Solutions

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

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

2.1

- $\mathbf{-3}$

2.2

- $\mathbf{y = 4x + 7}$: the same gradient 4

2.3

- $\mathbf{y = 5x - 2}$

2.4

- $y = 2x + \frac{1}{3}$ has gradient 2: **yes**

2.5

- $7 = 2 + c$
- $\mathbf{y = x + 5}$

3.1

- $2y = 6x - 5$ gives $y = 3x - 2.5$
- $\mathbf{y = 3x + 2}$ and $\mathbf{2y = 6x - 5}$: both have gradient 3

3.2

- gradient $\frac{1}{2}$
- $1 = \frac{1}{2}(6) + c$, so $c = -2$
- $\mathbf{y = \frac{1}{2}x - 2}$

3.3

(a)

- $1 = 2(4) + c$, so $c = -7$
- $\mathbf{y = 2x - 7}$

(b)

- $2x - 7 = 0$, $\mathbf{x = 3.5}$

(c)

- on the horizontal line $y = 1$: $2x + 1 = 1$, so $x = 0$
- $\mathbf{Q(0, 1)}$

(d)

- $4 - 0 = \mathbf{4}$ units