Solutions

2.1

(a) $3.6 \times 1000 = \mathbf{3600}$ m

(b) $450 \div 1000 = \mathbf{0.45}$ kg

2.2

- $2.5 \times 1000 = \mathbf{2500}$ ml

2.3

- $1\ \text{m}^2 = 10\,000\ \text{cm}^2$
- $3 \times 10\,000 = \mathbf{30\,000}\ \text{cm}^2$

2.4

- $1000\ \text{cm}^3 = 1$ litre
- $45\,000 \div 1000 = \mathbf{45}$ litres

2.5

- 0.4 h $= 0.4 \times 60 = 24$ min
- **2 hours 24 minutes**

2.6

- $1\ \text{m}^3 = 1\,000\,000\ \text{cm}^3$
- $0.08 \times 1\,000\,000 = \mathbf{80\,000}\ \text{cm}^3$

3.1

- same units: 1.5 kg $= 1500$ g, and $1500 \div 350 = 4.28\ldots$
- only whole cakes count: **4 cakes**

3.2

- a square metre is 100 cm **by** 100 cm
- so $1\ \text{m}^2 = 100 \times 100 = 10\,000\ \text{cm}^2$; Ali multiplied by 100 only once

3.3

- same units: 4.8 m $= 480$ cm
- tiles along each side: $480 \div 40 = 12$ and $320 \div 40 = 8$
- $12 \times 8 = \mathbf{96}$ tiles

3.4

- height of water: $\frac{3}{4} \times 40$ cm $= 30$ cm, since 0.4 m $= 40$ cm
- $V = 60 \times 30 \times 30 = 54\,000\ \text{cm}^3$
- $54\,000 \div 1000 = \mathbf{54}$ litres

3.5

- $18\ \text{m}^3 = 18 \times 1000 = 18\,000$ litres
- time $= 18\,000 \div 12 = 1500$ minutes
- $1500 \div 60 = \mathbf{25}$ hours