Practice worksheet | Quadratics and Parabolas

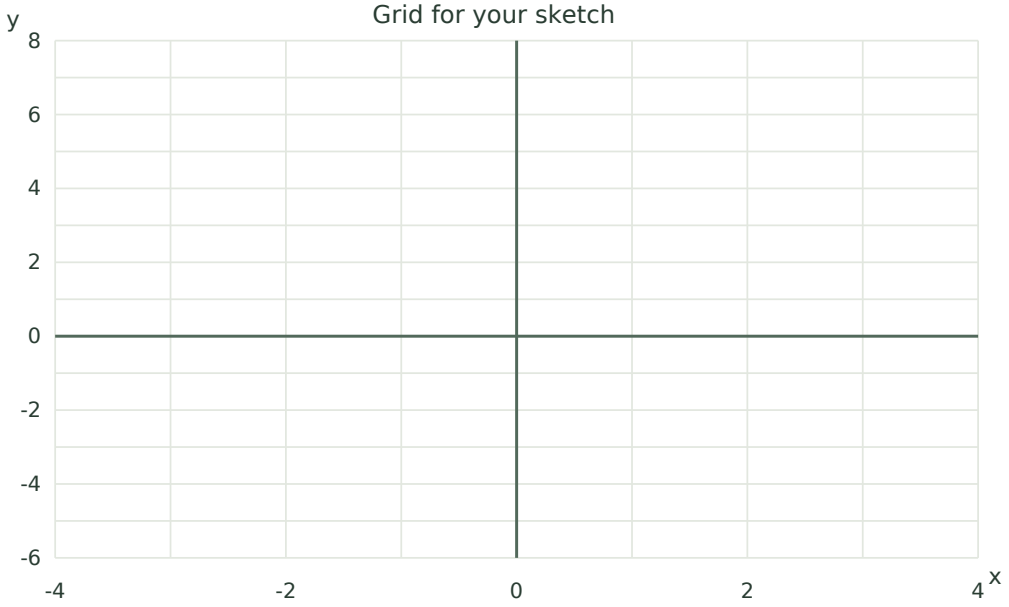
Sketching by hand and with graphing tools

Name: _____ Date: _____

6 questions | 17 marks

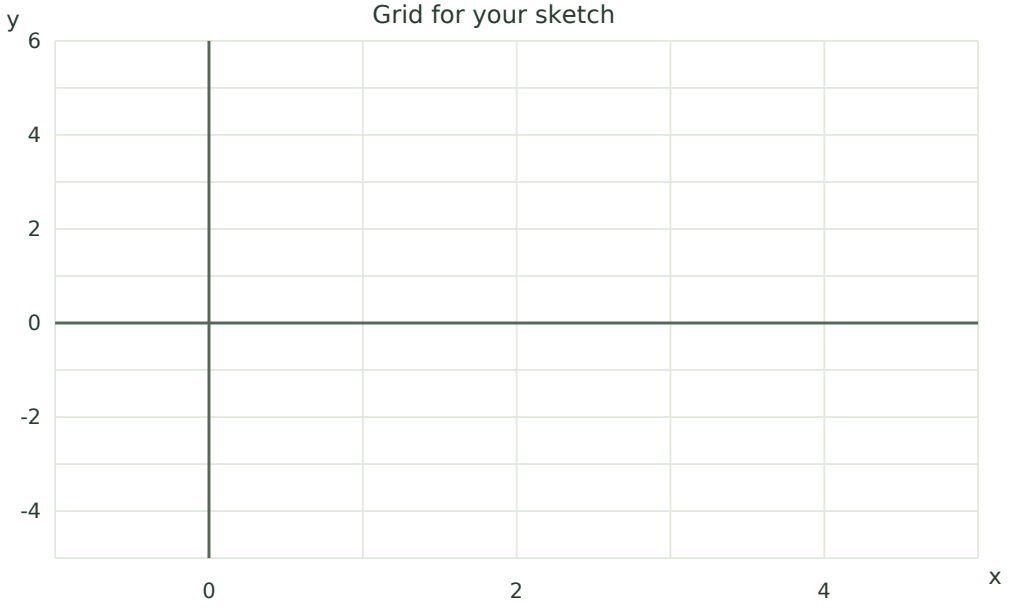
1. Sketch $y = x^2 - 4$. Label the vertex and all intercepts. [3 marks]

Grid for your sketch



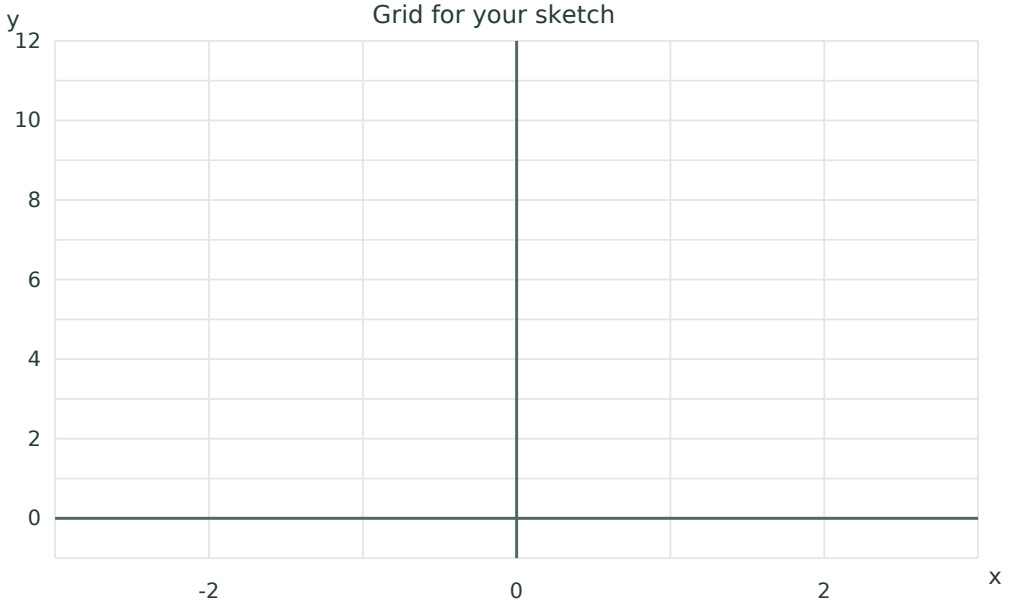
2. Sketch $y = -(x-2)^2 + 4$. Label the vertex and all intercepts. [3 marks]

Grid for your sketch



3. Sketch $y = x^2 + 2$. Explain why there are no x-intercepts. [3 marks]

Grid for your sketch



4. Describe how to obtain $y = -x^2 + 3$ from $y = x^2$, then state the vertex. [2 marks]

5. The table is intended for $y = x^2 - 2x - 3$. Identify the incorrect entry and correct it. [3 marks]

One y-value is incorrect.

x	−1	0	1	2	3
y	0	−3	−4	−1	0

6. A tool uses $-5 \le x \le 5$ to graph $y = x^2 - 10x + 16$ and shows only one root. Find both roots and suggest a better horizontal window. [3 marks]