

The Midpoint Formula

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

1) $(7, 4), (9, -1)$

2) $(8, -9), (0, 5)$

3) $(1, -7), (1, -12)$

4) $(0, 4), (-4, -12)$

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

6) $(5, 9), (-1, 9)$

7) $(-7, 8), (-2, -9)$

8) $(2, -11), (-9, 0)$

9) $(4, -1), (2, -7)$

10) $(-4, -6), (3, -6)$

11) $(14, 0), (-7, 5)$

12) $(14, -8), (12, -1)$

13) $(-4, 12), (-7, -2)$

14) $\left(-\frac{1}{9}, -\frac{1}{2}\right), \left(\frac{14}{9}, \frac{4}{3}\right)$

$$15) \left(\frac{5}{3}, 1\right), (0, 2)$$

$$16) \left(-\frac{3}{2}, -\frac{1}{3}\right), \left(\frac{3}{4}, \frac{3}{5}\right)$$

$$17) \left(\frac{2}{5}, -\frac{2}{5}\right), \left(-\frac{7}{8}, -\frac{3}{5}\right)$$

$$18) (6.6, 8.52), (-5.5, 4.07)$$

$$19) (-2.9, -2.958), (8.6, 5)$$

$$20) (9.3, 9.4), (8.3, -8.7)$$

Given the midpoint and one endpoint of a line segment, find the other endpoint.

$$21) \text{ Endpoint: } (-9, -1), \text{ midpoint: } (8, 14)$$

$$22) \text{ Endpoint: } (10, 12), \text{ midpoint: } (6, 9)$$

$$23) \text{ Endpoint: } (-8, -10), \text{ midpoint: } (10, -7)$$

$$24) \text{ Endpoint: } (-11, 9), \text{ midpoint: } (3, -11)$$

$$25) \text{ Endpoint: } (-2, 7), \text{ midpoint: } (12, -10)$$

$$26) \text{ Endpoint: } (11, 14), \text{ midpoint: } (10, 14)$$

$$27) \text{ Endpoint: } (14, -8), \text{ midpoint: } (5, 8)$$

$$28) \text{ Endpoint: } (-9, 0), \text{ midpoint: } (10, -7)$$

$$29) \text{ Endpoint: } \left(-\frac{5}{6}, -\frac{1}{3}\right), \text{ midpoint: } \left(\frac{1}{2}, -1\right)$$

$$30) \text{ Endpoint: } \left(2, \frac{12}{7}\right), \text{ midpoint: } \left(\frac{1}{3}, -\frac{8}{5}\right)$$

The Midpoint Formula

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

1) $(7, 4), (9, -1)$

2) $(8, -9), (0, 5)$

$(8, 1.5)$

$(4, -2)$

3) $(1, -7), (1, -12)$

4) $(0, 4), (-4, -12)$

$(1, -9.5)$

$(-2, -4)$

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

6) $(5, 9), (-1, 9)$

$(-1, -0.5)$

$(2, 9)$

7) $(-7, 8), (-2, -9)$

8) $(2, -11), (-9, 0)$

$(-4.5, -0.5)$

$(-3.5, -5.5)$

9) $(4, -1), (2, -7)$

10) $(-4, -6), (3, -6)$

$(3, -4)$

$(-0.5, -6)$

11) $(14, 0), (-7, 5)$

12) $(14, -8), (12, -1)$

$(3.5, 2.5)$

$(13, -4.5)$

13) $(-4, 12), (-7, -2)$

14) $\left(-\frac{1}{9}, -\frac{1}{2}\right), \left(\frac{14}{9}, \frac{4}{3}\right)$

$(-5.5, 5)$

$\left(\frac{13}{18}, \frac{5}{12}\right)$

$$15) \left(\frac{5}{3}, 1\right), (0, 2)$$

$$\left(\frac{5}{6}, \frac{3}{2}\right)$$

$$17) \left(\frac{2}{5}, -\frac{2}{5}\right), \left(-\frac{7}{8}, -\frac{3}{5}\right)$$

$$\left(-\frac{19}{80}, -\frac{1}{2}\right)$$

$$19) (-2.9, -2.958), (8.6, 5)$$

$$(2.85, 1.021)$$

$$16) \left(-\frac{3}{2}, -\frac{1}{3}\right), \left(\frac{3}{4}, \frac{3}{5}\right)$$

$$\left(-\frac{3}{8}, \frac{2}{15}\right)$$

$$18) (6.6, 8.52), (-5.5, 4.07)$$

$$(0.55, 6.295)$$

$$20) (9.3, 9.4), (8.3, -8.7)$$

$$(8.8, 0.35)$$

Given the midpoint and one endpoint of a line segment, find the other endpoint.

$$21) \text{Endpoint: } (-9, -1), \text{ midpoint: } (8, 14)$$

$$(25, 29)$$

$$22) \text{Endpoint: } (10, 12), \text{ midpoint: } (6, 9)$$

$$(2, 6)$$

$$23) \text{Endpoint: } (-8, -10), \text{ midpoint: } (10, -7)$$

$$(28, -4)$$

$$24) \text{Endpoint: } (-11, 9), \text{ midpoint: } (3, -11)$$

$$(17, -31)$$

$$25) \text{Endpoint: } (-2, 7), \text{ midpoint: } (12, -10)$$

$$(26, -27)$$

$$26) \text{Endpoint: } (11, 14), \text{ midpoint: } (10, 14)$$

$$(9, 14)$$

$$27) \text{Endpoint: } (14, -8), \text{ midpoint: } (5, 8)$$

$$(-4, 24)$$

$$28) \text{Endpoint: } (-9, 0), \text{ midpoint: } (10, -7)$$

$$(29, -14)$$

$$29) \text{Endpoint: } \left(-\frac{5}{6}, -\frac{1}{3}\right), \text{ midpoint: } \left(\frac{1}{2}, -1\right)$$

$$\left(\frac{11}{6}, -\frac{5}{3}\right)$$

$$30) \text{Endpoint: } \left(2, \frac{12}{7}\right), \text{ midpoint: } \left(\frac{1}{3}, -\frac{8}{5}\right)$$

$$\left(-\frac{4}{3}, -\frac{172}{35}\right)$$