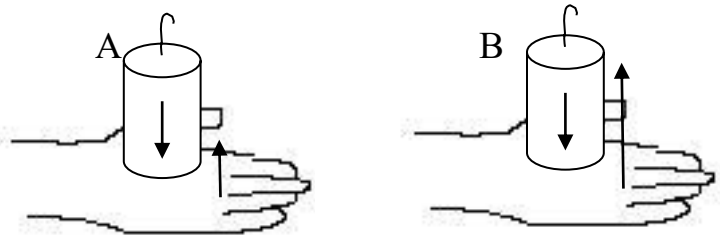
FORCES REVIEW /80points

NAME_____ DATE_____ HOUR _____

1. In which picture is the hand lifting the object?

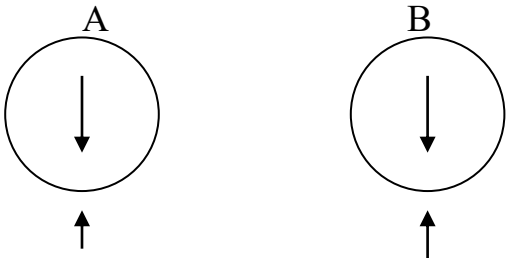


2. Does A have balanced or unbalanced forces?

Ball is falling

3. Which drawing is correct?

4. Push up forces from the air are called what?



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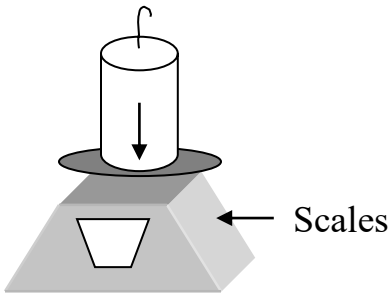
5. What is missing?



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6. What happens to the steel beam?

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7. Which takes more force?

8. Why?

9. What vectors are missing? (draw them in)

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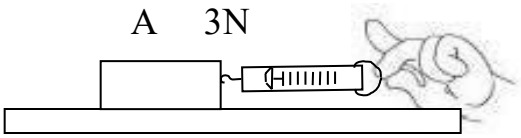
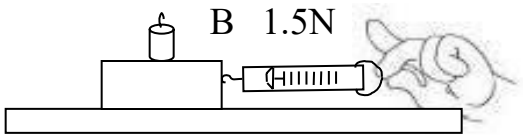
10. Draw all vectors.





11. Which friction vector has the greater magnitude?

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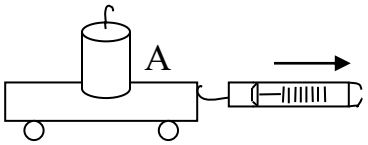
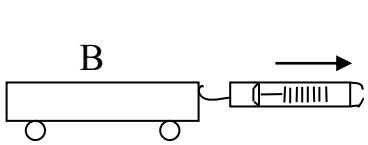
12. Draw the friction vectors.





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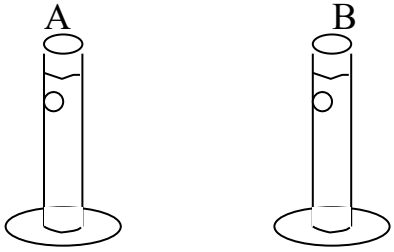
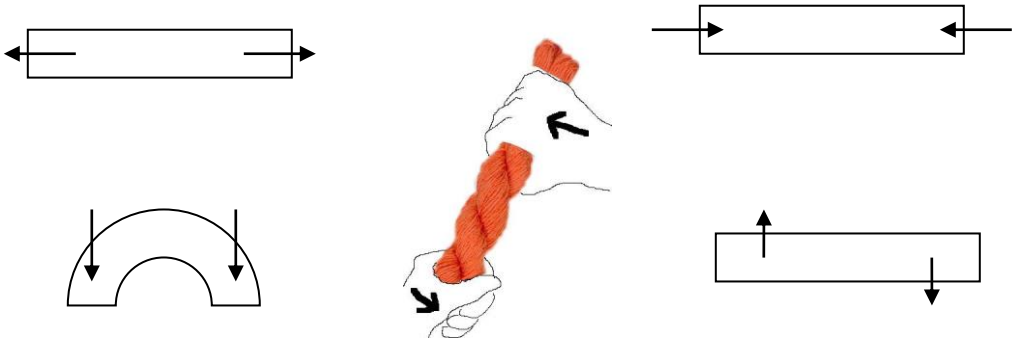
13. Where are there more buoyant forces?

