

Name: _____

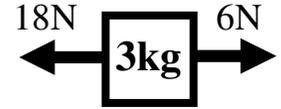
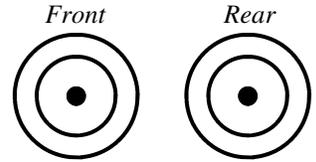
Period: _____

HW Unit 7:7 — Review
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Assigned: Fri., 2/9 and Mon., 2/12
Due: Tues., 2/13 and Wed., 2/14

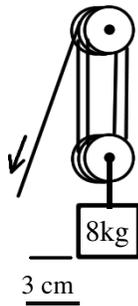
- 1) Increases, Decreases, or Stays the Same?
 - A) ___ **Gravity:** as the objects get further apart.
 - B) ___ **Inertia:** with a lighter object.
 - C) ___ **Mechanical Advantage:** with a longer ramp.
 - D) ___ **Your Mass:** if you go into space.
 - E) ___ **Acceleration:** if you increase the object's mass.
 - F) ___ **Energy Lost:** if there is more friction.
 - G) ___ **Air Friction:** if the object is moving faster.
 - H) ___ **Input Force:** if the pulley has more support ropes.
 - I) ___ **Output Force:** with a shorter ramp.
 - J) ___ **Acceleration Due to Gravity:** if the object is heavier.
 - K) ___ **Friction:** if the surfaces get more rough.
- 2) What force makes a 11kg object accelerate 4 m/s^2 .

- 3) Connect the gears to make the rear gear turn the slowest possible speed.
- 4) Would the above gear setup (ratio) be for going up hill or on flat roads?
- 5) Find the net force on this object.
- 6) Find the object's acceleration.



- 7) To make them balanced what force would you need to add above?

- 8) If you have unbalanced forces, can the object be at rest?
- 9) Label F_{in} , F_{out} , D_E , and D_R on the pulley.
- 10) What is the weight of the object?



- 11) What is the MA of this pulley?
- 12) How much rope will you have to pull out of the pulley?
- 13) How much force will you have to use?
- 14) A 20N force pulls on a 5 kg object. Find its acceleration.

HW Unit7:7

- 15) Experimental variable (1); control variable (2); control setup (3)?
 - A) ___ A setup without what you are studying to see if what you are testing has any affect at all.
 - B) ___ You change this to see how it works.
 - C) ___ Variables you don't change so they don't affect results.
 - D) ___ A good experiment has only 1 of these.
 - E) ___ You could have many of these.
- 16) Which of Newton's 3 Laws best applies?
 - A) ___ In a car crash a person without a seatbelt flies forward and is hurt when they hit the windshield.
 - B) ___ Your foot pushes backwards on the ground and friction pushes you forward.
 - C) ___ When you accelerate quickly in your car you have to use more gas, which costs more money.

STUDY HARD FOR THE TEST!!!!!!