



Midpoint Formula

Name _____

Score _____

MP:14

Example : Find the midpoint of a line segment with the endpoints $\left(-3, -\frac{2}{3}\right)$ and $\left(-1, -\frac{4}{3}\right)$.

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

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

1) $(-3, -10)$ and $(4.6, -2)$

2) $\left(-\frac{2}{3}, -\frac{5}{2}\right)$ and $\left(-\frac{1}{3}, \frac{7}{2}\right)$

3) $\left(-3, \frac{4}{5}\right)$ and $\left(3, -\frac{4}{5}\right)$

4) $(2.5, 1.6)$ and $(3.5, 8.4)$

5) $(0.8, -6.8)$ and $(2, -5)$

6) $(5, 2)$ and $\left(-11, -\frac{1}{2}\right)$



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Answer key

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1) $(-3, -10)$ and $(4.6, -2)$

$(0.8, -6)$

2) $\left(-\frac{2}{3}, -\frac{5}{2}\right)$ and $\left(-\frac{1}{3}, \frac{7}{2}\right)$

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

3) $\left(-3, \frac{4}{5}\right)$ and $\left(3, -\frac{4}{5}\right)$

$(0, 0)$

4) $(2.5, 1.6)$ and $(3.5, 8.4)$

$(3, 5)$

5) $(0.8, -6.8)$ and $(2, -5)$

$(1.4, -5.9)$

6) $(5, 2)$ and $\left(-11, -\frac{1}{2}\right)$

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