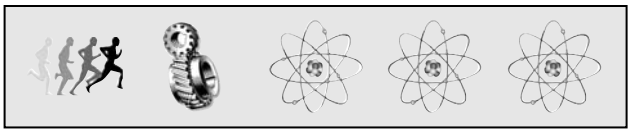
Name: _____

Date: _____ Grade: _____

SECTION QUIZ 2-3



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 2.5 points.

Fill in the blank or circle True or False.

1. Momentum is the mass of an object times its _____.

2. Whenever one body gains momentum, another body must receive an equal momentum in the same direction.
   (a) True or (b) False

3. Momentum includes direction.
   (a) True or (b) False

4. If an object is given an impulse, it is also given a change in its: _____.
   (a) law (c) mass
   (b) momentum (d) acceleration

5. An impulse applies a _____ for a period of time to an object which causes a change in the velocity of the object.

6. When something appears to be created from nothing, scientists: _____.
   (a) start laughing (c) become cautious
   (b) call it a law of conservation (d) calculate the gravitational force

7. In a closed system, the total momentum changes with time.
   (a) True or (b) False

8. A simple machine allows a resistance to be overcome at one point by applying a force at some other point.
   (a) True or (b) False

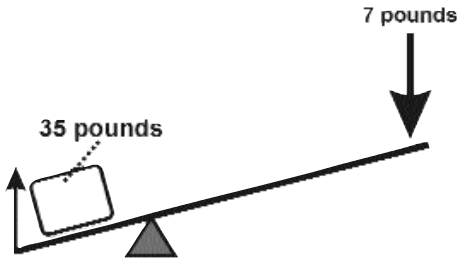
9. "The load times the distance the load is moved equals the effort times the distance the effort is applied" is called the: _____.
   (a) Law of Simple Machines (c) Law of Loading Distances
   (b) Law of Opposing Forces (d) Law of Compound Machines

10. The inclined plane, pulley and wheel and axle are all: _____.
    (a) potential energy machines (c) compound machines
    (b) simple machines (d) parts of a bicycle

11. Mechanical advantage is never equal to one.
    (a) True or (b) False

12. Torque is a force that causes a twisting motion.
    (a) True or (b) False

13. The mechanical advantage of a simple machine is equal to the load divided by the: _____.
    (a) effort
    (b) distance above sea level
    (c) time spent carrying the load
    (d) mass of the machine



14. In the above illustration, the mechanical advantage is: _____.
    (a) 5 (b) 7 (c) 35 (d) 245

15. A single pulley suspended overhead: _____.
    (a) allows a person to change the direction of the effort force
    (b) gives a mechanical advantage of 2
    (c) gives a greater mechanical advantage than a screw
    (d) allows a person to change the amount of force necessary to lift the object

16. Most simple machines have an efficiency that is greater than 1.00.
    (a) True or (b) False

17. If effort is applied 9 meters while the load moves 1.5 meters, the mechanical advantage is: _____.
    (a) 6.00 (b) 13.5 (c) 10.5 (d) 7.5

18. If an effort force of 50 newtons moves a load of 300 newtons, the mechanical advantage is: _____.
    (a) 6.00 (b) 350 (c) 1/6 (d) 15,000

19. Power is how quickly: _____.
    (a) heat is produced
    (b) the mechanical advantage becomes zero
    (c) distance is covered
    (d) work is done

20. Work is equal to force times _____.

21. Power is equal to the work divided by _____.

22. In the metric system, the unit of force is the _____.

23. Energy is the capacity to do _____.

24. Latent energy, such as that of water behind a dam, is called: _____.
    (a) moving (b) kinetic (c) dangerous (d) potential energy

SECTION QUIZ 2-3

25. Kinetic energy is energy due to: _____.
    (a) motion (b) position (c) the Sun (d) mass

26. The formula for kinetic energy is K. E. = _____.
    (a) ½ mv^2 (b) mc^2 (c) mv (d) mgh

27. The kinetic energy of an object is directly proportional to its: _____.
    (a) mass (c) weight
    (b) velocity (d) distance from the center of Earth

28. Should a car increase its speed by a factor of three, its kinetic energy increases by a factor of: _____.
    (a) one (b) three (c) six (d) nine

29. The energy of motion can be changed into potential energy.
    (a) True or (b) False

30. A wound-up spring is an example of: _____.
    (a) heat energy (c) mechanical energy
    (b) life energy (d) nuclear energy

31. In both the English system and metric system, heat is measured by how much it raises the temperature of a fixed amount of: _____.
    (a) water (b) mercury vapor (c) glass (d) air

32. Heat energy is due to the motion of atoms and molecules.
    (a) True or (b) False

33. As energy changes from one form or another, heat is usually generated.
    (a) True or (b) False

34. Energy can neither be created nor destroyed.
    (a) True or (b) False

35. Science is a process that never changes.
    (a) True or (b) False

36. *"F=ma, or Fortitude = Motivation (in times of) Adversity. I= ft, or _____ = Fortitude * Truth."*

37. *"In a time of drastic change, it is the _____ who inherit the future. The learned usually find themselves equipped to live in a world that no longer exists."*

38. *"Teamwork divides the _____ and multiplies the effect."*

39. *"How great is your Potential Energy? It depends on how high you are _____ to Go."*

40. *"All of the top _____ I know are life-long learners."*