



$$v_{oy} = v \cdot \sin \theta$$

$$= (15 \text{ m/s}) \cdot \sin 25^\circ$$

$$v_{oy} = +6.34 \text{ m/s}$$

Let $d_{oy} = 0 \text{ m}$ on top of the building

$$t = 3.0 \text{ sec}$$

$$v_{oy} = +6.34 \text{ m/s}$$

$$a = -9.8 \text{ m/s}^2$$

$$d_y = d_{oy} + v_{oy} \cdot t + \frac{1}{2} \cdot a \cdot t^2$$

$$= 0 \text{ m} + (6.34 \text{ m/s})(3.0 \text{ s}) + \frac{1}{2}(-9.8 \text{ m/s}^2)(3 \text{ s})^2$$

$$d_y = -25.1 \text{ m}$$

So, the height of the building is

$$d_y = 25 \text{ m}$$