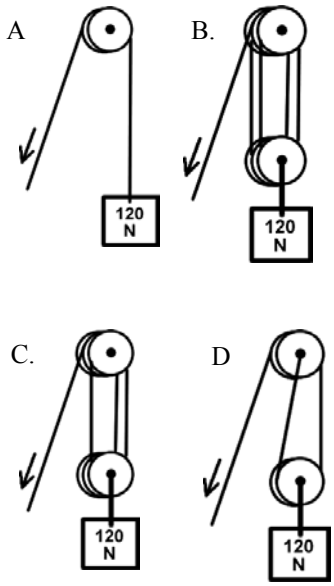
PreAP: due Tues., Nov 15 (Assigned: Fri., Nov 11)
Reg: due Wed., Nov 16 (Assigned: Mon., Nov 14)

Energy 6



1. True or False? A more powerful motor can do more work? (And why?)

2. Use the pictures at the right to answer the following:
   A. What kind of simple machine is shown?
   B. Which one has the greatest MA?
   C. Find the input force of the machine with greatest MA:

3. Are the following examples of added (A) or subtracted (S)?
   A. ___Friction
   B. ___Pushing an object up a ramp.
   C. ___Slowing an object down.
   D. ___ Speeding an object up.
   E. ___Compressing a spring.

4. Motor (M) or Generator (G)?
   A. ___Uses electricity
   B. ___Creates motion.
   C. ___Makes energy.
   D. __Uses work.
   E. ___Power windows in your car.

5. A 15 kg object is moving 8 m/s. A 200 N force pushes on for 20 m.
   A. Is energy added or subtracted from the system?
   B. What will happen to the object?
   C. Find the final velocity of the object. (This is an example of the Work–Energy Theorem)

6. An object is let go from 6 meters up a 30^o ramp. Find how fast the object is moving at the bottom of the ramp.

7. A 35 N force pulls at 40^o on a 20 kg object. If 300 J is expended, how far was the object moved?

8. A person tells you that they have a machine that is 110% efficient. What is your responds (give reasons, too).

9. A 25 kg object is moving 5 m/s and stops due to friction. If $\mu_k = 0.65$, how far did the object slide before stopping?

10. A 20 N force is pulled at 12 m/s. How much power is being exerted?

11. In which of these cases do you want the most Mechanical Advantage?
    A. Walking down the hall.
    B. Climbing a hill
    C. lifting a pencil
    D. Sitting at your desk.

MORE ON BACK

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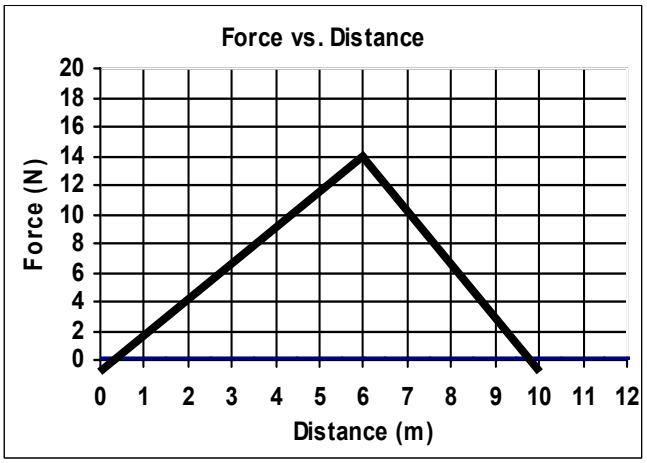
12. A 3 kg object is moving 4 m/s. Use the graph at the right to find out how fast it is going afterward. (And what do we call this process?)



13. What kingdom are they in? (Can be more than one.)
    A. Live without oxygen:
    B. Can move and breath oxygen:
    C. Do not have a nucleus:
    D. Do photosynthesis and have true roots and stems:
    E. Are consumers, but don't move:

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