15 A solid wooden cube rests on a horizontal surface.

What gives the pressure exerted by the weight of the cube on the horizontal surface?

A the product of the acceleration of free fall and the density of the cube

B the product of the acceleration of free fall, the density and the side length of the cube

C the product of the acceleration of free fall, the density and the area of one face of the cube

D the product of the acceleration of free fall, the density and the volume of the cube

16 Which expression could be used to calculate power?

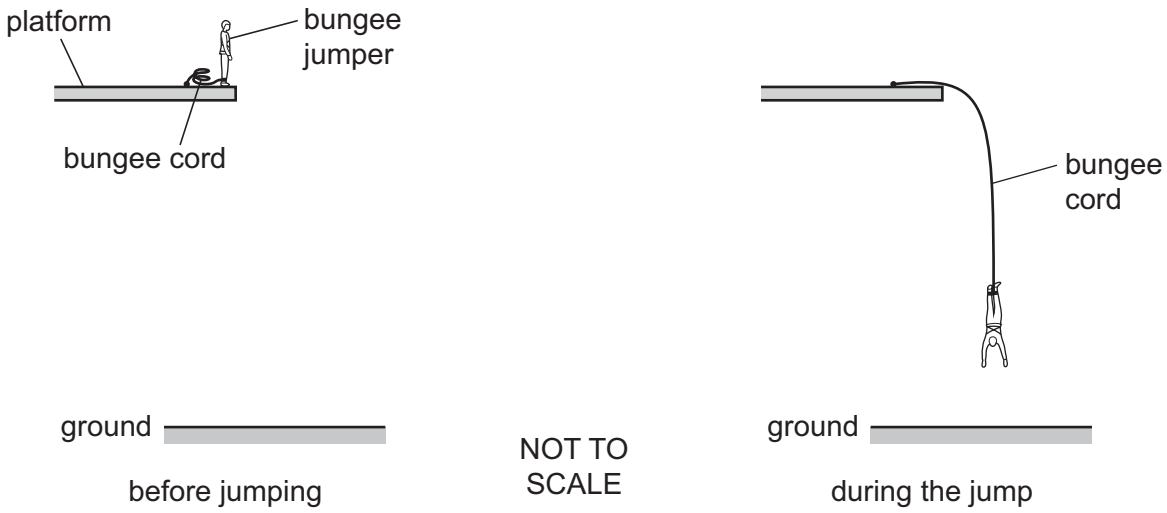
A $\frac{(\text{current})^2}{\text{resistance}}$

B $\frac{\text{force} \times \text{displacement}}{\text{time}}$

C $\text{current} \times (\text{resistance})^2$

D $\frac{\text{weight}}{\text{time}}$

17 A bungee jumper jumps from a platform and is decelerated by an elastic bungee cord, as shown.



When the jumper makes the jump, his initial gravitational potential energy is converted into his kinetic energy and into elastic potential energy in the cord.

At which part of the jump are all three types of energy non-zero?

A on the platform before the jump

B on the way down before the cord has started to extend

C on the way down as he decelerates

D at the bottom of the jump when he is stationary