

Midpoint Formula

MS1

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

$$\begin{aligned} \text{Midpoint} &= \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) = \left(\frac{\frac{1}{2} - 1}{2}, \frac{5 + 3}{2} \right) \\ &= \left(-\frac{1}{4}, 4 \right) \end{aligned}$$

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

1) $(7, 1), (2, -9)$ _____

3) $(-8, 10), (\frac{2}{5}, -4)$ _____

5) $(-1, 2), (-5, 0)$ _____

7) $(-9, -1.6), (-7, 4)$ _____

9) $(-1, -6), (\frac{5}{6}, -4)$ _____

10) $(2.8, -3), (0, 7)$ _____

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

1) $(7, 1), (2, -9)$

$(\frac{9}{2}, -4)$ or $(4.5, -4)$

3) $(-8, 10), (\frac{2}{5}, -4)$

$(-\frac{19}{5}, 3)$ or $(-3.8, 3)$

5) $(-1, 2), (-5, 0)$

$(-3, 1)$

7) $(-9, -1.6), (-7, 4)$

$(-8, 1.2)$

9) $(-1, -6), (\frac{5}{6}, -4)$

$(-\frac{1}{12}, -5)$ or $(-0.1, -5)$

10) $(2.8, -3), (0, 7)$

$(1.4, 2)$

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