

24th September

Corbettmaths

Solve $4x^2 - 9 = 2x^2 + 4x$

Give your answers to 1 decimal place.

$$2x^2 - 4x - 9 = 0$$

$$x = \frac{4 \pm \sqrt{88}}{4}$$

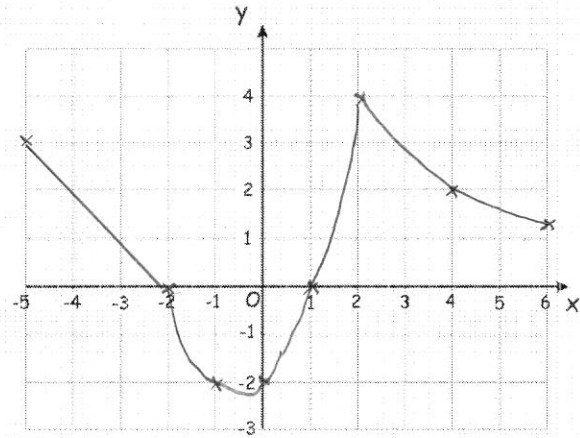
$$x = 3.3, -1.3 \text{ (1 d.p.)}$$

A function $f(x)$ is defined as

$$f(x) = -x - 2 \quad -5 \leq x < -2$$

$$= (x + 2)(x - 1) \quad -2 \leq x \leq 2$$

$$= \frac{8}{x} \quad 2 \leq x \leq 6$$

Draw the graph of $y = f(x)$ Work out the matrix that transforms the unit square by a 90° clockwise rotation about O

$$(1, 0) \rightarrow (0, -1)$$

$$(0, 1) \rightarrow (1, 0)$$

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

Given that

$$(ax + b)(x + 5)(x + c) \equiv 3x^3 - 5x^2 - 88x + 60$$

where a , b and c are integers.Find the values of a , b and c

$$3x^3 - 5x^2 - 88x + 60$$

$$= (x + 5)(3x^2 - 20x + 12)$$

$$= (x + 5)(x - b)(3x - 2)$$

$$a = 3 \quad b = -2 \quad c = -b$$