

***15** In a bungee jump, the bungee jumper falls from a high platform while attached to an elastic cord. The cord is also attached to the platform.

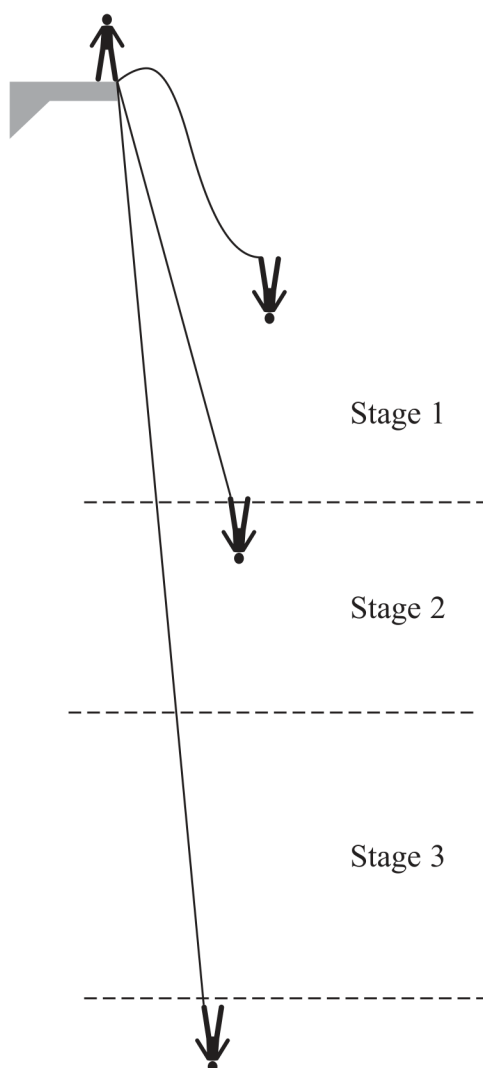
The cord slows the bungee jumper down, so that he comes to rest before reaching the ground.

The fall can be divided into three stages:

Stage 1 – the jumper is in free fall until the cord starts to stretch.

Stage 2 – the cord is stretching until the acceleration of the jumper decreases to zero.

Stage 3 – the cord continues to stretch until the jumper is momentarily at rest.



Explain, in terms of work done, how the kinetic energy of the bungee jumper changes during the three stages of the fall.

(6)

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