

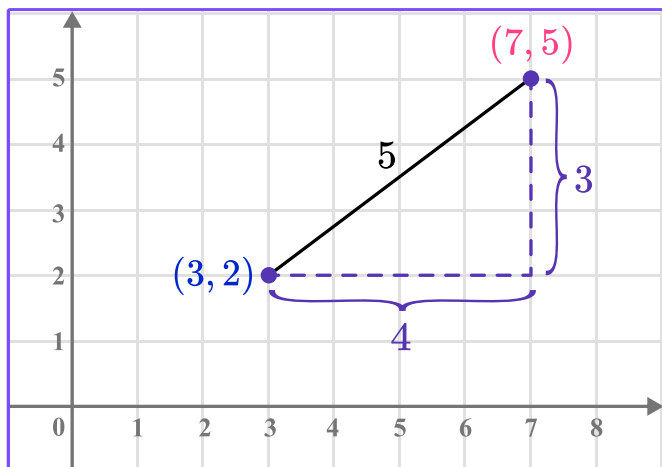
Distance Formula

The **distance formula** calculates the distance d between two coordinates (x_1, y_1) and (x_2, y_2) on an xy -coordinate plane.

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

 **Example**

Find the distance between the points $(3, 2)$ and $(7, 5)$



$$\begin{aligned} d &= \sqrt{(7 - 3)^2 + (5 - 2)^2} \\ &= \sqrt{4^2 + 3^2} \\ &= \sqrt{16 + 9} \\ &= \sqrt{25} \\ &= 5 \end{aligned}$$

Use Pythagoras' Theorem