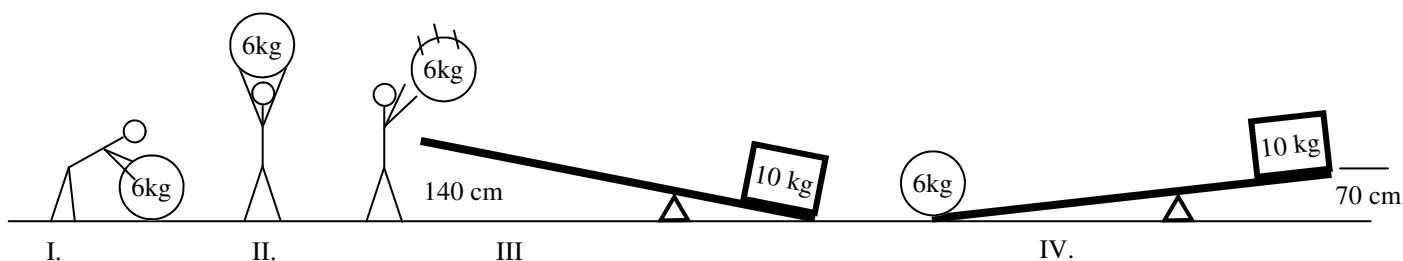
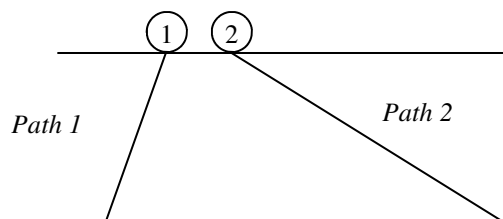


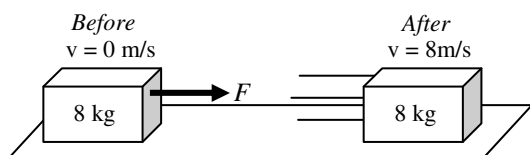
1. An object is at rest on the ground. A person lifts a 6 kg object up 8 meters in 4 seconds. Find the power used to lift the object.
 - A) Write the Conservation of Energy equation:
 - B) So $W =$
 - C) Calculate power.

2. If friction is acting on an object, does energy increase or decrease?
3. Two identical balls are at the top of a hill.
 - A. What kind of energy do they have at the top?
 - B. What kind of energy will they have at the bottom?
 - C. If there is no friction on either path, will energy be lost?
 - D. If there is no friction on either path, which ball will have the greatest speed at the bottom?
 - E. If there IS equal friction on both sides, which ball will have the greatest speed at the bottom?



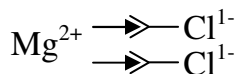
4. The above sequence shows Slim Jim lifting a medicine ball above his head and then dropping it onto a lever.
 - A. What kind of energy does the ball start with?
 - B. What kind of energy does Jim use to get the ball above his head?
 - C. What is the weight of the medicine ball?
 - D. What force is necessary to lift the object?
 - E. What kind of energy does the ball have when above Jim's head?
 - F. If Jim lifts the object up 2 m (Jim's tall) calculate the energy in part II.
 - G. What kind of energy does the ball lose as Jim drops the ball?
 - H. What kind of energy does the ball gain as it is dropped?
 - I. In part IV. the ball is at rest on the ground, again, so what kind of energy does it have?
 - J. So, did the ball gain, lose, or transfer energy as it hits the lever in part III?
 - K. So the ball does what on the lever?
 - L. If the ball lowers the lever 140 cm, how much force does it apply to the lever?
 - M. How much energy does the 10 kg box gain in part IV?
 - N. Calculate the efficiency of the energy transfer.

5. Be sure that you know these types of energy: Mechanical; Thermal; Nuclear; Chemical; Radiant; Electrical.



6. An object at rest is pulled and ends up moving 8 m/s.
 - A. Calculate how much energy it ends up with.
 - B. How much work was done on the object?
 - C. If the object is accelerated in 4 seconds, calculate power.
 - D. What is the weight of the object?

*On the test I will ask you to find the balanced ionic compound formulas, given a metal and a nonmetal.
Example: Write the formula for a balanced ionic compound for magnesium and chlorine.*



*You can draw
this if you want.*

What I need is this formula:



7. Write the formula for the balanced ionic compound between:
 - A. Lithium and Nitrogen.
 - B. Aluminum and Oxygen.