

Worksheet 1.4: Sketching and Interpreting Quadratic Graphs

Instructions:

For each question below, sketch the quadratic graph by:

- Finding the roots (x-intercepts)
- Determining the axis of symmetry and the turning point (vertex)
- Indicating whether the graph opens upwards or downwards

Leave clear space below each question for your graph sketch and working.

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

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

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

4. $y = 2x^2 - 8x + 6$

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

6. $y = x^2 + 6x + 9$

7. $y = -2x^2 + 4x + 6$

8. $y = x^2 - 1$