Name: _____

Period: _____

HW Unit 7:5 — Simple Machines
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Assigned: Mon., 2/5 and Tues., 2/6
Due: Wed., 2/7 and Thurs., 2/8

1) Name the six simple machines.

2) What two simple machines are scissors?

3) What simple machine is a flight of stairs?

4) What kind of simple machine is a screwdriver when it is used to pry open a can of paint?

5) Is an electric motor a simple machine?
6) Why or why not?

7) To multiply your force do you want a long or short ramp?
8) Why?

9) How do simple machines multiply force?

10) When you use a simple machine, do you use more or less work than without the simple machine?

11) What is always your output force when using a simple machine?

12) Input or Output?

A) ___ With the simple machine?
B) ___ Without the simple machine?
C) ___ Pushing up an incline plane?
D) __ The weight of the object?
E) __ How much force you push down on a lever.

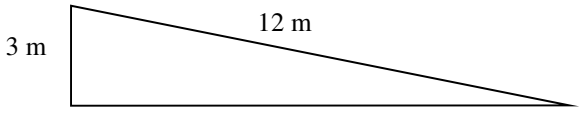
13) If you are lifting a 3 kg object, what is your output force?

14) If you are lifting a 40 N object, what is your F_{out}?

15) If you lift a 20 N object straight up and then with a ramp, in which case is your output force greater?

16) In which of the above is the input force greater?

17) Label your input distance (D_E) and output distance (D_R).



18) A 6 kg object is accelerating at 2 m/s2 to the left.
A) Does the object have balanced or unbalanced forces on it?
B) Find the net force on the object.

19) Which changes in space: weight or mass?
20) Why?

21) Find the acceleration of the following object.