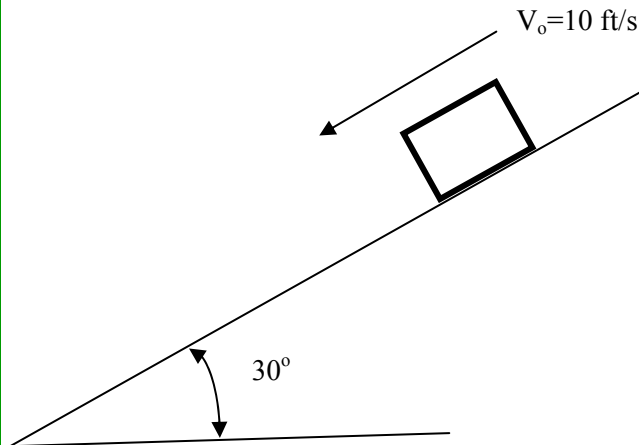


TOPIC

Engineering Mechanics (Statics and Dynamics)

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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This question of the day was provided by the courtesy of Professor Karim Nohra of the University of South Florida from the book Fundamentals of Engineering Examination Sample Questions General Engineering.