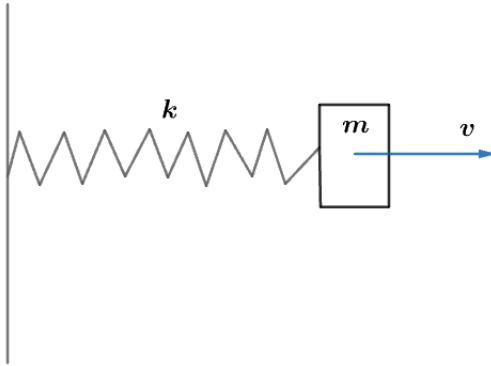


2008 F=ma Exam: Problem 13

Kevin S. Huang



By conservation of energy,

$$\frac{1}{2}mv^2 = \frac{1}{2}kA^2$$

$$A = v\sqrt{\frac{m}{k}}$$

If k is increased by a factor of 2, then A decreases by a factor of $\sqrt{2}$,

$$A' = \frac{A}{\sqrt{2}}$$

so the answer is B.