Practice worksheet | Quadratics and Parabolas

Roots, intercepts, symmetry and turning points

Name: _____ Date: _____

6 questions | 19 marks

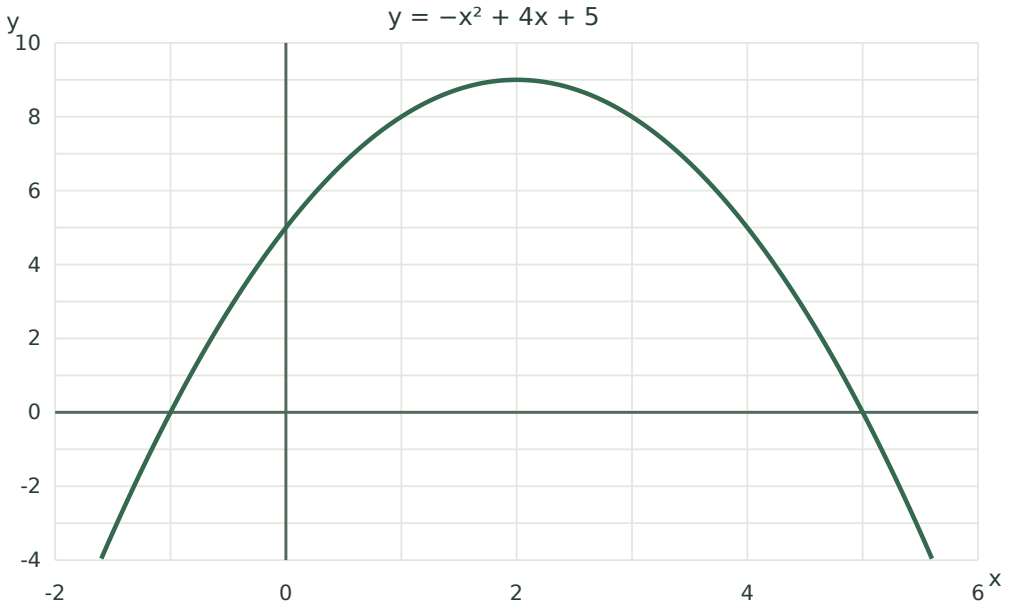
1. State the vertex, axis and minimum of $y = (x - 4)^2 + 2$. [2 marks]

2. Find the roots and y-intercept of $y = (x + 2)(x - 6)$. [3 marks]

3. Find the vertex of $y = x^2 - 2x - 8$. [2 marks]

4. Find all intercepts and the vertex of $y = 2(x - 1)^2 - 8$. [4 marks]

5. The graph shown is $y = -x^2 + 4x + 5$. State its roots, axis and maximum. [4 marks]



6. A ball has height $h = -t^2 + 2t + 3$ metres for times from launch until it first reaches the ground. Find the greatest height and the landing time. [4 marks]