3.10. A stone is dropped from the top of a tower takes 5 seconds to reach the ground. Calculate the height of the tower. (take $g = 10 ms^{-2}$)

DATA:-

Initial velocity = 0 ms^{-1}

Time taken = 5 secs

Gravity = g = 10 ms^{-2}

Height = h = ?

SOLUTION:-

$$h = vit + \frac{1}{2} gt^2$$

$$h = (0)(5) + \frac{1}{2}(10)(5)^2$$

$$h = 0 + \frac{1}{2}(10)(25)$$

$$h = \frac{250}{2}$$

$$h = 125 \text{ m}$$