

# Coordinate Geometry

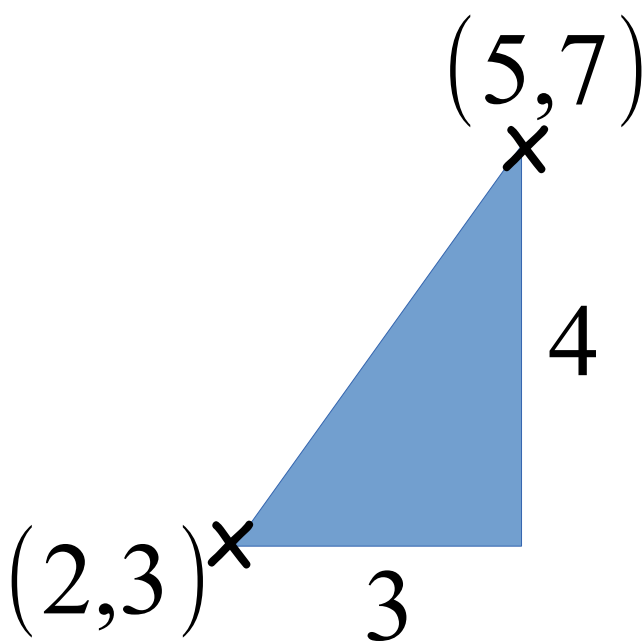
$$y = mx + c$$

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$$\text{Gradient} = \frac{y_2 - y_1}{x_2 - x_1}$$

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Distance is Pythagoras



$$a^2 + b^2 = c^2$$

$$3^2 + 4^2 = c^2$$

$$\sqrt{25} = c$$

$$c = 5$$

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Parallel means same gradient

Perpendicular: flip and minus