

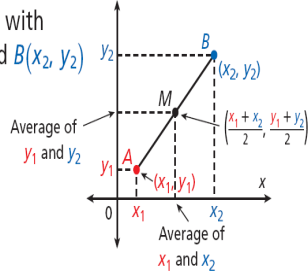
Jadwin-Geometry-5A Period-Off Site Learning Packet Day 1

Activities:

Midpoint Formula

The midpoint M of \overline{AB} with endpoints $A(x_1, y_1)$ and $B(x_2, y_2)$ is found by

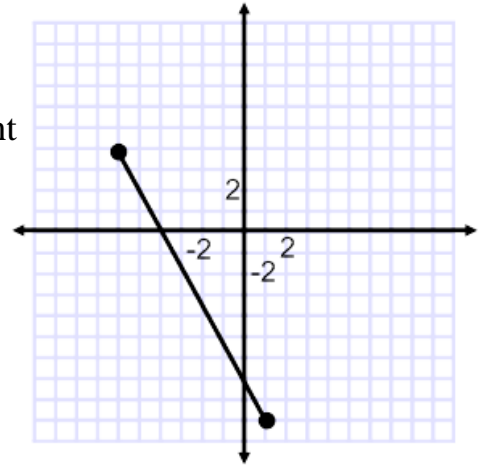
$$M\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$$



Example: To find the midpoint of the segment at the right, first find the coordinates of the endpoints. The left endpoint has coordinates $(-6, 4)$ and the right endpoint has coordinates $(1, -9)$

Now apply the midpoint formula: $\left(\frac{-6+1}{2}, \frac{4+ -9}{2}\right)$

$$= \left(\frac{-5}{2}, \frac{-5}{2}\right) = (-2.5, -2.5)$$

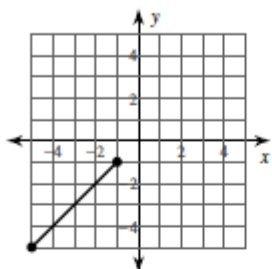


You could plot this point on the graph to check your work and be sure that it lies in the middle of the segment.

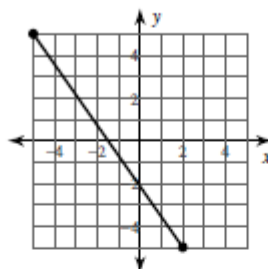
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Find the midpoint of each line segment.

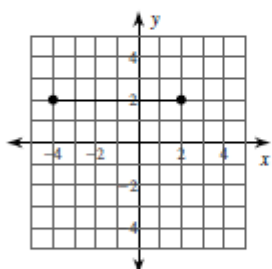
1)



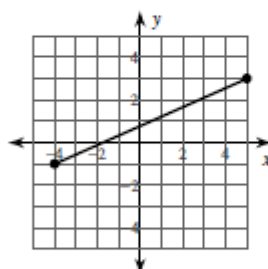
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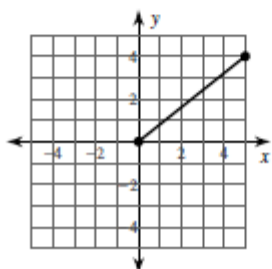
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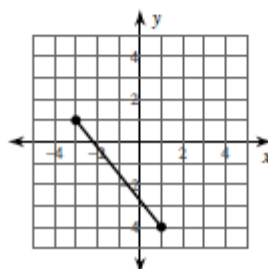
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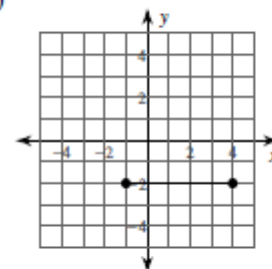
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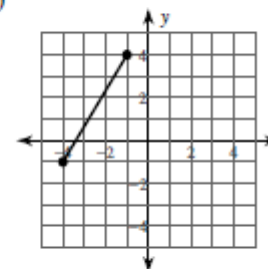
6)



7)



8)



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

9) $(-4, 4)$, $(5, -1)$

10) $(-1, -6)$, $(-6, 5)$

11) $(2, 4)$, $(1, -3)$

12) $(-4, 4)$, $(-2, 2)$