T  F  1. A 200 g piece of iron has four times the volume of a 50 g piece of aluminum.

T  F  2. Density is the volume of an object divided by its mass.

T  F  3. When classifying objects always group first, then rank.

T  F  4. In the Grouping and Ranking exercise, the science process skill of measuring was used.

5. A Diet Coke and a regular Coke can easily be distinguished from each other without opening the cans by the difference in their:
   A. Shape          B. Density
   C. Volume         D. Temperature

6. A property of matter that can be used for identification of materials is:
   A. Mass          B. Volume
   C. Density       D. Temperature

7. A solid sinks or floats in a liquid due to its:
   A. buoyancy      B. Mass
   C. Volume        D. Temperature

8. Of the following substances, the least dense is:
   A. Gold          B. Lead
   C. Wood          D. Quartz

9. The volume of an unknown irregular solid can be determined by:
   A. Measuring its dimensions
   B. Weighing it
   C. Water displacement
   D. Guessing

10. The intercept of the mass vs. volume graph ____________________.
    A. is zero
    B. is the rise over the run
    C. depends on the sample
    D. is one gram per cc.

11. The slope of the mass vs. volume graph ____________________.
    A. is zero
    B. is the mass
    C. is the density
    D. depends on how much mass you have

12. A student measures the mass of a toy car. The student finds that the mass is 2 hg plus 3 dag plus 4g. What is the mass expressed in kg?
    A. 2.34 kg
    B. 0.234 kg
    C. 234.0 kg
    D. 2340 kg
    E. None of these.

13. Mass is a measure of ____________________.
    A. the amount of space that an object occupies
    B. the amount of matter in an object
    C. the density of an object
    D. how heavy an object is.

14. What is the minimum mass that should be measured using the balance that we constructed in class?
    A. 200 g
    B. 2 g
    C. 10 g
    D. It doesn’t matter how much mass you use.

15. Compare the density of ice to the density of water. The density of ice is
    A. less
    B. the same
    C. greater.
16. A 1-cm³ piece is removed from a very large piece of modeling clay with a volume of over 100,000 cm³. Which piece has the greatest density?
A. The small piece.  B. The large piece.  C. The large and the small piece have the same density.

17. The volume of a sample of water is 20 cm³. The mass of this sample is
A. 40 kilograms  B. 40 grams  C. 20 grams  D. 40 ounces

18. A rock with a volume of 6.0 cm³ has a mass of 30.0 g. Its density is ______________.
A. 180 g/cm³  B. 5 g/cm³  C. 0.02 g/cm³  D. 6.0 g/cm³

19. Imagine a 10 g chunk of aluminum (ρ = 2.7 g/cm³) and a 10 g chunk of iron (ρ = 7.9 g/cm³). Which of the following is true?
A. The chunk of iron is smaller than the chunk of aluminum.  B. The chunk of iron is more massive than the chunk of aluminum.  C. The chunk of aluminum is smaller than the chunk of iron.  D. Both objects have the same volume.

20. Buoyancy can be explained by differences in ______________ on the top and bottom of an object placed in a fluid.
A. mass  B. pressure  C. density  D. volume

21. In the marshmallow mash experiment, which of the following properties of the marshmallows did not change?
A. volume  B. mass  C. density  D. chemical properties  E. both B and D

22. Which of the following are the same?
A. 100 cc and 10 ml  B. 100 cc and 1 dl  C. 1000 cc and 1 dl  D. 1 cc and 1 cl

23. The dimensions of a wood block is 1 dm x 1 m x 5 cm. What is its volume in liters?
A. 5000 liters  B. 5 liters  C. 50 liters  D. 10 liters

24. What is the slope and Y intercept of the line produced when the data below is plotted?
A. m = 6 ; b = 3  B. m = 4 ; b = 10  C. m = 3 ; b = 3  D. m = 3 ; b = 2

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25. What is the density of sample 2?
   A. 1 g/ml   B. 3 g/ml   C. 5 g/ml   D. None of these

26. Sample 1 is definitely not _______.
   A. rock  B. glass  C. water  D. a metal

27. What is the density of sample 1?
   A. 1 g/ml   B. 5 g/ml   C. 3 g/ml   D. None of these

28. What is the slope and Y intercept of the graph below?
   A. $m = 20 ; b = 2$   B. $m = 85 ; b = 0$   C. $m = 3 ; b = 6$   D. $m = 8 ; b = 4$
29. If a cube of jello is cut into two pieces, what total property of the two pieces changes?
A. mass B. volume C. density D. surface area

30. If a loaf of bread is compressed, its
A. surface tension becomes less. B. molecules become harder.
C. density decreases. D. density increases.
E. none of these.

31. In “Rice Crispy Crunch” which property (or properties) of the sample changed?
A. mass B. density C. volume D. chemical E. Answers B & C

32. In the Quicker Picker Upper experiment, which science process skill was not used?
A. measuring B. observing C. communicating D. inferring E. identifying variables

33. The primary source of error in the “Densities” experiment when you determined the density of the jewels was measuring the _____________.
A. mass of the jewels B. volume of the jewels C. density of water D. mass of the water