Lesson 5-4

midpoint	Decode
Definition halfway between two points $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$	Example 

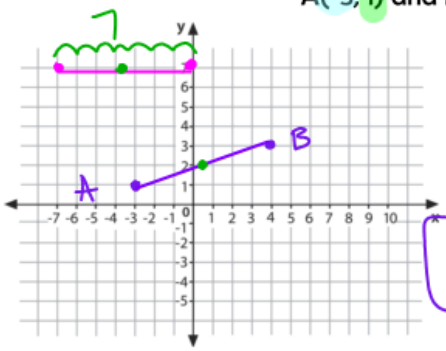
Example 3: Finding the Coordinates of a Midpoint

Find the coordinates of the midpoint of each line segment. Graph the line and label the midpoint as well.

I Do

x_1 y_1 x_2 y_2

A(-3, 1) and B(4, 3)



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

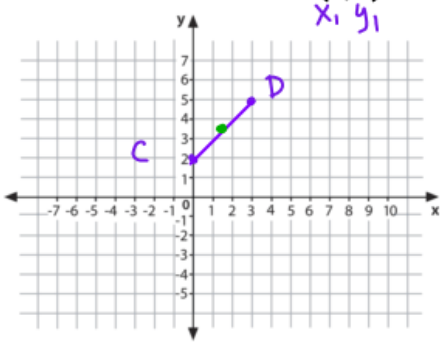
$\left(\frac{-3+4}{2}, \frac{1+3}{2}\right)$

$\left(\frac{1}{2}, 2\right)$

We Do

C(0, 2) and D(3, 5)

$x_1\ y_1 \qquad x_2\ y_2$



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

$$\left(\frac{0+3}{2}, \frac{2+5}{2}\right)$$

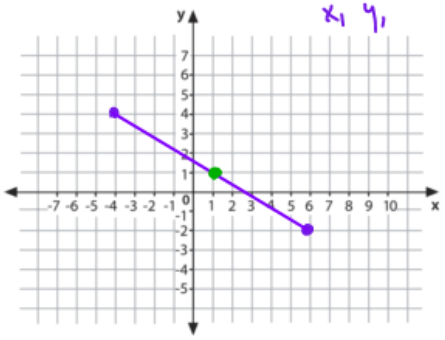
$$\left(\frac{3}{2}, \frac{7}{2}\right)$$

$$\left(1\tfrac{1}{2}, 3\tfrac{1}{2}\right)$$

You Do

E(-4, 4) and F(6, -2)

$x_1\ y_1 \qquad x_2\ y_2$



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

$$\left(\frac{2}{2}, \frac{2}{2}\right)$$

$$(1, 1)$$