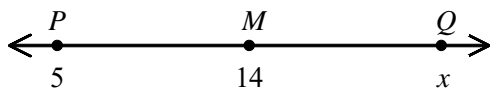NAME:_____

1. Find the midpoint of (3, –2) and (–11, 12).   [A] (–8, 10)   [B] (7, 7)   [C] (–4, 5)   [D] (14, 14)

2. What is the midpoint of line segment with endpoints (5, 6) and (−2, −6)?

   [A] (1.5, 6)   [B] (1.5, 0)   [C] (3.5, 0)   [D] (1.5, −6)   [E] (3.5, 6)

3. Find the coordinates of the midpoint of the segment connecting H(3, −2) and K(−15, 16).

   [A] (−12, 14)   [B] (9, 9)   [C] (18, 18)   [D] (−6, 7)

4. Find the midpoint of (−2, −1) and (−16, 13).

5. Find the coordinates of the midpoint of $\overline{MN}$ with endpoints $M = (2, 3)$ and $N = (2, 9)$.

6. Write the coordinates of two points A and B such that the midpoint of $\overline{AB}$ is (−3, −8).

7. Give two sets of possible coordinates of endpoints of segments with $M(2, 4)$ as the midpoint.

8. Compare the quantities in Column A and Column B.
   <u>Column A</u>   <u>Column B</u>
   the y - coordinate of the midpoint   the x - coordinate of the midpoint

   of the segment between the   of the segment between the

   points (1, 4) and (−2, −5)   points (−1, −4) and (2, 5)

   [A] The quantity in Column A is greater.   [B] The quantity in Column B is greater.

   [C] The quantities are equal.

   [D] The relationship cannot be determined from the information given.

9. If M is the midpoint of $\overline{PQ}$, find the value of x.   [A] 24   [B] 22   [C] 25   [D] 23

10. Find the coordinates of B if A is the point (−1, 4) and the midpoint of $\overline{AB}$ is M = (5, 4).

[1]   C

[2]   B

[3]   D

[4] $(-9,\ 6)$

[5] $(2, 6)$

[6]   Answers may vary. Sample: $A\,(-4,\,-8)$, $B\,(-2,\,-8)$

[7]   Answers may vary. Sample: $(5, 6)$ and $(-1, 2)$

[8]   B

[9]   D

[10] $(11, 4)$