

Question Number	Answer	Mark
11(a)	Use of $E_k = \frac{1}{2} m v^2$ (1) $E_k = 0.54 \text{ J}$ (1) <u>Example of calculation</u> $E_k = 0.5 \times 0.16 \text{ kg} \times (2.6 \text{ m s}^{-1})^2 = 0.541 \text{ J}$	2
11(b)	Use of $E_{\text{grav}} = m g \Delta h$ (1) $\Delta h = 0.51 \text{ m}$ (1) (allow ecf from (a)) <u>Example of calculation</u> Decrease in GPE = $0.54 \text{ J} + 0.26 \text{ J} = 0.8 \text{ J}$ $\Delta h = 0.8 \text{ J} / (0.16 \text{ kg} \times 9.81 \text{ m s}^{-2}) = 0.51 \text{ m}$	2
	Total for question 11	4