

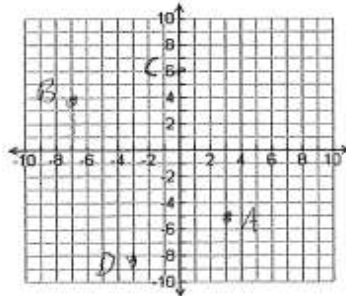
Plot:

1. Point A (3, -5)

2. Point B (-7, 4)

3. Point C (0, 6)

4. Points D (-3, -8)



Find the distance between the given points.

5. (2, 2) and (5, -2)

$$d = \sqrt{(5-2)^2 + (-2-2)^2}$$

$$= \sqrt{3^2 + (-4)^2}$$

$$= \sqrt{9+16} = \sqrt{25} = 5$$

6. (0, 2) and (-2, 10)

$$d = \sqrt{(-2-0)^2 + (10-2)^2} = \sqrt{4+8^2} = \sqrt{4+64}$$

$$= \sqrt{68}$$

Find the midpoint.

7. (3, -2) and (-5, 6)

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

$$= (-1, 2)$$

8. (-2, 7) and (5, -7)

$$\left( \frac{-2+5}{2}, \frac{7+(-7)}{2} \right)$$

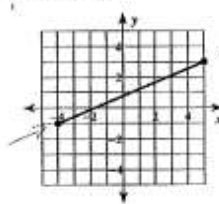
$$= \left( \frac{3}{2}, 0 \right)$$

Find the midpoint and the distance of the line segment.

$$d = \sqrt{(5-(-1))^2 + (3-(-1))^2}$$

$$= \sqrt{6^2 + 4^2} = \sqrt{36+16} = \sqrt{52}$$

9.



← (5, 3)

midpoint

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

$$= \left( \frac{4}{2}, \frac{2}{2} \right)$$

$$= (2, 1)$$

Write the equation for each circle if the coordinates of the center and length of the radius are given.

10. (5, 3), r = 3

$$(x-5)^2 + (y-3)^2 = 9$$

11. (-2, -4), r = 5

$$(x+2)^2 + (y+4)^2 = 25$$