14. Which one's marble hits first?



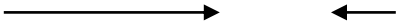
15._____ forces where **you can see** the agent exerting the force
16._____ **forces** where the agent exerting the force is **invisible** (gravity, magnetism)
17._____ field force that pulls all objects toward each other
18._____ -amount
19._____ -forces where there is **no motion** because both vectors are equal
20._____ -forces where there is **motion** because the vectors are not equal
21._____ -force arrow
22._____ -push up forces found in liquids and gases
23._____ -to change size, shape, or form
24._____ -the ability to go back to normal after distortion
25._____ -how far you can go before breaking
26._____ -the act of getting broken
27._____ -any force that fights against you
28._____ -tool used to measure forces in newtons
29._____ -group of objects interacting (acting together)
30._____ -picture
31._____ -resistance force caused by molecules rubbing together
32._____ - forces of attraction between molecules of the same type
33._____ - forces of attraction between molecules of a different type

34. LABEL:



LABEL THE NET FORCE AND DIRECTION

1. 8 Newtons 2 Newtons



2. 7 newtons

4 newtons

3. 10 newtons 3 newtons

4. What is Newton's first law?
5. What is Newton's second law?
6. What is Newton's third law?
7. When the net forces equal 0 N, they are _____?
8. What causes friction (if you zoom in really close)?
9. Give an example of kinetic friction

10. Give an example of static friction

11. Give an example of rolling friction

12. When can friction be helpful?

13. When can friction be harmful?

14. As the distance between two objects increases, the force of gravity between them _____

15. The gravitational pull is greater between two objects when their masses are _____

16. If an action force is a baseball hitting a bat, then the reaction force is _____

17. Why would a crumpled piece of paper hit the ground before a flat sheet of paper?

18. According to Newton's first law of motion, a moving object that has no force acting on it will….

19. Why does a ball thrown sideways curve downward?

20. Which cart will accelerate the least?

21. Two ice skaters at rest push against each other, causing both skaters to move away from each other. This is an example of which law?

22. Which units would be used for force?

23. If a foot pushes a skateboard across the room, are the forces balanced or unbalanced?

24. Give an example of interaction at a distance

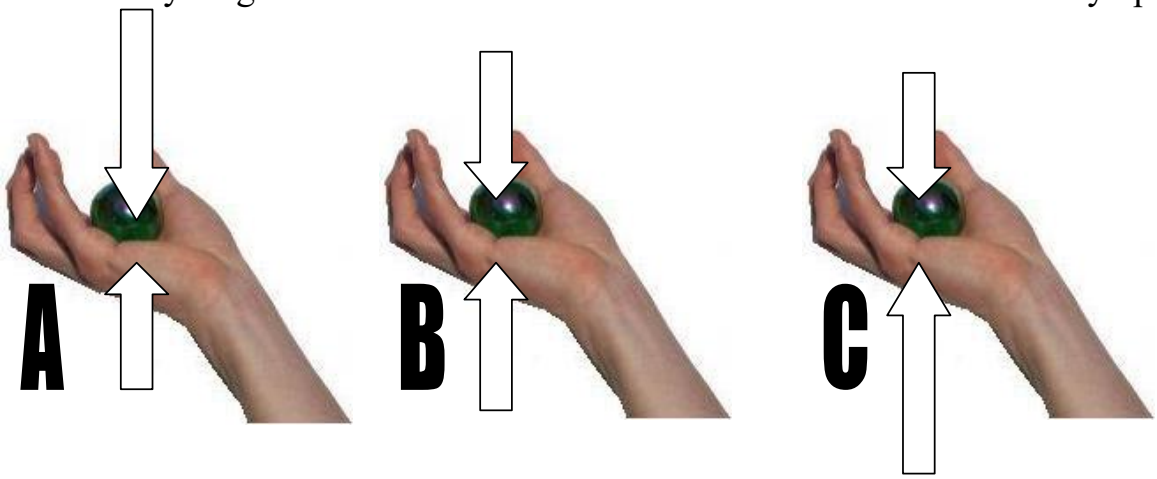
25. What is gravity?

26. The resistance force that keeps your feet from slipping out from under you is called

27. The rope during a tug of war has
    a. tension
    b. strain
    c. distortion
    d. all of the above
    e. none of the above

28. What would happen to the concrete of a driveway if it couldn't push up against a car with as much force as the car pushes down on it?

29. Which free body diagram is most accurate if the ball in the hand is about to fly upward?



30. Which example does **NOT** have balanced forces?
    a. a dictionary sitting on a table
    b. a person holding onto a briefcase
    c. a person rolling a cart
    d. a wastebasket on the floor

31. A go-cart and a student weigh 120 kg together. What force is needed to accelerate on a racetrack at a rate of 5 m/s^2?

32. What is the acceleration of baseball if it has a mass of 0.5 kg and hits a catcher's mitt with a force of 15 N?

33.	inertia	A] A force that attracts all objects to each other
34.	gravity	B] The combination of all forces acting on an object
35.	unbalanced forces	C] A combined force that causes something to move
36.	balanced forces	D] A combined force that does not cause movement
37.	net force	E] attractive force between molecules of different types
38.	adhesive forces	F] attractive force between molecules of the same type
39.	cohesive forces	G] the property of matter that makes it hard to get moving, and also hard to stop