

STEP/Polynomials Q6 (26/6/23)

How many solutions are there to $x^3 - 6x^2 + 9x + 2 = 0$?

Solution

$$\Leftrightarrow x(x^2 - 6x + 9) = -2$$

$$\Leftrightarrow x(x - 3)^2 = -2$$

So one solution, from graph of $y = x(x - 3)^2$