

11th September



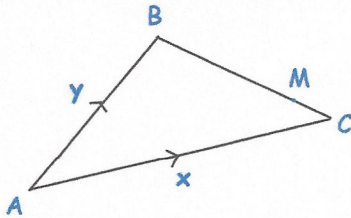
Corbettmaths

Prove that the sum of three consecutive integers is divisible by 3.

$$n + (n+1) + (n+2)$$

$$3n + 3 = 3(n+1)$$

\therefore divisible by 3



$$\vec{BC} = -\underline{y} + \underline{x}$$

 \vec{BM}

$$-\frac{4}{5}\underline{y} + \frac{4}{5}\underline{x}$$

ABC is a triangle.

M lies on BC such that $BM = \frac{4}{5} BC$

Express these vectors in terms of x & y

$$\vec{AM} = \vec{AB} + \vec{BM}$$

$$= \underline{y} + \left(-\frac{4}{5}\underline{y} + \frac{4}{5}\underline{x}\right)$$

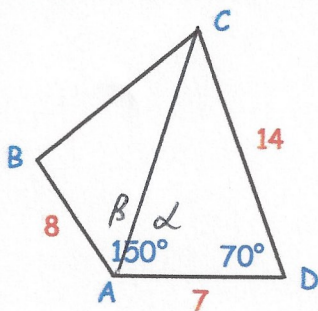
$$= \frac{1}{5}\underline{y} + \frac{4}{5}\underline{x}$$

Find the minimum point of the graph

$$y = x^2 + 6x + 8 \quad y = (x+3)^2 - 9 + 8$$

$$y = (x+3)^2 - 1$$

$(-3, -1)$



Find the length of BC.

Using Cosine rule $AC = 13.34$

Using sine rule $\alpha = 80.46$

$\beta = 69.54$

Using cosine rule $BC = 12.94 \text{ cm}$