

- 1 A train of mass 600 000 kg moves with a speed of 100 km h^{-1} .

What is the order of magnitude of the kinetic energy of the train?

- A 10^6 J B 10^8 J C 10^{10} J D 10^{12} J

- 2 What are the SI base units of electromotive force (e.m.f.)?

- A $\text{kg m}^2 \text{ s}^{-1} \text{ A}^{-1}$
B $\text{kg m}^2 \text{ s}^{-3} \text{ A}^{-1}$
C $\text{kg m}^2 \text{ s}^{-1} \text{ A}$
D $\text{kg m s}^{-3} \text{ A}^{-1}$

- 3 A digital meter is used to measure the current in an electric circuit.

The reading on the meter fluctuates (varies) between 3.04 A and 3.08 A. The readings on the meter have an accuracy of $\pm 1\%$.

What is the true value of the current, with its uncertainty?

- A $(3.06 \pm 0.02) \text{ A}$
B $(3.06 \pm 0.04) \text{ A}$
C $(3.06 \pm 0.05) \text{ A}$
D $(3.06 \pm 0.07) \text{ A}$

- 4 Which quantity is a vector quantity?

- A density
B mass
C volume
D weight