

Name: _____

HW Unit 7:3 — Newton's Second Law

Assigned: Tues., 1/30 and Wed., 1/31

Period: _____

Mr. Murray, IPC

Due: Thurs., 2/1 and Fri., 2/2

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- 1) If F_1 and F_2 are equal:
 - A) Balanced or unbalanced forces?
 - B) Will its motion change or stay the same?



- 2) If $F_1 > F_2$: balanced or unbalanced forces?
 - A) Will its motion change or stay the same?
 - B) Which way will it accelerate?
- 3) If M increases, will it be easier or harder to move?
- 4) If the force pulling on an object decreases, will the object accelerate faster or slower?
- 5) If you move from the earth to Mars what changes mass or weight?
- 6) Why?

- 7) From the "Atoms and Molecules" song:
 - A) What is mass?
 - B) What is weight?
 - C) Which changes in space?
 - D) Use _____ to measure mass?
 - E) Use _____ to measure weight, for weight is a f_____.
 - F) If you already know your mass, it's easy to find weight, just multiply mass times:
- 8) Calculate the weight of a 35 kg object. (*show your work*).

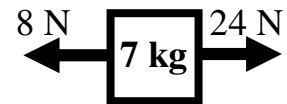
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- 9) When we dropped the two bottles in class, which hit the ground first: the empty or the full bottle?
Why?

- 12) A 21 N force pulls to the right on a 7 kg object. Find the acceleration on the object. (*Show work.*)

- 10) Why, then, if I dropped a piece of paper and a hammer, which hits the ground first?
Why?

- 13) Use the graphic at the right to answer the following:
 - A) Find the net force on the object (F_{net}). (*remember negatives*).



- 11) A 4 kg mass accelerates to the left at 6 m/s^2 . Find the force pulling on the mass. (*Show your work.*)

- B) Now find the acceleration.
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