Solutions

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

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

2.1

- divide top and bottom by 12: $\frac{\mathbf{2}}{\mathbf{3}}$

2.2

- $\frac{2\times5+2}{5} = \frac{\mathbf{12}}{\mathbf{5}}$
- $\mathbf{2.4}$

2.3

- $\frac{32}{100} = \frac{\mathbf{8}}{\mathbf{25}}$
- $\mathbf{32}\%$

2.4

- $7 \div 8 = \mathbf{0.875}$
- $\mathbf{87.5}\%$

2.5

- $56 \div 4 \times 3 = \mathbf{42}$

3.1

- decimals: 0.625, 0.61, 0.63, 0.6
- $\frac{\mathbf{3}}{\mathbf{5}},\ \mathbf{0.61},\ \frac{\mathbf{5}}{\mathbf{8}},\ \mathbf{63}\%$

3.2

- $\frac{2}{5} = 40\%$
- cycle $= 100\% - 40\% - 30\% = \mathbf{30}\%$
- 30% of $30 = \mathbf{9}$ students

3.3

(a)

- $\dfrac{0.225}{1.5} = \dfrac{225}{1500}$
- $= \frac{\mathbf{3}}{\mathbf{20}}$
- $= \mathbf{15}\%$

(b)

- six servings $= 6 \times \frac{3}{20} = \frac{18}{20}$
- remaining $= 1 - \frac{18}{20} = \frac{\mathbf{1}}{\mathbf{10}}$
- $\frac{1}{10} \times 1.5 = \mathbf{0.15}$ litres

3.4

(a)

- first: $\frac{42}{50} = \mathbf{84}\%$
- second: $\frac{43}{50} = \mathbf{86}\%$

(b)

- the scores differ by $86 - 84 = 2$ points on the percentage scale; a 2% increase of 84% would be only 1.68 points