

Name: _____

Force and Motion Study Guide

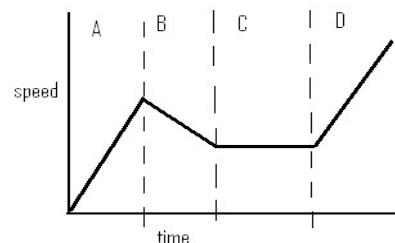
1. What is motion? What do we use to help us determine if an object is in motion?
2. Write the formula for speed. Calculate the speed of an object that has traveled 42 meters in 12 seconds.
3. What is velocity?
4. What is a force? What unit do we use to measure force?
5. How does each type of force affect the motion of an object?
 - a. Balanced forces:
 - b. Unbalanced forces:
6. When looking at a graph of motion, what does the slope of the line tell us?
7. What is acceleration? What unit do we use to measure acceleration? What are the three ways that acceleration can happen?
8. _____ forces maintain motion at constant velocity.
9. _____ forces acting on an object produce accelerated motion.
10. _____ is the tendency of an object to resist change in its motion.
11. To increase acceleration, one could decrease _____.
12. A push or a pull, are both known as _____.
13. What is Net force? How do we draw an object with 50N of force pushing from the right and 20N of force pushing from the left?

Use the graph to answer the following questions:

14. Name the two variables plotted in the graph.
15. Describe the object's motion.
16. What is the distance traveled in three hours?
17. What is the average speed the object traveled during the entire four hours?



18. Label Positive, Negative, and constant acceleration on the graph below.



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19. In what direction is the net force acting on the box?
20. What does the head of the arrow indicate?
21. In what direction must a force be applied to balance the forces?
22. If you apply a third force in a downward direction, how will the acceleration change?

