Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_

**Motion Quiz**

1.What is Newton's second law of motion?

1. F=Ma
2. Every action has its equal and opposite reaction
3. The law of inertia
4. CPMS

2. A slug crawls by a twig in a grassy field. What is its reference point? \*

1. The Twig
2. The Sun
3. It's Shell
4. The Field

3. A force of 32N is applied to a boat with a mass of 8kg. What is the acceleration of the boat?

1. 4m/s^2
2. Mass
3. 1440.6N
4. 3 m/s^2

4. A 245N bowling ball weighs 25kg. What is the acceleration of the ball due to gravity?

1. 9.8m/s^2
2. 500 kg
3. Inertia
4. 16 kg

5. Pushing or pulling on an object

1. Force
2. 9.8m/s^2
3. kilograms
4. Balanced Force

6. What force is needed to accelerate a 22kg mass across a surface of 12.5m/s^2?

1. 275 N
2. 500 kg
3. Balanced Force
4. 16 kg

7. What label do you use when solving for Force/Weight?

1. Newtons
2. 16 kg
3. Action Force
4. Balanced Force

8. What label do you use when solving for acceleration?

1. m/s^2
2. Newtons
3. Newton's second law
4. 275 N

9. A force of 48N is applied to a 16kg mass. What is the acceleration?

1. 3 m/s^2
2. 9.8m/s^2
3. 4m/s^2
4. 1440.6N

10. What is the mass of a dog that has a force of 64N and is moving with an acceleration of

1. 4m/s^2?
2. 16 kg
3. 30 kg
4. 3 m/s^2

11. Intertia

1. an object with large amounts of mass and high speeds will also have a lot of
2. the rubbing of two surfaces together
3. what happens if the amount of friction increases on an object
4. these ends of the magnet repel each other

12. Distance/Time

1. how is speed calculated
2. what happens to speed if you apply a force in the direction the object is moving
3. if the object is moving the forces are
4. these ends of the magnet attract to each other

13. A baseball has a momentum of 6.0 kg.m/s south and a mass of 0.15 kg. What is a baseball's velocity?

1. v = 40 m/s south
2. v = 0.025 m/s north
3. v = 0.9 m/s south
4. Answer not given.

14. The rate of change of an object's position

1. Speed
2. Velocity
3. Acceleration
4. Momentum

15. Any change over time

1. rate
2. speed
3. mass
4. displacement

16. Speed

1. distance traveled divided by the time it takes
2. how fast an object is moving at the beginning
3. on a DISTANCE-TIME graph a line that is horizontal (side to side) shows an object that is
4. m/s, mi/hr, ft/day

17. Motion

1. Change in position of an object
2. the product of an object's mass and its velocity
3. m/s, mi/hr, ft/day
4. distance traveled divided by the time it takes

18. Acceleration

1. the rate at which velocity changes over time
2. on a DISTANCE-TIME graph a line that is straight and diagonal shows \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_motion
3. m/s north, mi/hr up, ft/day forward
4. Change in position of an object

19. Reference point

1. a stationary object used to compare motion
2. how far apart an object is from where it started to where it ended
3. the rate at which velocity changes over time
4. on a SPEED-TIME graph a line that is horizontal (side to side) shows an object that

20. Labels for speed

1. m/s, mi/hr, ft/day
2. m/s north, mi/hr up, ft/day forward
3. Change in position of an object
4. on a DISTANCE-TIME graph a line that is horizontal (side to side) shows an object that is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

21. Velocity is

1. speed in a certain direction
2. how fast an object is moving at the end
3. the rate at which velocity changes over time
4. on a DISTANCE-TIME graph a line that is horizontal (side to side) shows an object that is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

22. Distance

1. how far apart an object is from where it started to where it ended
2. on a DISTANCE-TIME graph a line that is horizontal (side to side) shows an object that is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. how fast an object is moving at the end
4. speed in a certain direction

23. Momentum is

1. the product of an object's mass and its velocity
2. speed in a certain direction
3. how fast an object is moving at the end
4. how far apart an object is from where it started to where it ended

24. Newtons 3rd Law of Motion

1. Action --> Reaction
2. Blue
3. Acceleration is the same as the Net Force Applied to that Objects mass
4. Jay Cutler

25. Newtons 1st Law of Motion

1. An Object that is in rest tends to stay in rest
2. Isaac Newton
3. Acceleration is the same as the Net Force applied to an objects mass
4. Action --> Reaction

26. Acceleration is the same as the Net Force Applied to that Objects mass

1. 2nd Law
2. 3rd Law
3. 1st Law
4. 76th Law

27. 

28. About how fast was the bowling ball rolled down the lane?

1. 65 mph
2. 88 mph
3. 66 mph
4. 67 mph

29. A force must be applied in order for motion to occur.

1. True
2. False

30. Sir Issac Newton was the guru of motion.

1. True
2. False

31. Short Answer Question: Describe Newton’s Three Laws of Motion and give an example of each law. Answer should be at least 5 complete sentences. 10 points.

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