

7th May



Corbettmaths

Make  $m$  the subject of  $y = \frac{3m+1}{11-m}$

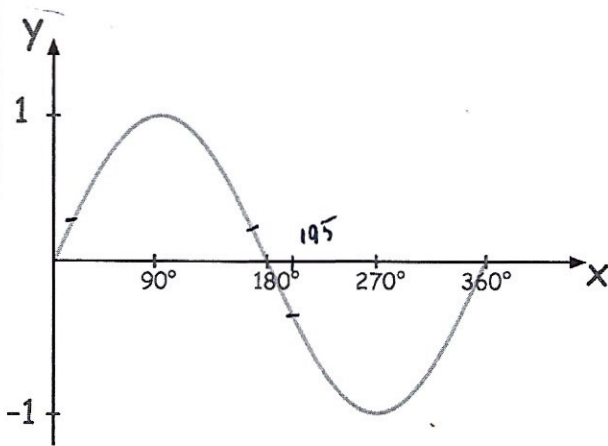
$$11y - my = 3m + 1$$

$$11y - 1 = 3m + my$$

$$m(3+y) = 11y - 1$$

$$m = \frac{11y - 1}{3 + y}$$

Here is a sketch of  $y = \sin x$  for  $0^\circ \leq x \leq 360^\circ$



Given that  $\sin 195^\circ = -0.2588$

Solve  $\sin x = 0.2588$  for  $0^\circ \leq x \leq 360^\circ$

$$15^\circ \text{ and } 165^\circ$$

Work out the equation of the line that is perpendicular to  $3x + 4y = 8$  that passes through the point  $(3, 10)$

$$4y = -3x + 8$$

$$y = -\frac{3}{4}x + 2$$

*left*  
~~to find~~

$$y = \frac{4}{3}x + c$$

$$10 = \frac{12}{3} + c$$

$$c = 6$$

$$y = \frac{4}{3}x + 6$$

The transformation matrix  $\begin{pmatrix} 5 & -2 \\ 1 & 4 \end{pmatrix}$  maps the point  $(x, y)$  onto the point  $(26, -8)$

Find the values of  $x$  and  $y$

$$\begin{pmatrix} 5 & -2 \\ 1 & 4 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 26 \\ -8 \end{pmatrix}$$

$$5x - 2y = 26$$

$$x + 4y = -8$$

$$10x - 4y = 52$$

$$11x = 44$$

$$x = 4$$

$$y = -3$$