

I-122

A 100 kg man concerned about his weight decides to weigh himself in an elevator. He stands on a bathroom scale in an elevator that is moving upward at 3.0 m/s. As the elevator reaches his floor, it slows to a stop.

a. If the elevator slows to a stop over a distance of 2.0 m, what is the reading on the bathroom scale?

Free-Body Diagram



Mathematical Analysis

Event 1:

Event 2:

b. If the elevator slows to a stop in 1.5 s, what is the reading on the bathroom scale?

Free-Body Diagram



Mathematical Analysis

Event 1:

Event 2:

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