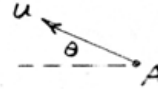


2/69

From Sample Prob. 2/6

$$2s = \frac{u^2 \sin 2\theta}{g} = \frac{2(u \cos \theta)(u \sin \theta)}{g}$$



But $2s = 22 \text{ ft}$, $u \cos \theta = 30 \text{ ft/sec}$, $u \sin \theta = v_y$

$$\text{So } v_y = \frac{2sg}{2u \cos \theta} = \frac{22(32.2)}{2(30)} = 11.81 \text{ ft/sec}$$

$$\text{Also, } h = \frac{u^2 \sin^2 \theta}{2g} = \frac{v_y^2}{2g} = \frac{(11.81)^2}{2(32.2)} = 2.16 \text{ ft}$$