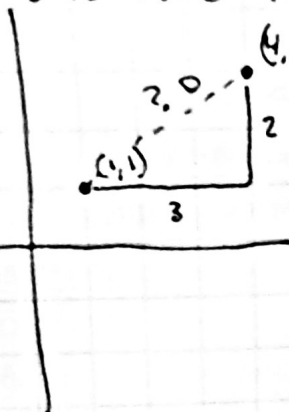


CH 1 Rectangular Coordinate System

Distance Formula



$$D^2 = 3^2 + 2^2$$

$$D^2 = 9 + 4$$

$$D^2 = 13$$

$$D = \sqrt{13}$$

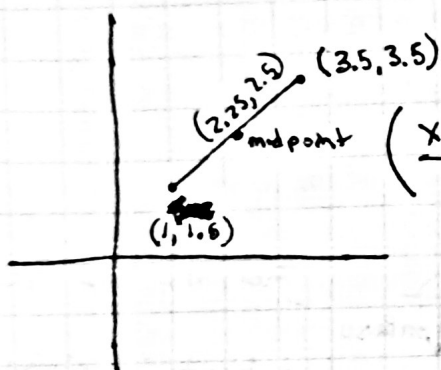
$$D = 3.6...$$

$$|D^2| = |x_2 - x_1|^2 + |y_2 - y_1|^2$$

$$D^2 = (x_2 - x_1)^2 + (y_2 - y_1)^2$$

$$D = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Determining midpoint between 2 points



$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

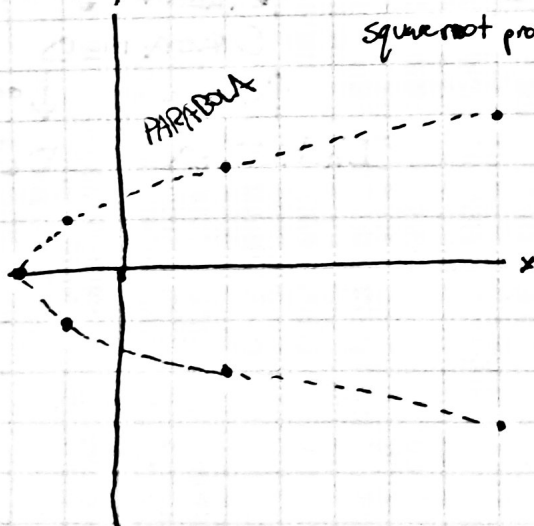
$$\text{ex: } \left(\frac{1 + 3.5}{2}, \frac{1.5 + 3.5}{2} \right)$$

$$\left(\frac{4.5}{2}, \frac{5}{2} \right)$$

$$(2.25, 2.5)$$

Graphing an Equation by plotting points

X	Y
-2	0
-1	± 1
2	± 2
7	± 3
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square root property

$$y^2 - x - 2 = 0$$

isolate y or x

$$y^2 = x + 2$$

$$y = \pm \sqrt{x + 2}$$

in order to ~~plot~~ real numbers required

$$x + 2 \geq 0 \text{ or } x \geq -2$$

$$y = \pm \sqrt{-2 + 2}$$

$$y = \sqrt{0} = 0$$

$$y = \pm \sqrt{-1 + 2}$$

$$y = \pm \sqrt{1} = \pm 1$$

$$y = \pm \sqrt{2 + 2}$$

$$y = \pm \sqrt{4} = \pm 2$$

$$y = \pm \sqrt{7 + 2}$$

$$y = \pm \sqrt{9} = \pm 3$$

Determining x and y intercepts from equation

- given an equation in x and y

• Find the x-intercepts by subbing 0 for y in the equation and solving for x

• Find the y-intercepts by subbing 0 for x in the equation and solving for y