

## I-84

To practice falling, a 55 kg pole-vaulter falls off of a wall 6.0 m above a foam cushion. The pole-vaulter sinks about 1.4 m into the cushion before stopping.

### Motion Diagram

### Motion Information

#### Free-Body Diagrams



Event 1:

Event 2:

Event 3:

*before hitting cushion*

$t_1 =$

$t_2 =$

$t_3 =$

$r_1 =$

$r_2 =$

$r_3 =$

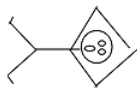
$v_1 =$

$v_2 =$

$v_3 =$

$a_{12} =$

$a_{23} =$



*after hitting cushion*



### Mathematical Analysis

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