

Multiple Choice Answers

Q1: D

Q3: B

Multiple Choice Answers

Q1: A

Multiple Choice Answers

Q1: A

1(a)(i)	scalar has magnitude (size) <u>only</u> OR vector has (magnitude and) direction
1(a)(ii)	mass, energy and temperature all correct and no additional quantities 2 marks 2 correct and no additional quantities 1 mark
1(b)(i)	decrease in kinetic energy = increase in gravitational (potential) energy OR $\frac{1}{2}mv^2 = mg(\Delta)h$ $v^2 = 2gh$ OR $v^2 = 2 \times 9.8 \times 5.0$ OR $v^2 = 98$ $v = \sqrt{98}$ OR 9.899
1(b)(ii)	0.57 kg m / s (upwards) OR 0.57 Ns (upwards) (momentum =) mv OR $5.8 \times 10^{-2} \times 9.9$

1(a)	(only) acceleration AND velocity circled
1(b)(i)	56 m / s braille: 55 m / s
1(b)(ii)	accelerates OR speed increases AND (then) constant speed AND (then) decelerates OR speed decreases <u>constant</u> acceleration OR <u>constant</u> deceleration
1(b)(iii)	26 000 m OR 26 km braille: 26 125 m (distance =) area under the speed–time graph OR (distance =) <u>average</u> speed $\times$ time taken $0.5 \times 80 \times 56$ AND 56×400 AND $0.5 \times 50 \times 56$ OR $\frac{1}{2} \times \{400 + 530\} \times 56$ braille: $0.5 \times 100 \times 55$ AND 55×400 AND $0.5 \times 50 \times 55$ OR $\frac{1}{2} \times \{400 + 550\} \times 55$
1(b)(iv)	any one from: - lower acceleration OR less acceleration - lower deceleration OR less deceleration - lower maximum speed OR lower average speed OR lower constant speed

Multiple Choice Answers

Q1: A

Multiple Choice Answers

Q1: D