

**Chapter 7 Energy**

**Work and Energy—continued**

6. Which block reaches the bottom of the incline first?  
Assume no friction. (Be careful!) Explain your answer.

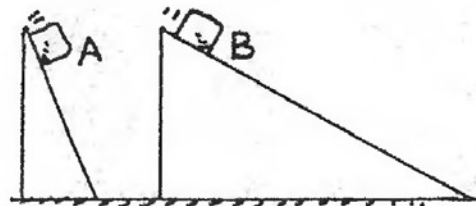
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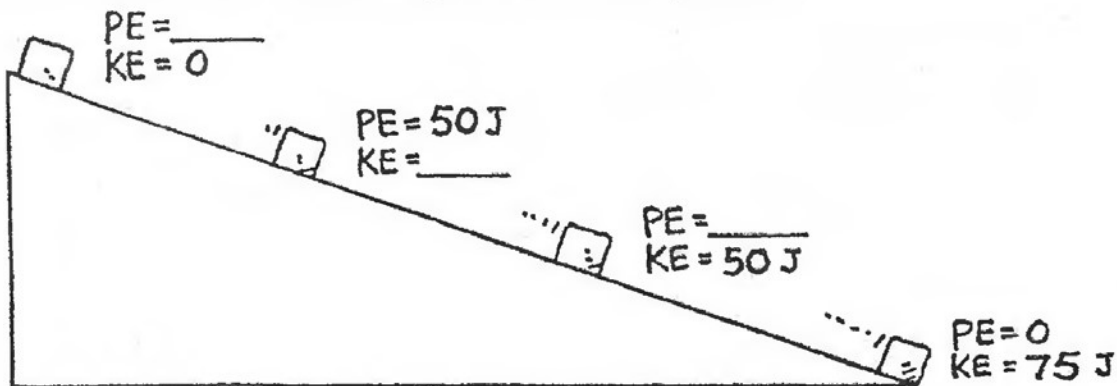
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7. Both the KE and PE of a block freely sliding down a ramp are shown below only at the bottom position in the sketch. Fill in the missing values for the other positions.



8. A big metal bead slides due to gravity along an upright friction-free wire. It starts from rest at the top of the wire as shown in the sketch.

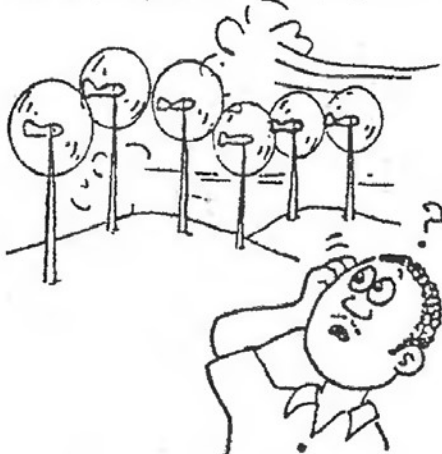
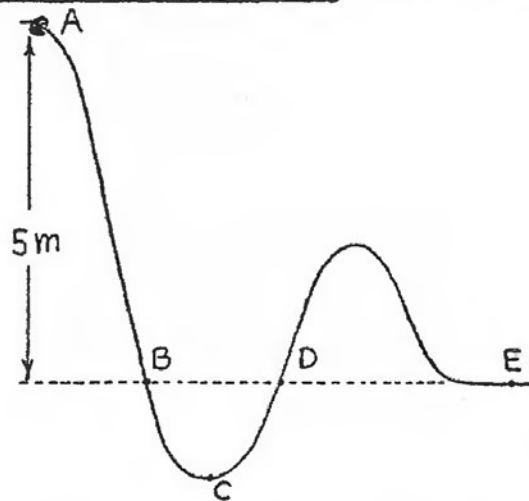
How fast is it traveling as it passes

Point B? \_\_\_\_\_

Point D? \_\_\_\_\_

Point E? \_\_\_\_\_

Maximum speed at Point \_\_\_\_\_



9. Rows of wind-powered generators are used in various windy locations to generate electric power. Does the power generated affect the speed of the wind? Would locations behind the "windmills" be windier if they weren't there. Discuss this in terms of energy conservation with your classmates.

