

7th July



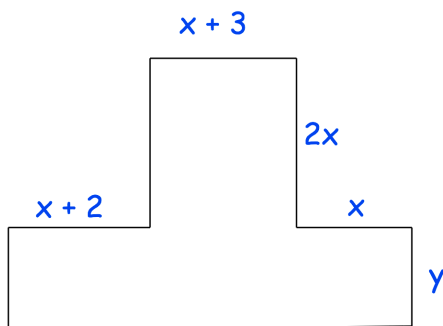
Corbettmaths

Write down the exact value of  $\sin 870^\circ$ 

Work out the image of the point  $(5, -2)$  when transformed by the matrix

$$\begin{pmatrix} 2 & -3 \\ 5 & 1 \end{pmatrix}$$

The shape below is made from two rectangles.



The perimeter of the shape is 80cm.

The area of the shape is  $A \text{ cm}^2$

Show that  $y = 35 - 5x$

Show that  $A = 175 + 86x - 13x^2$

Use differentiation to find the value of  $x$  for which  $A$  is a maximum