Name: _____ 5-a-day Further Maths

10th August

Corbettmaths

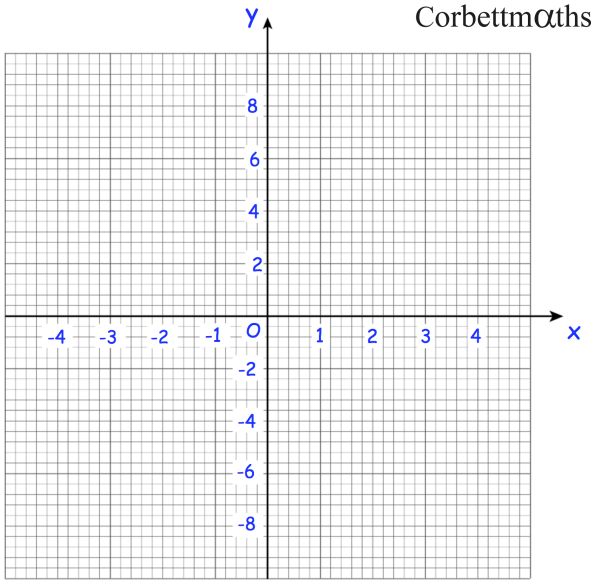
A function f(x) is defined as

$$f(x) = 10 + x - x^2 \quad -3 \leq x < -1$$

$$= x^2 + 7 \quad -1 \leq x < 1$$

$$= \frac{8}{x} \quad 1 \leq x \leq 4$$

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



$$y = \frac{8}{x^4}$$

Find $\frac{dy}{dx}$

Rationalise and simplify $\frac{17\sqrt{3} + 5\sqrt{5}}{2\sqrt{3} - \sqrt{5}}$

Prove $tan\theta cos\theta \equiv sin\theta$