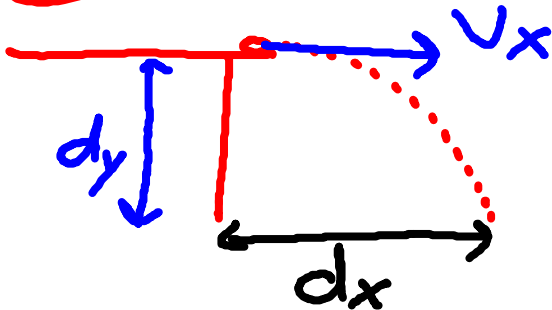


Target Lab – Class Calculation

$$\textcircled{1} \quad t_{\text{avg}} = \frac{t_1 + t_2 + t_3}{3} = 1.04 \text{ s}$$

$$v = \frac{d}{t} = \frac{(1 \text{ m})}{(1.04 \text{ s})} = \underline{0.96 \text{ m/s}}$$

$\textcircled{2}$



horiz	vert.
$v_x = 0.96 \text{ m/s}$	$d_y = 0.77 \text{ m}$
$d_x = ?$	$v_{iy} = 0 \text{ m/s}$
$v = \frac{d}{t}$	$a = 9.8 \text{ m/s}^2$
$t = .396 \text{ s}$	$t = ? = .396 \text{ s}$

$$\frac{2d}{a} = \sqrt{v_x^2 t^2 + \left(\frac{1}{2} a t^2\right)^2}$$

$$\sqrt{\frac{2d}{a}} = \sqrt{t^2} \rightarrow t = \sqrt{\frac{(2)(.77 \text{ m})}{(9.8 \text{ m/s}^2)}}$$

$$\underline{t = 0.396 \text{ s}}$$

$\textcircled{3}$

$$v = \frac{d}{t}$$

$$\rightarrow d_x = v_x(t) = (0.96 \text{ m/s})(.396 \text{ s})$$

$\underline{d_x = 0.38 \text{ m}}$