

$$c. KE = \frac{1}{2} mv^2$$

$$1.8 = 0.5 \times 0.1 \times v^2 \quad (100g = 0.1 \text{ kg})$$

$$1.8 = 0.05 \times v^2$$

$$v^2 = 1.8 / 0.05$$

$$v^2 = 180 / 5$$

$$v = \sqrt{36}$$

$$= 6 \text{ m/s}$$

$$d. KE = PE, \text{ at the top}$$

$$= mgh$$

$$= 0.1 \times 10 \times 1.25$$

$$= 1.25 \text{ J}$$

$$e. KE = \frac{1}{2} mv^2$$

$$1.25 = \frac{1}{2} \times 0.1 \times v^2 \quad (100g = 0.1 \text{ kg})$$

$$1.25 = 0.05 \times v^2$$

$$1.25 = 0.05 v^2$$

$$v^2 = 1.25 / 0.05$$

$$v^2 = 25$$

$$v = \sqrt{25}$$

$$v = 5 \text{ m/s}$$

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