

- 7 A rock of mass 0.80 kg is projected horizontally with a speed of  $1.2 \text{ m s}^{-1}$  from the top of a hill. The rock falls through a vertical distance of 10 m before hitting the ground with a speed of  $4.0 \text{ m s}^{-1}$ .

What is the energy lost by the rock to the surroundings during its fall?

A 5.7 J

B 39 J

C 73 J

D 79 J