

ASG v2
Ex 9.2 (Ball toss)

$$v_{\text{initial}} = 25 \text{ m/s}$$

- It takes $t = \frac{v_{\text{init}}}{a}$ seconds to reach its peak

$$t = \frac{25 \text{ m/s}}{10 \text{ m/s}^2} = 2.5 \text{ sec}$$

- During this time it ascends $h = \frac{1}{2} a t^2$

$$= \frac{1}{2} (10 \text{ m/s}^2) (2.5)^2$$

$$h = 31 \frac{1}{4} \text{ m}$$

- It takes 5 seconds to fall back into your hand.