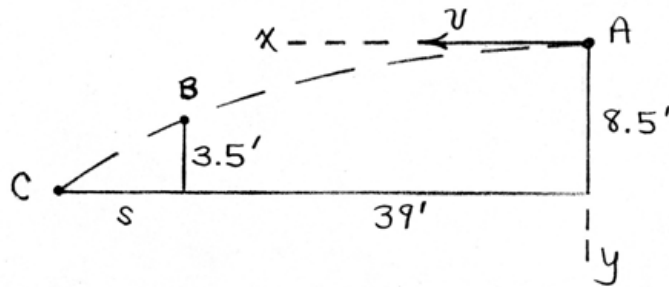


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$$a_x = 0 : x = v_{x_0} t, \quad 39 = v t_B$$

$$a_y = g : y = v_{y_0} t + \frac{1}{2} g t^2$$

$$\text{At B : } 8.5 - 3.5 = 0 + \frac{1}{2} 32.2 t_B^2, \quad t_B = 0.557 \text{ sec}$$

$$\text{Then } v = \frac{39}{t_B} = \frac{39}{0.557} = 70.0 \text{ ft/sec} \\ \underline{(47.7 \text{ mi/hr})}$$

$$\text{At C : } 8.5 = \frac{1}{2} (32.2) t_c^2, \quad t_c = 0.727 \text{ sec}$$

$$s + 39 = 70.0 (0.727), \quad \underline{s = 11.85 \text{ ft}}$$