# Plotting Quadratic Graphs 1

Here is the graph **y = x² + 2x + 3**

Notice that it has a line of symmetry which has been plotted as a dotted line.

Using Geogebra, plot other graphs in the form **y = x² + bx + c**



What effect does b have on the graph?

What effect does c have on the graph?

Can you work out the equation of the line of symmetry from the equation?

Now go to Geogebra file ***Copy My Graph 1*** and make each of the graphs.

Put the equations to the five graphs here

1. Qu1
2. Qu2
3. Qu3
4. Qu4
5. Qu5

Complete the square for this quadratic expression

x² + 4x + 1

Go to ***Completing the square form of parabolas***

Once you have understood what is going on go to Geogebra file ***Copy My Graph 2*** and make each of the graphs.

Put the equations to the five graphs here

1. Qu1
2. Qu2
3. Qu3
4. Qu4
5. Qu5