

16th January

Corbettmaths

$$y^5 \times y^n = 1 \rightarrow y^0$$

Work out the value of n

$$5 + n = 0$$

$$n = -5$$

A curve has equation

$$y = x^2 - 4x + 21$$

$$\text{Find } \frac{dy}{dx} = 2x - 4$$

Hence, find the coordinates of the minimum point.

$$\frac{dy}{dx} = 0$$

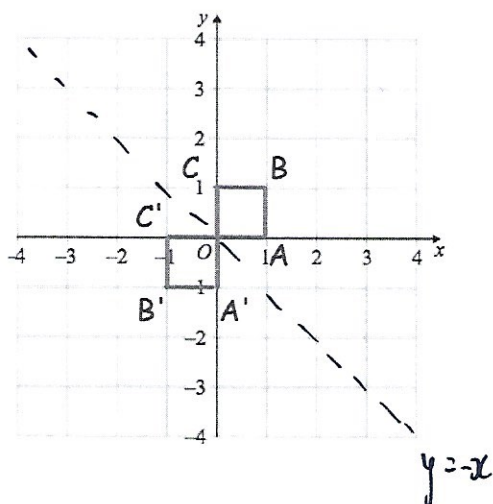
$$2x - 4 = 0$$

$$x = 2$$

$$y = 2^2 - 4 \times 2 + 21$$

$$y = 17$$

$$(2, 17)$$

OABC is mapped to OA'B'C' under transformation matrix **M**Work out matrix **M**

$$\begin{pmatrix} 0 & -1 \\ -1 & 0 \end{pmatrix}$$

$$\begin{pmatrix} a & b \\ c & d \end{pmatrix} \begin{pmatrix} 1 \\ 0 \end{pmatrix} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$

$$a = 0$$

$$c = -1$$

$$\begin{pmatrix} a & b \\ c & d \end{pmatrix} \begin{pmatrix} 0 \\ 1 \end{pmatrix} = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

$$b = -1$$

$$d = 0$$