

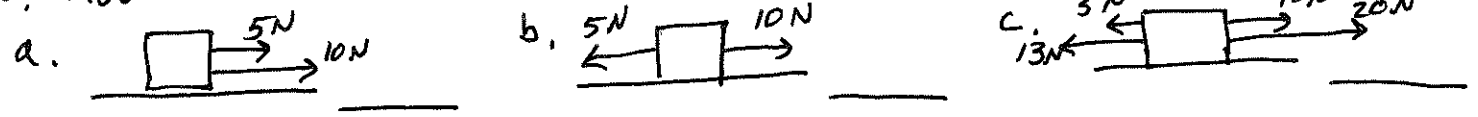
Review for ch 4 + 5 Test

1. Newton's First Law of motion is also called _____. Define this Law here:
2. _____ is a measure of an object's inertia and is measured in _____.
3. The Force that gravity has on mass is called _____
4. acceleration due to gravity uses the symbol _____ and has a value of _____
5. what is the weight of the following masses?
 a. $3\text{kg} = \underline{\hspace{2cm}}$ b. $110\text{kg} = \underline{\hspace{2cm}}$ c. $1500\text{g} = \underline{\hspace{2cm}}$

- b. what is the mass of the following weights?
 a. $100\text{N} = \underline{\hspace{2cm}}$ b. $630\text{N} = \underline{\hspace{2cm}}$ c. $2400\text{N} = \underline{\hspace{2cm}}$

7. when adding all of the forces on an object, you get one equivalent force called the _____.

8. Add the forces to find this equivalent force:



9. what happens to the motion of an object moving at $3 \frac{\text{m}}{\text{s}}$ when the net force = 0?

this is also called _____.

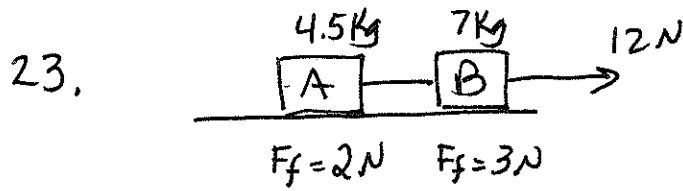
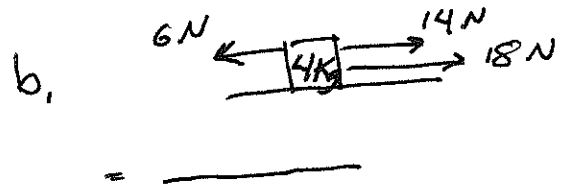
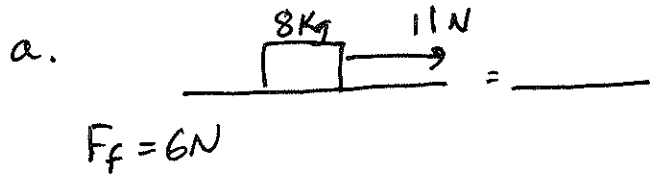
10. If the 1st law of motion states that no force is required to maintain motion, why do you have to keep peddling to keep your ~~brake~~ bicycle in constant motion?

11. Newton's 2nd Law of Motion states:
12. What causes objects to accelerate?
13. Newton's 2nd Law has an equation, what is it?
14. If the mass of 8 kg needs to be accelerated at $4 \frac{m}{s^2}$, what force is required to do this? _____
15. A 15 N Force is applied to a ~~2.5~~ 2.5 kg mass, what is its acceleration? _____
16. Define Friction
17. What are the factors that affect friction?
- a,
 - b,
 - c.
18. What does the term coefficient of friction mean?
19. Compare static friction with kinetic friction

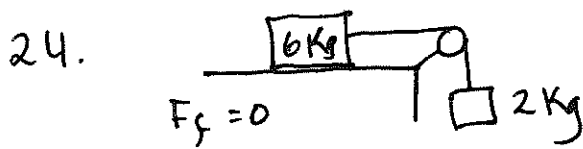
20. What is the range of values for the coefficient of friction?

21. What is the amount of static friction for a 6 kg block, where $\mu_s = .23$? _____

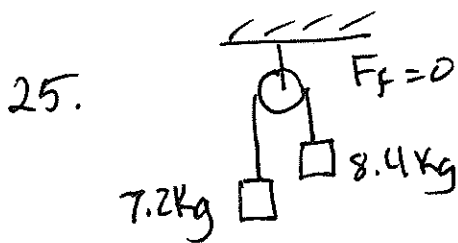
22. Find the acceleration for these:



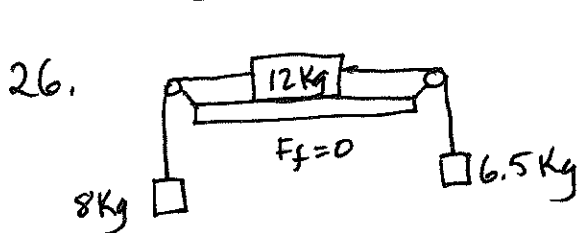
What is the acceleration of Box A? _____



What is the acceleration of the top box? _____



What is the acceleration of box on the Right? _____



What is the acc of the box hanging on the right? _____

27. What is Free fall?

28. What is terminal velocity?

29. Give examples of objects that have different terminal velocities, and which is higher.