

Solutions

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

2.1

- $6 \times 10 = 60$ L

2.2

- $\int_0^4 2t \, dt = [t^2]_0^4 = 16$ L

2.3

- $20 + 16 = 36$ L

3.1 B

- (litres/hour) $\times$ hours = litres

3.2

(a)

- $\int_0^6 (40 + 10t) \, dt = [40t + 5t^2]_0^6 = 240 + 180 = 420$

(b)

- megawatt-hours

3.3

(a)

- $500 + \int_0^5 (30 - 6t) \, dt$

(b)

- $[30t - 3t^2]_0^5 = 150 - 75 = 75$; total $500 + 75 = 575$ m³