

## Quadratic Sketching 2

Understanding quadratics fully is essential for GCSE and C1 and beyond. Sketch the following quadratic curves, labelling the coordinates of the turning points and where the curve crosses both the  $x$  and  $y$ -axes.

1.  $y = (x - 3)(x + 4)$ .

2.  $y = (x + 1)^2 - 4$ .

3.  $y = x^2 + 3x - 4$ .

4.  $y = (2x - 1)(x + 5)$ .

5.  $y + 9 = x^2$ .

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

7.  $y = 2x^2 - 8x + 8$ .

8.  $y + x^2 = 2x + 35$ .

9.  $y = (-x + 3)^2 - 16$ .

10.  $y = (2 - x)^2 + 2$ .

11.  $y = -x^2 + 2x + 8$ .

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

13.  $y = x^2 + 5x + 5$ .

14.  $y = 2x^2 - 10x - 3$ .

15.  $y = 5x^2 + 15x - 4$ .

16.  $y = x^2 - 6x + 11$ .

17.  $y = -3x^2 - 12x + 15$ .

18.  $y = -x^2 + 3x - 5$ .