

17th February

Corbettmaths

Factorise fully

$$30xy^5z - 24x^2y^3z^2 + 12x^3y^3z$$

The first 5 terms of a quadratic sequence are

36 30 22 12 0

Find an expression for the nth term

A curve has equation $y = (x + 2)(x - 3)$

The gradient of the curve at point P is -4

Work out the coordinates of the point P.

Rationalise the denominator

$$\frac{7 + \sqrt{6}}{3 + \sqrt{6}}$$

Show that

$$(\sin\theta + \cos\theta)^2 + (\sin\theta - \cos\theta)^2 \equiv 2$$