

## 1-7

## Practice

Form G

## Midpoint and Distance in the Coordinate Plane

Find the coordinate of the midpoint of the segment with the given endpoints.

1. 3 and 5

2.  $-7$  and  $4$

3.  $5$  and  $-9$

4.  $-6$  and  $-10$

Find the coordinates of the midpoint of  $\overline{AB}$ .

5.  $A(6, 7), B(4, 3)$

6.  $A(-1, 5), B(2, -3)$

7.  $A(14, -2), B(7, -8)$

8.  $A(0, 0), B(-5, 12)$

9.  $A(2.8, 1.1), B(-3.4, 5.7)$

10.  $A(2\frac{1}{2}, -\frac{1}{4}), B(3\frac{1}{4}, -1)$

The coordinates of point  $Y$  are given. The midpoint of  $\overline{XY}$  is  $(3, -5)$ . Find the coordinates of point  $X$ .

11.  $Y(0, 2)$

12.  $Y(-10, 5)$

13.  $Y(7, 1)$

14.  $Y(4, -8)$

15.  $Y(-1, -9)$

16.  $Y(2.5, -6.5)$

Find the distance between each pair of points. If necessary, round to the nearest tenth.

17.  $A(6, 7), B(-1, 7)$

18.  $C(5, -5), D(5, 3)$

19.  $E(-1, 0), F(12, 0)$

20.  $Q(2, -6), T(10, 0)$

21.  $H(20, -4), I(-4, 3)$

22.  $J(-5, 5), K(-3, -2)$

The room shown below right is 14 ft by 10 ft. Find the dimensions of each piece of furniture to the nearest tenth.

23. length and width of the dresser

24. length and width of the table

25. length and width of the bed

26. **Reasoning** The midpoint of  $\overline{AB}$  is on the  $y$ -axis, and  $\overline{AB}$  is parallel to the  $x$ -axis. Point  $A$  is located in Quadrant III. Which quadrant contains point  $B$ ? Explain.

