Review P. 24: Graphing on the Coordinate Plane

1. 080624a, P.I. G.G.66
The coordinates of A are (-9, 2) and the coordinates of G are (3, 14). What are the coordinates of the midpoint of $\overline{AG}$?

[A] (-3,8) [B] (-6,16)

[C] (-6,6) [D] (-21,-10)

2. 080217a
M is the midpoint of $\overline{AB}$. If the coordinates of A are (-1,5) and the coordinates of M are (3,3), what are the coordinates of B?

[A] (7,1) [B] (-5,7)

[C] (1,4) [D] (2,8)

3. 010718a
The midpoint of $\overline{AB}$ is $(-1,5)$ and the coordinates of point A are $(-3,2)$. What are the coordinates of point B?

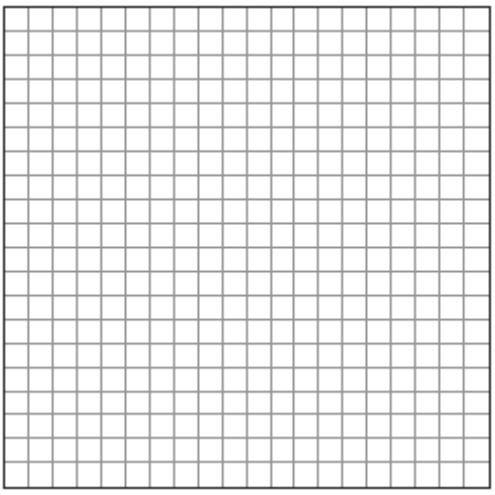
[A] (0,7) [B] (1,8)

[C] (1,10) [D] (-5,8)

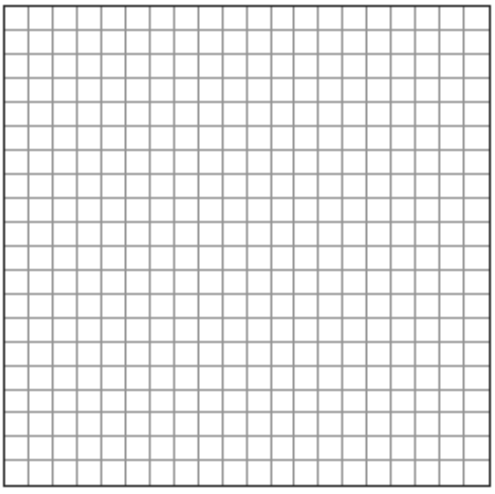
4. 080515a
A line segment on the coordinate plane has endpoints (2,4) and (4,y). The midpoint of the segment is point (3,7). What is the value of y?

[A] 5 [B] -2 [C] 11 [D] 10

5. 060434a
The coordinates of the midpoint of $\overline{AB}$ are (2,4), and the coordinates of point B are (3,7). What are the coordinates of point A? [The use of the accompanying grid is optional.]



6. 010021a
The midpoint M of line segment AB has coordinates (-3,4). If point A is the origin, (0,0), what are the coordinates of point B? [The use of the accompanying grid is optional.]



[1] A

[2] A

[3] B

[4] D

[2] (1,1), and appropriate work is shown, such as a correct graph of $\overline{AB}$ and an appropriate explanation of how point A is found or the use of the midpoint formula.
[1] Appropriate work is shown, but one computational or graphing error is made.
or [1] Appropriate work is shown, but one conceptual error is made, such as finding the midpoint of the given coordinates.
or [1] The midpoint and points A and B are graphed correctly, but the coordinates of point A are not stated or are stated incorrectly.
or [1] (1,1), but no work is shown.
[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

[5]

[2] (-6,8) or -6,8 or x = -6 and y = 8 and an appropriate explanation is given, such as graphing the line or doubling the coordinates.
[1] One correct coordinate and one incorrect coordinate are found.
or [1] An appropriate method is shown, such as algebraic or graphing, but computational mistakes are made.
or [1] (-6,8) or -6,8 or x = -6 and y = 8 and no explanation is given.
or [1] Substitutions are correct for the midpoint formula, but computational mistakes are made.
or [1] The student properly locates point B on the graph but does not state its coordinates.
or [1] Point A and point M are reversed, resulting in B(3,-4), and an explanation is given.
[0] Only the midpoint of $\overline{AM}$ $(-\frac{3}{2}, 2)$ is found.
[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

[6]