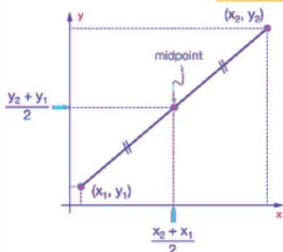


Name :

Class :

Midpoint Formula



A midpoint of a segment is the point on that line segment that divides the segment into two congruent segments.

The Midpoint Formula

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

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

(-4, 4), (5, -1)

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

(5, 2), (-4, -3)

(2, -1), (-6, 0)

(-5.1, -2), (1.4, 1.7)

(5.1, 5.71), (6, 3.6)

(-1, -6), (-6, 5)

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

(-1, 1), (5, -5)

(-3.1, -2.8), (-4.92, -3.3)

(4.9, -1.3), (-5.2, -0.6)

(3.1, -2.1), (-0.52, -0.6)

b) Find the other endpoint of the line segment with the given endpoint and midpoint.

Endpoint: (-1, 9), midpoint: (-9, -10)

Endpoint: (5, 2), midpoint: (-10, -2)

Endpoint: (-9, 7), midpoint: (10, -3)

Endpoint: (2, 5), midpoint: (5, 1)

Endpoint: (9, -10), midpoint: (4, 8)

Endpoint: (-6, 4), midpoint: (4, 8)

c) Critical thinking questions:

Find the point that is one-fourth of the way from (2, 4) to (10, 8).

One endpoint of a line segment is (8, -1). The point (5, -2) is one-third of the way from that endpoint to the other endpoint. Find the other endpoint.