

MHF 4UI
Unit 1 Polynomials
Day 5 - Solving Polynomial Equations (2.5)

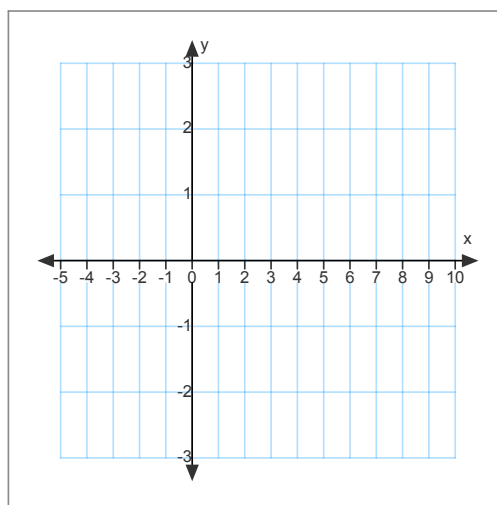
Solving Polynomial Equations

The solutions of polynomial equations are the zeros or the roots of the equation. Graphically this is where the graph crosses the x axis.

Example 1: Solve the following:

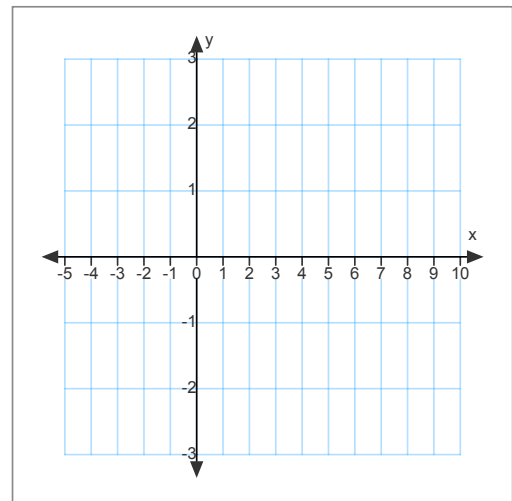
a) $3x^3 - 10x^2 + 3x = 0$

$$y = 3x^3 - 10x^2 + 3x$$



b) $9x^3 + 18x^2 - 4x - 8 = 0$

$$y = 9x^3 + 18x^2 - 4x - 8$$



c) $x^3 + 4x - 5 = 0$

$$y = x^3 + 4x - 5$$

Example 2: The height, length and width of a small box are consecutive integers with the height being the smallest of the 3 dimensions. If the length and width are increased by 1 cm each and the height is doubled, the volume is increased by 120 cm^3 . Find the original dimensions.