

## The Midpoint Formula

Date \_\_\_\_\_ Period \_\_\_\_\_

**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) Endpoint:  $(-9, -1)$ , midpoint:  $(8, 14)$

22) Endpoint:  $(10, 12)$ , midpoint:  $(6, 9)$

23) Endpoint:  $(-8, -10)$ , midpoint:  $(10, -7)$

24) Endpoint:  $(-11, 9)$ , midpoint:  $(3, -11)$

25) Endpoint:  $(-2, 7)$ , midpoint:  $(12, -10)$

26) Endpoint:  $(11, 14)$ , midpoint:  $(10, 14)$

27) Endpoint:  $(14, -8)$ , midpoint:  $(5, 8)$

28) Endpoint:  $(-9, 0)$ , midpoint:  $(10, -7)$

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

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

## The Midpoint Formula

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

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

$(8, 1.5)$

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

$(4, -2)$

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

$(1, -9.5)$

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

$(-2, -4)$

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

$(-1, -0.5)$

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

$(2, 9)$

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

$(-4.5, -0.5)$

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

$(-3.5, -5.5)$

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

$(3, -4)$

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

$(-0.5, -6)$

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

$(3.5, 2.5)$

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

$(13, -4.5)$

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

$(-5.5, 5)$

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

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

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

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

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

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

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

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

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

$(0.549, 6.295)$

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

$(2.849, 1.02)$

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) Endpoint:  $(-9, -1)$ , midpoint:  $(8, 14)$

$(25, 29)$

22) Endpoint:  $(10, 12)$ , midpoint:  $(6, 9)$

$(2, 6)$

23) Endpoint:  $(-8, -10)$ , midpoint:  $(10, -7)$

$(28, -4)$

24) Endpoint:  $(-11, 9)$ , midpoint:  $(3, -11)$

$(17, -31)$

25) Endpoint:  $(-2, 7)$ , midpoint:  $(12, -10)$

$(26, -27)$

26) Endpoint:  $(11, 14)$ , midpoint:  $(10, 14)$

$(9, 14)$

27) Endpoint:  $(14, -8)$ , midpoint:  $(5, 8)$

$(-4, 24)$

28) Endpoint:  $(-9, 0)$ , midpoint:  $(10, -7)$

$(29, -14)$

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

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

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

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