

23rd December

Corbettmaths

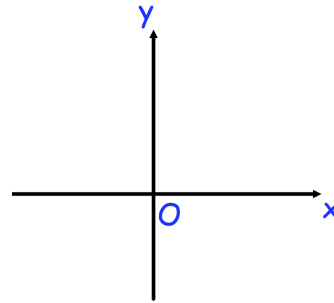
Factorise fully

$$(x + 3)^7 + (x + 3)^6(2x - 1)$$

Do not attempt to expand brackets.

Sketch the graph of $y = 3 \times 2^x$

Label the coordinates of any points of intersection with the coordinate axes.



$$\mathbf{A} = \begin{pmatrix} 9 & -1 \\ 0 & 4 \end{pmatrix} \quad \mathbf{B} = \begin{pmatrix} 4 & -2 \\ 1 & 3 \end{pmatrix}$$

Work out the matrix **AB**

$$f(x) = 2x^3 - 10x^2 + 30x + 2$$

Show that $f(x)$ is an increasing function for all values of x .

$$4\sin^2x + 7\cos^2x \equiv A + B\sin^2x$$

Work out the values of A and B .