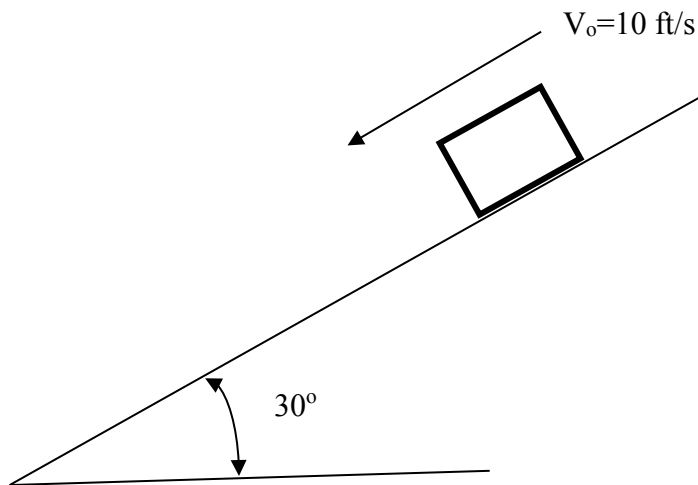


TOPIC

Engineering Mechanics (Statics and Dynamics) – Section VII – Question 16

QUESTION

A 161 lb block travels down a 30° inclined plane with initial velocity of 10 ft/s. The initial kinetic energy of the block, in ft-lbs most nearly is



- (A) 25.00
- (B) 250.0
- (C) 820.6
- (D) 8050

HINT

- Kinetic energy is given by $\frac{1}{2}mv^2$
- Be careful to use mass and not weight!

SOLUTION

$$\begin{aligned}\text{Kinetic Energy} &= \frac{1}{2} \left(\frac{161}{32.2} \right) (10)^2 \\ &= 250 \text{ ft-lbs}\end{aligned}$$

ANSWER

(B)

CONTRIBUTOR

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