

Question#19337

an object falls freely from rest for 5 seconds. Find the distance travelled in the last 2 seconds.
($g=9.8\text{m/s}^2$)

Solution:

The distance is:

$H=H_0-H_1$, where H_0 – full distance travelled from 5 sec, H_1 – distance travelled at first 3 sec

$H=gt_0^2/2-gt_1^2/2$, where $t_0=5$ sec., $t_1=3$ sec,

$$H=9.8*5^2/2 - 9.8*3^2/2=78.4 \text{ m}$$

Answer: 78.4 m.