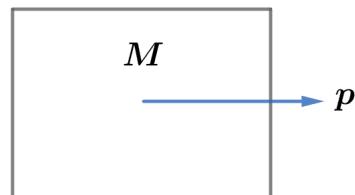


2013 F=ma Exam: Problem 7

Kevin S. Huang



The kinetic energy is given by

$$K = \frac{p^2}{2m} \propto \frac{1}{m}$$

for the same momentum. Since the truck has ten times more mass $M = 10m$,

$$K_{\text{truck}} = \frac{K_{\text{car}}}{10}$$

so the answer is D.