Worksheet | Quadratics & Parabolas

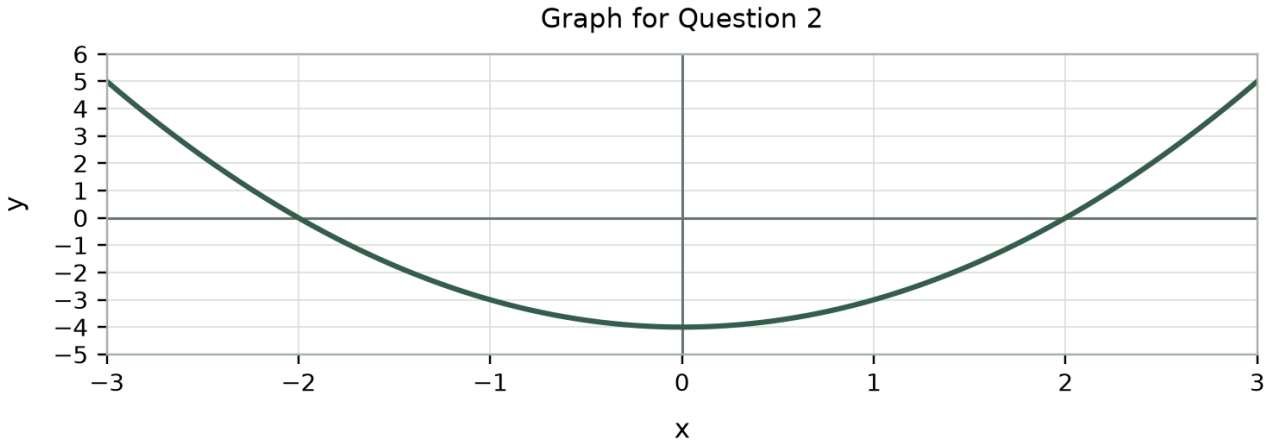
Graphing parabolas

Name: _____ Date: _____

6 questions | 21 marks

1. For $y = x^2 - 4$, calculate y for $x = -3, -2, -1, 0, 1, 2, 3$. Write the ordered pairs. [3 marks]

2. Use the graph of $y = x^2 - 4$ supplied with this worksheet. [4 marks]



(a) State the turning point.

(b) State the x-intercepts.

(c) Write the axis of symmetry.

3. For $y = (x-2)^2 - 9$: [4 marks]

(a) State the turning point and whether the graph opens up or down.

(b) Find the roots.

4. For $y = -x^2 + 9$: [4 marks]

(a) State the highest point.

(b) Find both roots.

(c) State whether its turning point is a maximum or minimum.

5. Compare $y = x^2$ and $y = 2x^2$. [3 marks]

(a) Find the y value on each graph when $x = 1$.

(b) Which graph is narrower?

6. Compare $y = x^2 + 3$ and $y = x^2 - 2$. [3 marks]

(a) How far above the second graph is the first graph?

(b) Do they have the same axis of symmetry? Give its equation.