Name: _____

Date: _____ Grade: _____

SECTION QUIZ 2-2



Remember:
Score an 85% or higher on all three quizzes and you may be exempt from the chapter test!



Congratulations! You have completed this section!
Answer the following questions to test your understanding of the material. When you are finished, hand in your quiz to your teacher. Each answer is worth 2.27 points.

Fill in the blank or circle True or False.

1. Cambridge University closed and sent Isaac Newton home because of the bubonic plague.
   (a) True or (b) False

2. During the 18 months on his mother's farm, Isaac Newton studied: _____.
   (a) light
   (b) mathematics
   (c) the nature of gravity
   (d) all of these

3. The formula for speed = distance/ _____.

4. Acceleration = change in velocity/ _____.

5. A large, heavy object that is on Earth, on the surface of the Moon or floating in space has the same: _____.
   (a) weight (b) mass (c) acceleration (d) velocity

6. Weight measures the amount of matter an object contains.
   (a) True or (b) False

7. If an object's velocity changes, then it has been acted upon by: _____.
   (a) a mass (b) speed (c) a force (d) inertia

8. Isaac Newton invented the first telescope that brought light to a focus with a: _____.
   (a) glass lens
   (b) mirror
   (c) magnifying glass
   (d) fiber optics rod

9. Isaac Newton's book, *Principia Mathematica Philosophiae Naturalis*, is generally considered the greatest science book every written.
   (a) True or (b) False

10. Inertia causes a body to: _____.
    (a) keep moving at constant speed
    (b) lose speed slowly
    (c) gain speed slowly
    (d) accelerate

11. The acceleration of an object is directly proportional to the net force acting upon it and inversely proportional to the object's: _____.
    (a) friction
    (b) motion
    (c) mass
    (d) distance from the surface of the Earth

12. According to the Second Law of Motion, if the force on a body doubles, the acceleration: _____.
    (a) doubles (c) stays the same
    (b) is reduced in half (d) goes to zero

13. According to the Second Law of Motion, if the same force acts on a mass twice as great, the acceleration will: _____.
    (a) double (c) stay the same
    (b) be reduced by half (d) go to zero

14. In order for the same size engine to make a vehicle accelerate faster, one could: _____.
    (a) add more mass to the car (c) place another mass in front of the car
    (b) eliminate mass from the car (d) press the breaks

15. Force is equal to mass times: _____.
    (a) inertia (b) mass (c) velocity (d) acceleration

16. The First Law of Motion states that a body at rest will remain at rest, and a body in motion will remain in _____ straight-line motion unless acted upon by an outside _____.

17. The ancient Greeks believed objects naturally: _____.
    (a) came to rest (c) rotated
    (b) maintained their speed (d) all of these

18. The ancient Greeks of Aristotle's time believed the Earth: _____.
    (a) did not orbit the Sun (c) was at the center of the universe
    (b) was motionless (d) all of these

19. The First Law of Motion is known as the Law of: _____.
    (a) Inertia (c) Distance
    (b) Action-reaction (d) Universal Gravitation

20. Seatbelts and air bags are needed to overcome the: _____.
    (a) force of gravity (c) vacuum caused by the collision
    (b) inertia of a person's body (d) incline of the road

21. The Second Law of Motion states the _____ of an object is directly proportional to the force acting upon it and inversely proportional to its _____.

22. The Third Law of Motion states that when two bodies interact, the _____ exerted by the first body on the second is equal and opposite to the _____ exerted by the second body on the first.

23. The person who discovered the Law of Gravity was: _____.
    (a) Aristotle (b) Kepler (c) Galileo (d) Isaac Newton

24. Isaac Newton concluded that the Moon's straight-line path is changed into a closed orbit because of: _____.
    (a) wind (b) a force (c) the man in the Moon (d) friction

25. Although a cannon may fire a cannonball horizontally, gravity will cause its path to curve toward the surface of the: _____.
    (a) Moon (b) Sun (c) Earth (d) center of the universe

26. Gravity follows the Inverse Square Law.
    (a) True or (b) False

27. The Inverse Square Law relates two quantities by the inverse of the _____ of the distance separating them.

28. Light follows the Inverse Square Law.
    (a) True or (b) False

29. If the Moon was three times as far away, the gravitational attraction between the Moon and Earth would be: _____.
    (a) nine times as great (c) three times as great
    (b) one-ninth as great (d) one-third as great

30. The Law of Universal Gravitation measures distance from the: _____.
    (a) surface of the mass (c) Sun
    (b) centers of mass (d) top of the mass

31. One key statement of the Law of Gravity is that the force of attraction between two objects is inversely proportional to the: _____.
    (a) distance (c) masses of the objects
    (b) square of the distance separating them (d) gravitational constant

32. The second statement in the Law of Gravity states that the force of attraction between two bodies is directly proportional to the product of their _____.

33. The Moon orbits the center of the Earth.
    (a) True or (b) False

34. To calculate weight, multiply mass by the acceleration due to _____.

35. The third key statement of the Law of Gravity states that it works only in the solar system.
    (a) True or (b) False

36. Isaac Newton said, *"If I have been able to see farther, it is because I have stood on the shoulders of _____."*

37. The statement, *"This most beautiful (solar) system could only proceed from the dominion of an intelligent and powerful Being"* was made by _____, considered to be the greatest and most influential scientist of all time.
    (a) Albert Einstein (c) Galileo
    (b) Isaac Newton (d) Archimedes

38. *"You cannot run the race until you learn to _____."*

39. *"A body at rest will remain at rest and a body in motion will remain in motion. Get moving now to remain in motion toward _____."*

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40. *"Wise people greet words of hate and anger with an equal and opposite reaction of _____ and _____."*

41. *"_____, like gravity, is universal. It applies anytime, on anybody, anywhere."*