Name: _____
Date: _____
Period: _____

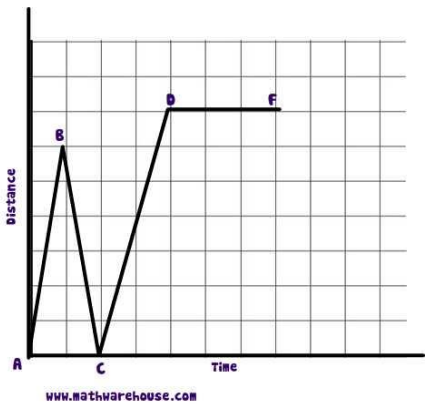
Review of Newton's Laws

1. Provide an example of Inertia in a basketball game. _____
_____
_____
_____

2. What is the speed of an object at rest? _____

3. We can mathematically measure inertia with which of the following?

   a. Force b. Momentum
   c. Acceleration d. Gravity



4. Which line segment on this graph to the right represents an object that is not moving?
   a. A – B c. C – D
   b. B – C d. D – F

5. When a hockey puck is at rest on an ice rink all the forces acting upon the puck are said to be . . .
   a. Equal b. Supportive c. Balanced d. Excessive

6. When a player shoots the hockey puck, the forces are now referred to as . . .
   a. Changed b. Unbalanced c. Equalized d. Inertial

7. The hockey puck has a mass of 0.15kg and is accelerated at a rate of 14m/s^2, how much force was applied to the puck? Show Your Math.

8. From the above question, how much force did the puck apply to the stick? _____
_____ So what happens to the stick? _____
_____

More questions on the back

9. In space there is noting for a rocket to push off of, so it must use Newton's Third Law to change direction, explain how to do that. _____

10. Imagine two skaters facing each other on a friction-less ice rink. One skater has a basketball. They toss the ball between each other 5 times. What happens to the two skaters? _____

    Diagram your answer:

11. An astronaut is working on the International Space Station (ISS) during a spacewalk. She places a wrench half way between herself and the ISS. What will happen to the wrench? Explain. _____

$$Fg = m_1 m_2 / d^2$$

12. Using the formula for gravity , calculate the force of gravity between two objects 10 meters apart. One object has a mass of 30kg, the other's mass is 5kg. Show your Math.

13. If 2 objects are 1000 meters apart and have a force of gravity between them of 20 Newtons, what will happen to the force when the objects are moved to 500 meters apart?