

28th August

Corbettmaths

Rationalise the denominator

$$\frac{\sqrt{2}}{\sqrt{10} + \sqrt{8}}$$

$$\mathbf{A} = \begin{pmatrix} 5 & -3 \\ -2 & 7 \end{pmatrix}$$

Work out the matrix \mathbf{A}^2

$$y = 4x^3 - 2x^2 + 6x$$

Work out the value of $\frac{d^2y}{dx^2}$ when
 $x = 5$

Prove

$$\sin^2 x - 2\cos^2 x \equiv 3\sin^2 x - 2$$

Hence, work out the values of x
between 0° and 360° for which

$$\sin^2 x - 2\cos^2 x = 0$$