

26th April

Corbettmaths

Expand and simplify

$$(1 + 2\sqrt{3})^3$$

$(x + 1)$ is a factor of
 $x^3 - 2x^2 + 3x + a$

Work out the value of a

$$3^x = 9\sqrt{3} \quad \text{and} \quad 3^y = \frac{1}{\sqrt{3}}$$

Work out 3^{x-y}

For what values of x is
 $y = -x^2 - 7x + 12$ an increasing
function?

Work out the matrix that transforms the
unit square by a 180° rotation about O .