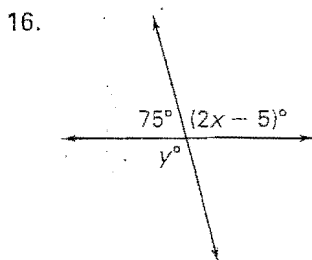
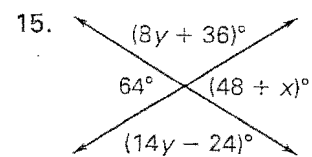
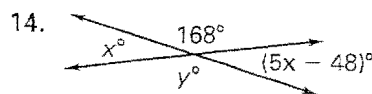
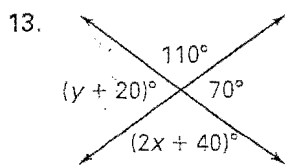
5. If  $m\angle 6 = 51^\circ$ , then  $m\angle 7 = ?$ .
6. If  $m\angle 8 = 103^\circ$ , then  $m\angle 6 = ?$ .
7. If  $m\angle 9 = 136^\circ$ , then  $m\angle 8 = ?$ .
8. If  $m\angle 7 = 53^\circ$ , then  $m\angle 9 = ?$ .



In Exercises 9–12, assume  $\angle A$  and  $\angle B$  are complementary and  $\angle B$  and  $\angle C$  are supplementary.

9. If  $m\angle A = 48^\circ$ , then  $m\angle B = ?$  and  $m\angle C = ?$ .
10. If  $m\angle B = 83^\circ$ , then  $m\angle A = ?$  and  $m\angle C = ?$ .
11. If  $m\angle C = 127^\circ$ , then  $m\angle B = ?$  and  $m\angle A = ?$ .
12. If  $m\angle A = 45^\circ$ , then  $m\angle B = ?$  and  $m\angle C = ?$ .

Find the value(s) of the variable(s).



In Exercises 19 and 20, assume that  $\angle A$  is supplementary to  $\angle B$  and complementary to  $\angle C$ . Determine  $m\angle A$ ,  $m\angle B$ , and  $m\angle C$ .

19.  $m\angle A = x^\circ$ ,  $m\angle B = (x + 40)^\circ$ ,  $m\angle C = (x - 50)^\circ$
20.  $m\angle A = x^\circ$ ,  $m\angle B = (2x)^\circ$ ,  $m\angle C = (x - 30)^\circ$