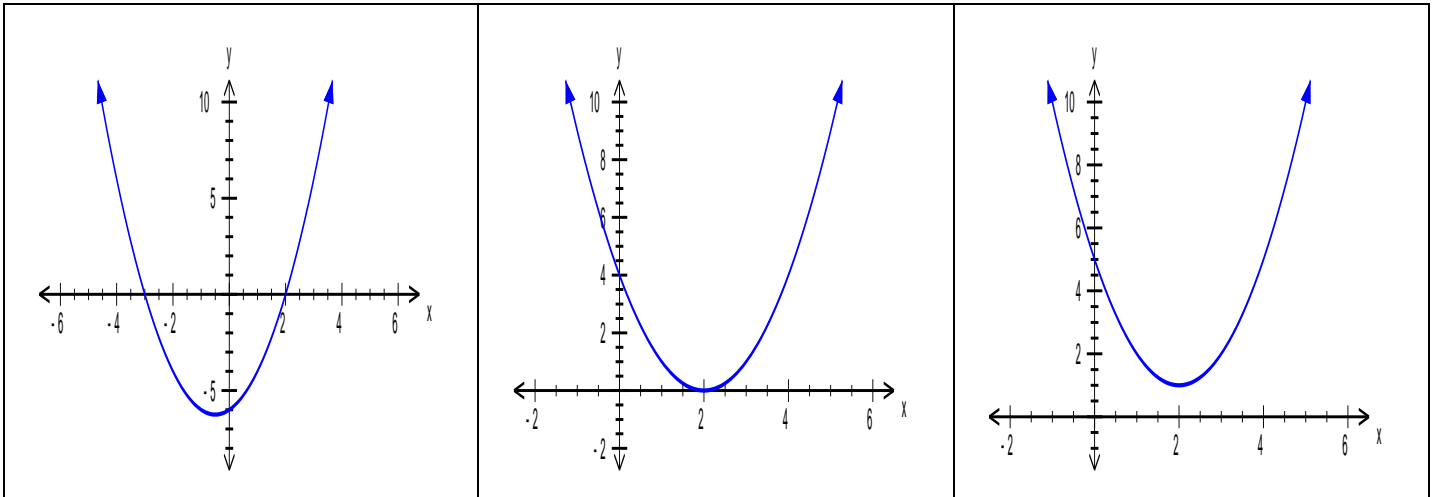


Quadratic Function 1

Note

- 1 Linear Functions contain x to the power of 1 e.g. $f(x) = 2x + 1$ or $y = 2x + 1$
- 2 Quadratic Functions contain x to the power of 2 e.g. $g(x) = x^2 + 2x + 1$ or $y = x^2 + 2x + 1$
- 3 Cubic Functions contain x to the power of 3 e.g. $h(x) = x^3 + 3x^2 + 2x + 1$

If we look at the graphs of various quadratic functions we see that they may cross the x -axis in two places, one place or not at all. These points are called the roots of the function. (Found on the casio classpad as ROOT)



These roots may be found by using the classpad or by factorising or by using a formula.

If the quadratic is in the form of an equation, then we can solve it in the same way.

e.g. $x^2 - 4x - 12 = 0$ may be factorised giving $(x - 6)(x + 2) = 0$ Then $x = 6$ or -2

Note that a quadratic function may be written in different ways. See below.

Note it is the SAME graph as the function is the same but expressed in three different ways.

