

Consider the two points (3, 5) (-3, 8).

1) Find the distance between the points. $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

2) Find the midpoint of the line segment connecting the two points. $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$

Consider the two points (9.32, -8.66) (31.73, 102.15)

3) Find the distance between the points.

4) Find the midpoint of the line segment connecting the two points.

Find the domain for each of the following functions.

5) $f(x) = x^2 + 3x - 6$

6) $g(x) = \frac{3x+7}{x-7}$

7) $h(x) = \frac{x^2+1}{x^2-36}$

8) $s(x) = \sqrt{5-8x}$

9) $q(x) = \sqrt{x+5}$

10) $k(x) = \frac{x^4}{\sqrt{2x+1}}$

11) Find the equation of the line through the points (2.3, 104.5) (4.7, 198.2).

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$y = m(x - x_1) + y_1$$