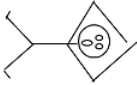


I-124

To practice falling, a 55 kg pole-vaulter falls off of a wall 6.0 m above a 2.0 m thick foam cushion resting on the ground. However, he misses the cushion. The pole-vaulter sinks about 0.10 m into the ground before stopping.

- a. What is the speed of the pole-vaulter when he hits the ground?

Free-Body Diagram



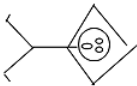
Mathematical Analysis

Event 1:

Event 2:

- b. What is the force exerted on the pole-vaulter by the ground as he comes to rest?

Free-Body Diagram



Mathematical Analysis

Event 1:

Event 2:

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