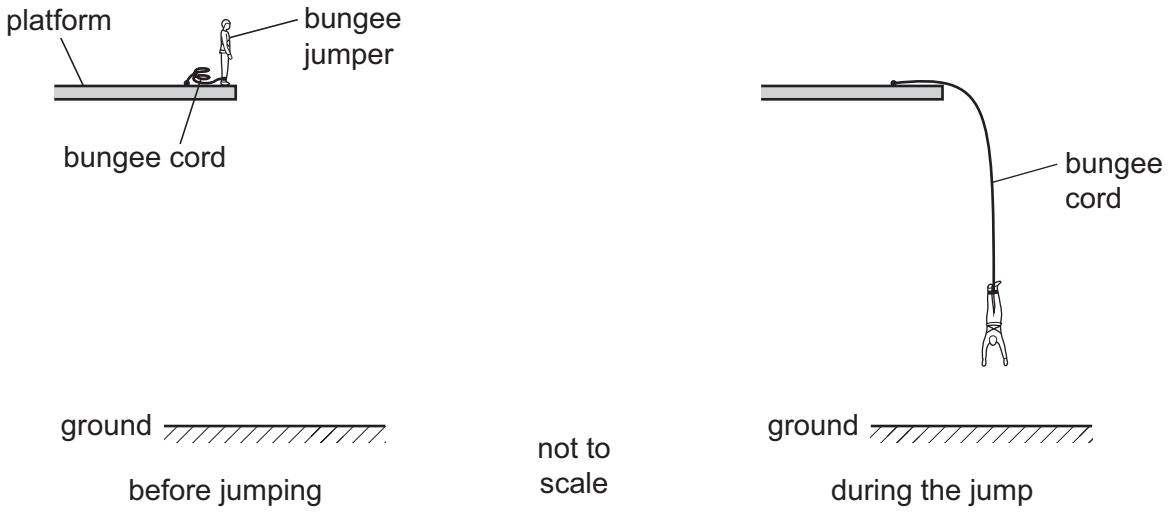
16 A bungee jumper jumps from a platform and is decelerated by an elastic bungee cord, as shown.



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

17 An object of mass 0.30 kg is thrown vertically upwards from the ground with an initial velocity of 8.0 m s^{-1}. The object reaches a maximum height of 1.9 m.

How much work is done against air resistance as the object rises to its maximum height?

A 4.0 J **B** 5.6 J **C** 9.6 J **D** 15 J

18 A racing car has an output power of 300 kW when travelling at a constant speed of 60 m s^{-1}.

What is the total resistive force acting on the car?

A 5 kN **B** 10 kN **C** 50 kN **D** 100 kN