

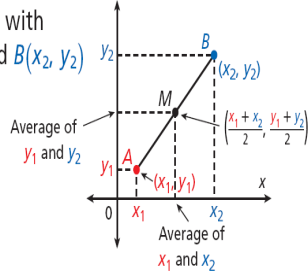
# Jadwin-Geometry-8<sup>th</sup> Period-Off Site Learning Packet Day 1

## 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

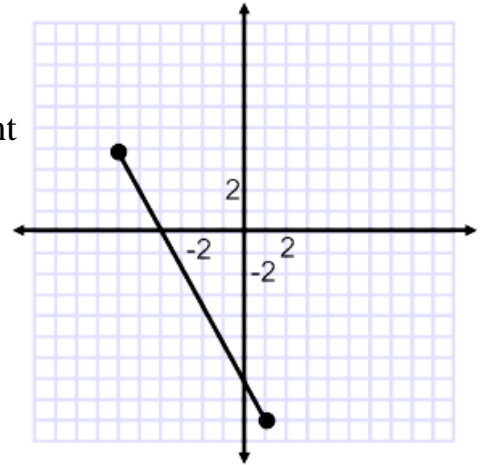
$$M\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$$



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:  $\left(\frac{-6+1}{2}, \frac{4+ -9}{2}\right)$

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

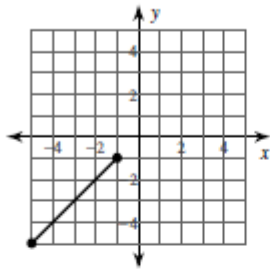


You could plot this point on the graph to check your work and be sure that it lies in the middle of the segment.

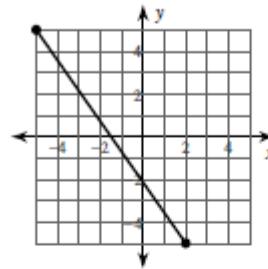
# Jadwin-Geometry-8<sup>th</sup> Period-Off Site Learning Packet Day 1

Find the midpoint of each line segment.

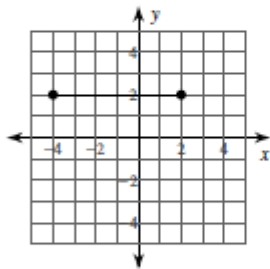
1)



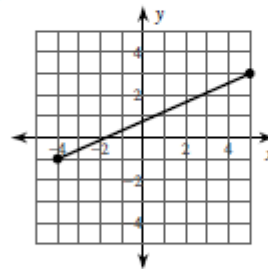
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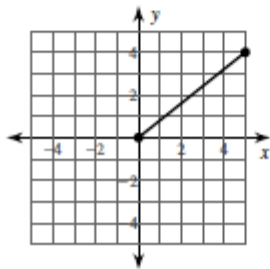
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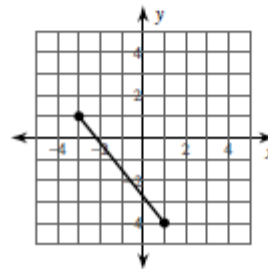
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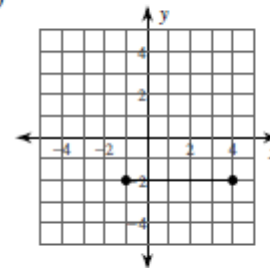
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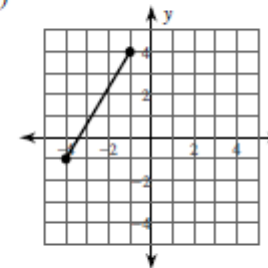
6)



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