

## Distance and Midpoint

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

1)  $(8, -7), (2, -6)$

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

3)  $(-9, 2), (8, 5)$

4)  $(-6, -1), (1, -6)$

5)  $(-3, -5), (7, 4)$

6)  $(1, 4), (0, 2)$

7)  $(7, -3), (0, 1)$

8)  $(4, 1), (7, -9)$

9)  $(10, 7), (6, -9)$

10)  $(-7, 3), (-1, 9)$

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

11) Endpoint:  $(-4, -1)$ , midpoint:  $(5, -2)$

12) Endpoint:  $(6, 2)$ , midpoint:  $(-10, -5)$

13) Endpoint:  $(-1, 9)$ , midpoint:  $(-2, 9)$

14) Endpoint:  $(2, 5)$ , midpoint:  $(5, -2)$

15) Endpoint:  $(-9, 7)$ , midpoint:  $(10, -5)$

16) Endpoint:  $(9, -10)$ , midpoint:  $(4, 6)$

17) Endpoint:  $(-6, 4)$ , midpoint:  $(3, -8)$

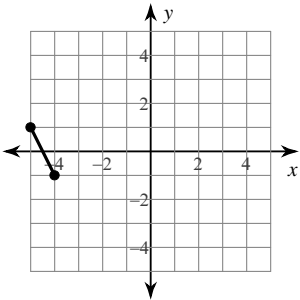
18) Endpoint:  $(-2, -8)$ , midpoint:  $(9, 2)$

19) Endpoint:  $(1, 10)$ , midpoint:  $(3, -8)$

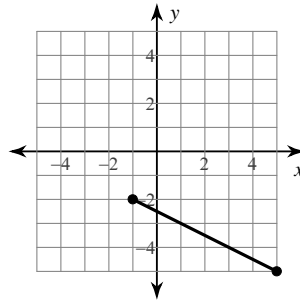
20) Endpoint:  $(4, 6)$ , midpoint:  $(9, 2)$

**Find the distance between each pair of points.**

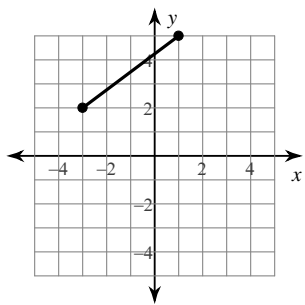
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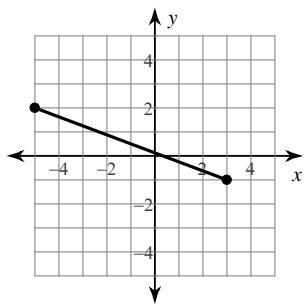
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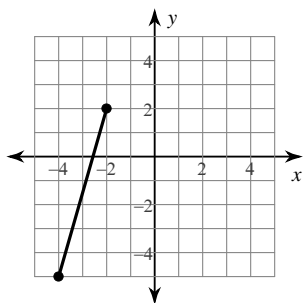
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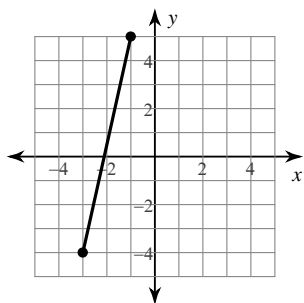
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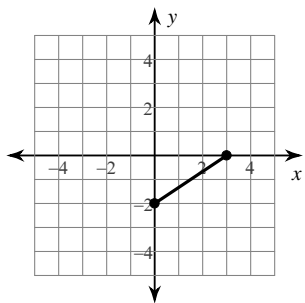
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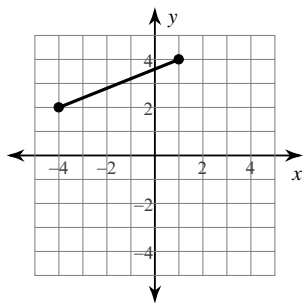
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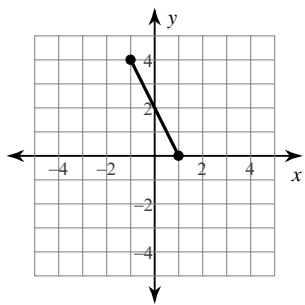
27)



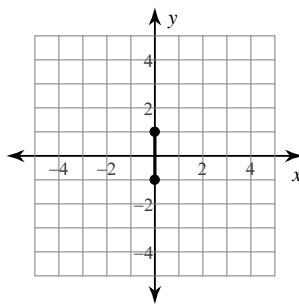
28)



29)



30)



31)  $(-6, -8), (-7, 2)$

32)  $(-3, -4), (7, -7)$

33)  $(1, 8), (-5, -8)$

34)  $(-7, -4), (3, -1)$

35)  $(-3, 0), (0, -2)$

36)  $(0, 4), (5, -2)$

37)  $(4, -4), (-8, -8)$

38)  $(3, 0), (2, -3)$

39)  $(7, 4), (7, 5)$

40)  $(7, 0), (-3, 8)$

41)  $(-7, -8), (4, 5)$

42)  $(3, -4), (-5, -5)$

43)  $(-4, 4), (-7, 4)$

44)  $(-1, 8), (7, 3)$

45)  $(-1, -5), (0, 1)$

46)  $(-8, -4), (-3, -7)$

47)  $(-5, 0), (2, -7)$

48)  $(6, 8), (-8, -6)$

49)  $(2, 0), (5, 0)$

50)  $(5, 4), (2, 0)$

## Answers to Distance and Midpoint (ID: 1)

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

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

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

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

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

6)  $\left(\frac{1}{2}, 3\right)$

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

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

9)  $(8, -1)$

10)  $(-4, 6)$

11)  $(14, -3)$

12)  $(-26, -12)$

13)  $(-3, 9)$

14)  $(8, -9)$

15)  $(29, -17)$

16)  $(-1, 22)$

17)  $(12, -20)$

18)  $(20, 12)$

19)  $(5, -26)$

20)  $(14, -2)$

21)  $\sqrt{5}$

22)  $3\sqrt{5}$

23)  $5$

24)  $\sqrt{73}$

25)  $\sqrt{53}$

26)  $\sqrt{85}$

27)  $\sqrt{13}$

28)  $\sqrt{29}$

29)  $2\sqrt{5}$

30)  $2$

31)  $\sqrt{101}$

32)  $\sqrt{109}$

33)  $2\sqrt{73}$

34)  $\sqrt{109}$

35)  $\sqrt{13}$

36)  $\sqrt{61}$

37)  $4\sqrt{10}$

38)  $\sqrt{10}$

39)  $1$

40)  $2\sqrt{41}$

41)  $\sqrt{290}$

42)  $\sqrt{65}$

43)  $3$

44)  $\sqrt{89}$

45)  $\sqrt{37}$

46)  $\sqrt{34}$

47)  $7\sqrt{2}$

48)  $14\sqrt{2}$

49)  $3$

50)  $5$