

# Quadratic Equations



**i. Factorise the following quadratic expressions:**

- $x^2 + 4x + 4$
- $x^2 + 8x + 15$
- $x^2 + 9x + 14$
- $x^2 + 16x + 60$
- $x^2 + 2x - 3$
- $x^2 - 15x + 42$
- $x^2 - 100$
- $4x^2 - 14x - 8$

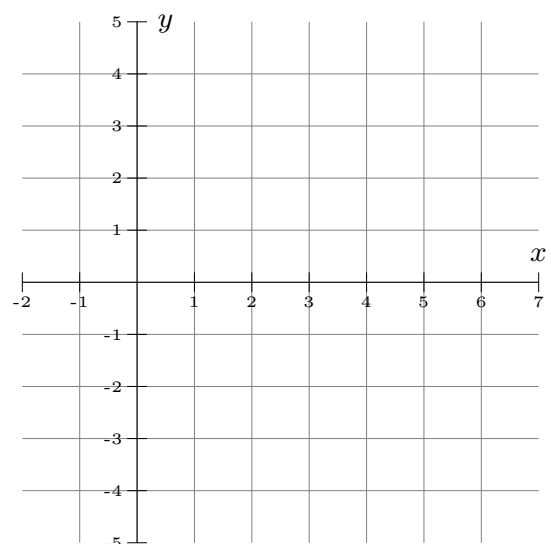
**ii. Expand the following quadratic expressions:**

- $x(x - 8)$
- $(x + 1)(x + 1)$
- $(x - 1)(x + 4)$
- $(x + 6)(x - 3)$
- $(2x - 7)(x - 9)$
- $(x - 5)(x + 5)$

**iii. Complete the table of values for  $y = x^2 - 6x + 5$ , then draw the graph of  $y = x^2 - 6x + 5$  for values of  $x$  from 0 to 8 on the grid below.**

$$y = x^2 - 6x + 5$$

$x$	0	1	2	3	4	5	6
$y$					-3		



- Using the graph, solve the equation  $x^2 - 6x + 5 = 0$
- Using the graph, find the co-ordinates of the turning point of  $y = x^2 - 6x + 5$