

**27th January**

Corbettmaths

James is creating a 8-digit code to lock his iPad.

He does not repeat any digit.

How many possible codes can James create?

Show that  $(2x - 3)$  is a factor of

$$2x^3 + 9x^2 - 32x + 21$$

$$\begin{pmatrix} -6 & 2 \\ 5 & -4 \end{pmatrix} \begin{pmatrix} -4 & -2 \\ -5 & m \end{pmatrix} = 14 \mathbf{I}$$

Work out the value of  $m$

Solve the simultaneous equations

$$y = x^2 + x - 7$$

$$4x + 2y + 1 = 0$$