

3 Fig. 3.1 shows a side view of part of a concrete track at a skateboard park.

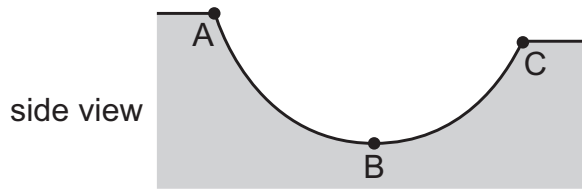


Fig. 3.1

- (a) A skateboarder is initially at rest at point A. The skateboarder then travels through point B and comes to rest at point C.

Describe the transfer of energy as the skateboarder travels from A to B to C along the concrete track.

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- (b) (i) B is at ground level and C is at 2.8 m above ground level. The mass of the skateboarder is 65 kg.

Calculate the work done on the skateboarder as she travels from B to C.

work done = [2]

- (ii) The skateboarder falls off the skateboard at B. She hits the track and comes to rest after a few milliseconds.

State the equation that defines the force F with which the skateboarder hits the track. State the meaning of any symbols you use.

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