

HW3-4 Soln)

This meets the requirements for the range equation.

$$R = \frac{v_o^2 \sin(2\theta_o)}{|a_g|}$$

$$\sin(2\theta_o) = \frac{R|a_g|}{v_o^2} = \frac{150(10)}{60^2} = 0.417$$

$$2\theta_o = \sin^{-1} 0.417 = 24.62^\circ$$

$$\theta_o = \frac{24.62^\circ}{2} = 12.31^\circ$$

Also, the complement of this angle, 77.69° .