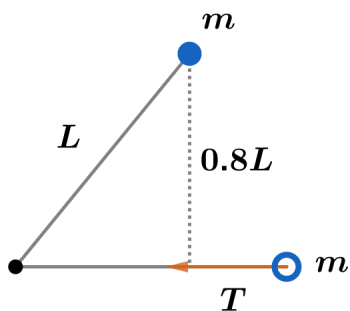


2019A F=ma Exam: Problem 7

Kevin S. Huang



From conservation of energy, when the rod is horizontal, we have

$$mg(0.8L) = \frac{1}{2}mv^2$$

Tension provides the centripetal force so

$$T = \frac{mv^2}{L} = \frac{2mg(0.8L)}{L} = 1.6mg$$

and the answer is B.