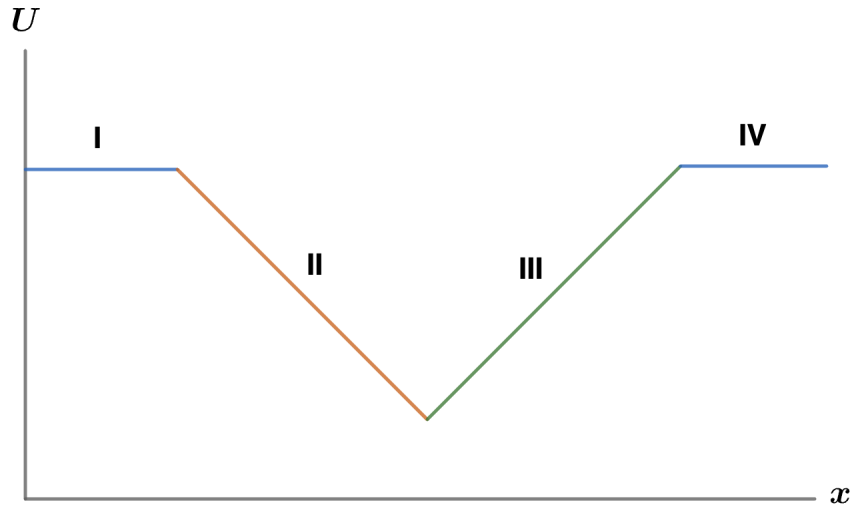


2010 F=ma Exam: Problem 18

Kevin S. Huang



Recall force is related to the potential energy by

$$F = -\frac{dU}{dx}$$

so force is given by the negative slope of the U - x plot. Part I and Part IV have zero slope so there is no force. Part II has slope -1 so the force is $+1$ N. Part III has slope $+1$ so the force is -1 N. Thus, the answer is E.