

5th February

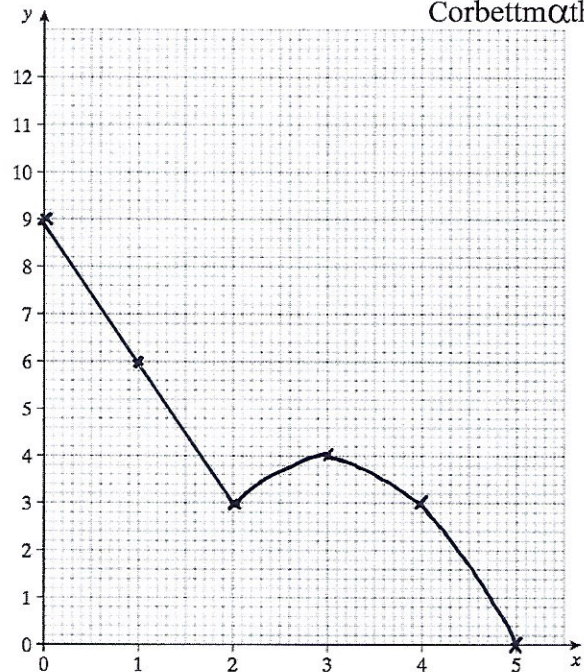


Corbettmaths

A function $f(x)$ is defined as

$$f(x) = 9 - 3x \quad 0 \leq x < 2$$

$$= (5 - x)(x - 1) \quad 2 \leq x \leq 5$$

Draw the graph of $y = f(x)$ 

$$y = (1 - 2x)(3 - 4x)$$

Work out $\frac{dy}{dx}$

$$y = 3 - 10x + 8x^2$$

$$\frac{dy}{dx} = -10 + 16x$$

$$\text{Prove } \frac{1}{\tan\theta} + \tan\theta \equiv \frac{1}{\cos\theta\sin\theta}$$

LHS

$$\frac{\cos\theta}{\sin\theta} + \frac{\sin\theta}{\cos\theta}$$

$$\frac{\cos^2\theta + \sin^2\theta}{\cos\theta\sin\theta} = \frac{1}{\cos\theta\sin\theta}$$