



$$E_p = m \cdot g \cdot h$$
$$E_p = 50 \cdot 9.8 \cdot 30 = 14700 \text{ J}$$

$$E_c = \frac{1}{2} m \cdot v^2$$

$$14700 = \frac{1}{2} \cdot 50 \cdot v^2$$

$$14700 = \frac{50v^2}{2}$$

$$29400 = 50v^2$$

$$v^2 = \frac{29400}{50} = 588$$

$$v = \sqrt{588} = 24.3 \text{ m/s}$$