

if we catch @ the same
height

$$\Delta y = 0 \quad a = -9.8 \text{ m/s}^2 \quad t = t$$
$$V_i = ?$$

$$\Delta x = V_0 t + \frac{1}{2} a t^2$$

$$0 = V_i t + \frac{1}{2} a t^2$$

$$\frac{-\frac{1}{2} a t^2}{t} = V_i t$$

$$V_i = -\frac{1}{2} a t$$

$$V_i = -\frac{1}{2} (-9.8) t$$

$$V_i = 4.9 t$$

← Hang time
for $\Delta x = 0$