Solutions

Marking: **M1** a correct method, **A1** the correct answer, **B1** an independent mark.

Each answer shows the steps, then the **result**.

2.1

- $\mathbf{-4}, \mathbf{-1}, \mathbf{2}, \mathbf{5}$

2.2

- $(-3)^2 + 1 = \mathbf{10}$; $2^2 + 1 = \mathbf{5}$

2.3

- $3^2 - 2 = 7$, so **yes**

2.4

- $\mathbf{-3}, \mathbf{4}, \mathbf{2}$
- $12 \div 0$ has no value, so the graph never meets the y-axis

2.5

- $\mathbf{y = 5}$

3.1

(a)

- $\mathbf{y = 4}$

(b)

- $4^2 - 3(4) = 16 - 12 = 4$

3.2

(a)

- $\mathbf{1}, \mathbf{-2}, \mathbf{-3}, \mathbf{-2}, \mathbf{1}$

(b)

- five points plotted
- a smooth U-shaped curve through them

(c)

- $\mathbf{x \approx 0.3}$
- $\mathbf{x \approx 3.7}$

3.3

(a)

- $(\mathbf{2}, \mathbf{4})$
- $(\mathbf{-4}, \mathbf{-2})$

(b)

- $\dfrac{\mathbf{8}}{\mathbf{x}} = \mathbf{x + 2}$

(c)

- on the y-axis $x = 0$, and $8 \div 0$ has no value