1 When a force F moves its point of application through a displacement s in the direction of the force, the work W done by the force is given by

$$W = Fs.$$

How many vector quantities and scalar quantities does this equation contain?

A one scalar quantity and two vector quantities

B one vector quantity and two scalar quantities

C three scalar quantities

D three vector quantities

2 What is a possible unit for the product VI, where V is the potential difference across a resistor and I is the current through the same resistor?

A newton per second ($\mathrm{N\,s^{-1}}$)

B newton second ($\mathrm{N\,s}$)

C newton metre ($\mathrm{N\,m}$)

D newton metre per second ($\mathrm{N\,m\,s^{-1}}$)

3 What is a reasonable estimate of the average kinetic energy of an athlete during a 100 m race that takes 10 s?

A 40 J **B** 400 J **C** 4000 J **D** 40 000 J

Space for working