Name: _____

Period:_____

HW Unit 7:6 — Levers, Pulleys, Incline Planes
Mr. Murray, IPC
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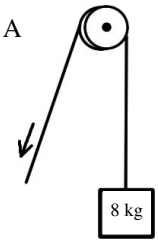
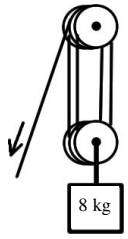
Assigned: Mon., 2/5 and Tues., 2/6
Due: Wed., 2/7 and Thurs., 2/8

1) Label Fin, Fout, DE, and DR for pulley A, below.

A



B



2) What is the output force for pulley B?

3) How many support ropes does pulley A have?
4) How many support ropes does pulley B have?
5) Which pulley multiplies your force more?
6) Which pulley has a greater output?

7) Where do pulleys lose energy?

8) Where do levers lose energy?

9) Where do ramps lose energy?

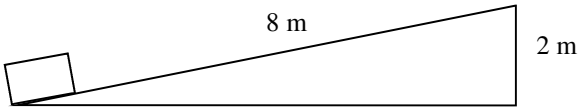
10) What do we call the pivot point of a lever?

11) Input or Output?

A) ___ How much you push down on a lever.
B) ___ Distance from the fulcrum to the object.
C) ___ Length of a ramp.
D) ___ Distance the object lifts up.
E) ___ How much force the lever applies to the object.
F) ___ How much force the pulleys pull on the object.

12) When I used the giant lever, which was the input side: me or the person I lifted?
13) Which moved more: my hand or the person I lifted?
14) So, did the lever increase or decrease my force?
15) How does a simple machine make work easier?

16) Label D_E and D_R on the ramp below.



17) Label F_{in} and F_{out}.
18) If the object is 20 N, how much force will you have to use to pull the object up the ramp?

19) If a 20 kg object is accelerating 3 m/s^2 to the left, calculate the net force on the object.

20) If the net force on an object is 12 N to the right and there is a 4 N object pulling to the left, find any other forces on the object.

21) An unbalanced force pulls on an object, what happens?

22) What happens when the unbalanced force stops?