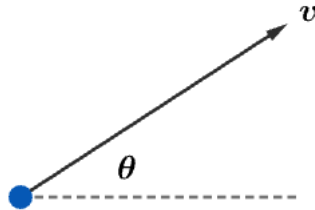


## 2008 F=ma Exam: Problem 6

Kevin S. Huang



Recall the range equation from kinematics,

$$R = \frac{v^2 \sin(2\theta)}{g} = L \sin(2\theta)$$

where  $L = v^2/g$  is the maximum range (when  $\theta = \pi/4$ ). In our case,

$$R = L \sin\left(2 \cdot \frac{\pi}{6}\right) = \frac{\sqrt{3}}{2}L$$

so the answer is A.