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*Hewitt  
Draw it!*

# CONCEPTUAL *Physics* PRACTICE PAGE

## Chapter 7 Energy Conservation of Energy

1. Fill in the blanks for the six systems.

$v = 30 \text{ km/h}$   
 $KE = 10^6 \text{ J}$



$v = 60 \text{ km/h}$   
 $KE = \text{-----}$



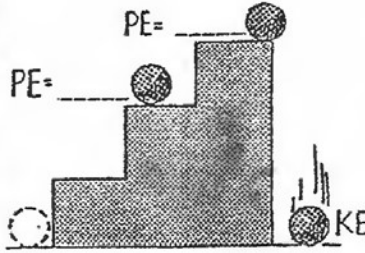
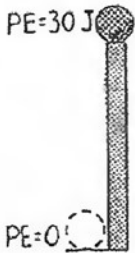
$v = 90 \text{ km/h}$   
 $KE = \text{-----}$



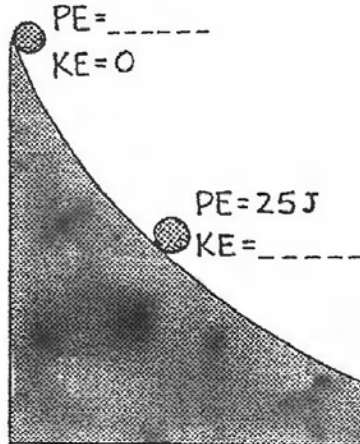
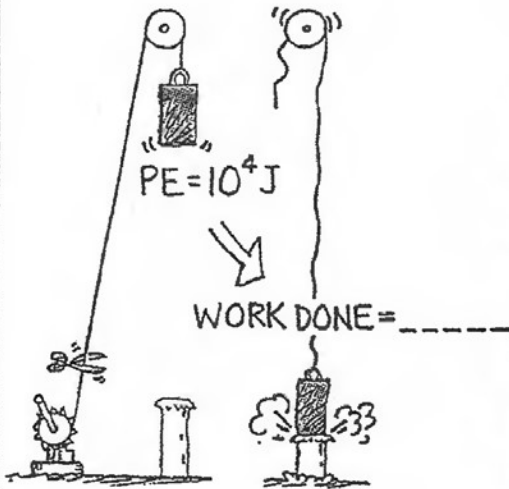
$PE = 15000 \text{ J}$   
 $KE = 0$



$PE = 11250 \text{ J}$   
 $KE = \text{-----}$



$PE = 7500 \text{ J}$   
 $KE = \text{-----}$



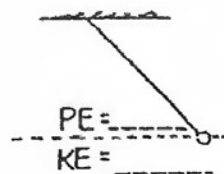
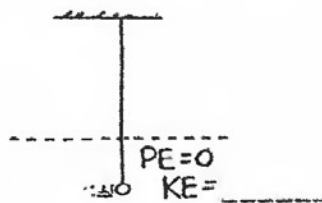
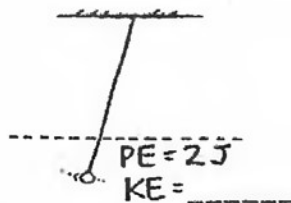
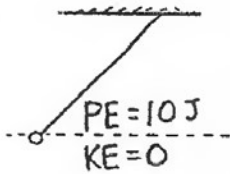
$PE = 3750 \text{ J}$   
 $KE = \text{-----}$



$PE = 0 \text{ J}$   
 $KE = \text{-----}$



$PE = 0$   
 $KE = 50 \text{ J}$



Hewitt  
Draw it!