

7th August

Corbettmaths

Use factor theorem to show that
 $(x + 3)$ is a factor of

$$x^3 + x^2 - 14x - 24$$

$$\mathbf{A} = \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}$$

Callum says that \mathbf{A}^2 equals the identity
matrix, \mathbf{I}

Is Callum correct?

Work out the equation of the normal to
the curve $y = x^3 + 2x^2 - x - 1$
at the point $(2, 13)$

Prove

$$\sin^4\theta - \cos^4\theta \equiv 1 - 2\cos^2\theta$$