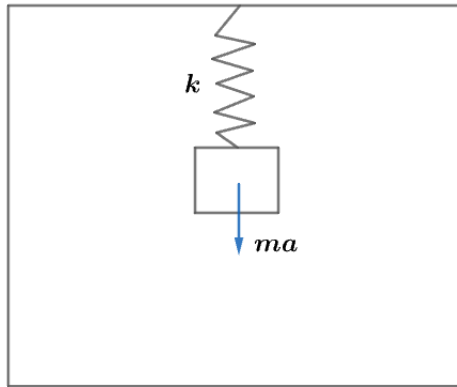


## 2008 F=ma Exam: Problem 17

Kevin S. Huang



We can go to the noninertial box frame by introducing a fictitious  $-m\vec{a}$  force on the mass. This stretches the spring by distance

$$kx = ma$$

$$x = ma/k$$

which is also how much closer the mass moves toward the bottom. Thus, the answer is E.