

**Answer on Question #60670-Physics-Other**

Omar kicks a ball from a level field, at an initial velocity of 29.4 m/s at an initial angle of 30 with respect to the horizontal. The ball is in its trajectory for a total time of 3 s before it hits the ground. What is the ball's net (total) vertical displacement during its 3-s trajectory?

**Solution**

The ball's net (total) vertical displacement during its 3-s trajectory is

$$\Delta d_y = d_{fy} - d_{iy} = 0.$$

**Answer: zero.**

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