



# Midpoint Formula

Name \_\_\_\_\_

Score \_\_\_\_\_

MP:12

Example : Find the midpoint of a line segment with the endpoints  $(-3, 5)$  and  $(2, 1)$ .

$$\begin{aligned}\text{Midpoint} &= \left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \quad x_1 = -3 ; x_2 = 2 ; y_1 = 5 ; y_2 = 1 \\ &= \left( \frac{-3 + 2}{2}, \frac{5 + 1}{2} \right) \\ &= \left( -\frac{1}{2}, 3 \right)\end{aligned}$$

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

1)  $(-2, -4)$  and  $(4, -4)$

2)  $(6, 0)$  and  $(10, 6)$

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

4)  $(1, -1)$  and  $(4, -4)$

5)  $(2, 9)$  and  $(7, 5)$

6)  $(-3, -2)$  and  $(-3, 2)$



# Midpoint Formula

Name \_\_\_\_\_

Score \_\_\_\_\_

## Answer key

MP:12

Example : Find the midpoint of a line segment with the endpoints  $(-3, 5)$  and  $(2, 1)$ .

$$\begin{aligned}\text{Midpoint} &= \left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \quad x_1 = -3 ; x_2 = 2 ; y_1 = 5 ; y_2 = 1 \\ &= \left( \frac{-3 + 2}{2}, \frac{5 + 1}{2} \right) \\ &= \left( -\frac{1}{2}, 3 \right)\end{aligned}$$

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

1)  $(-2, -4)$  and  $(4, -4)$

$(1, -4)$

2)  $(6, 0)$  and  $(10, 6)$

$(8, 3)$

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

$(-1, 1)$

4)  $(1, -1)$  and  $(4, -4)$

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

5)  $(2, 9)$  and  $(7, 5)$

$\left( \frac{9}{2}, 7 \right)$

6)  $(-3, -2)$  and  $(-3, 2)$

$(-3, 0)$