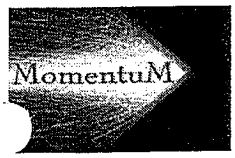

Momentum and Collisions- Video Questions and Notes

Name: _____Hr.___

Video #1- Bill Nye "Momentum" *(about 23 minutes)*

Answer the following questions during the Bill Nye video. Yes, the questions go in order. ☺

1. The faster you go the more _____ you have.
2. Whenever an object is _____ it has momentum.
3. The faster something is traveling, the more it weighs, and the more mass it has, the _____of its momentum will transfer.
4. Why does the quarter only move a little bit?
5. If you added up all the momentum of all the pieces of the ornament and all the marbles, they would equal the _____ amount of momentum as when the ornament just bounced off the truck.
6. If you are not moving, then you have _____ momentum.
7. In a rocket, the momentum of the hot fuel going one way _____ the momentum of the rocket going the other.
8. a. He is bouncing two different balls. The momentum of the individual pieces is _____ to the momentum of the bouncing ball.
   b. That's what we call _____ of momentum.
9. What makes a soap box car move? _____
10. How can rockets zoom through space where there is nothing to push against?
11. What happens when you drop a tennis ball while it's on top of a falling basketball and why?
12. Momentum depends on how much things _____ and how _____they're moving.
13. How is momentum used on a billiards table?
14. While you are in a moving car, **you and the car / only you** have momentum. *(Circle one.)*
15. When the car stops, you will keep moving. Which one of Newton's laws is this? _____
    (They don't say this in the video. Do you remember?)
16. In croquet, the momentum of the mallet gets _____ to the ball.
17. The momentum of the air in the balloon going one way _____ the momentum of the tape/straw/balloon assembly going the other way.
18. Fly vs. Windshield: Whose momentum wins? _____
19. Explain how one of the scenes in the music video involves momentum.
20. a. At the end Bill says "Excuse me, I've got some _____ and _____ to multiply."
    b. What variable would that give him? _____
    c. What unit would it be measured in? _____