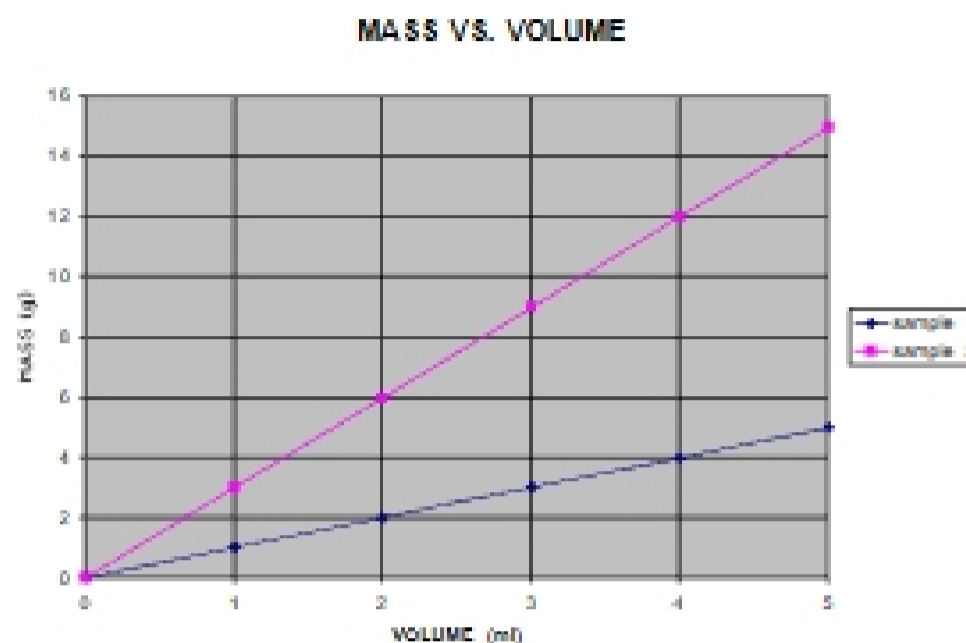


1. What is the density of sample 2?
A. 1 g/ml
B. 3 g/m
C. 5 g/m
D. NOTA



2. Sample 1 is most likely _____.
A. iron
B. oxygen
C. water
D. aluminum

3. A child sits down at a desk on which mineral samples are found. She sorts them as to rock type and determines the density of each sample. Which science process skill was not involved in this hands-on exercise?
A. Measuring B. Observing C. Inferring D. Classifying

4. 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

5. An atom has 20 protons and 20 neutrons, so it is an atom of
A. Boron.
B. Calcium.
C. Neon.
D. Zirconium.

6. How many dots would surround the symbol for each alkali metal atom in the electron dot notation for the group IA elements?
A. one.
B. two.
C. six.
D. seven.

7. Which of the following represents a hydrogen isotope?



- D. B and C only

- E. A, B, and C.

8. How are the atoms of ${}^{12}_6\text{C}$ and ${}^{14}_6\text{C}$ different?

A. number of protons.

B. number of neutrons.

C. number of electrons.

D. none of the above.

- T F 9. Elements in the same row of the periodic table exhibit similar chemical properties.
10. Metals are substances that are
- malleable
 - are good conductors of heat and electricity
 - have luster
 - all of these
11. Isotopes of an element are atoms that have
- the same number of protons, but a different number of electron.
 - the same number of neutrons, but a different number of protons.
 - the same number of protons, but a different number of neutrons.
 - equal numbers of protons and neutrons.
12. Atoms of an element tend to gain or lose electrons so that they will
- have the same number of protons as electrons.
 - become electrically neutral.
 - have the same number of outer shell electrons as a noble gas.
 - have the same outer shell arrangement as a metal.
13. If you wanted to know the number of neutrons in an atom of a given element, you would
- look up the atomic number.
 - round off the atomic weight to the nearest whole number.
 - subtract the atomic number from the mass number.
 - divide the mass number by two.
14. Which of the following statements about elements in a chemical family is false?
- They have the same number of outer shell electrons
 - They exist in the same physical state (solid, liquid or gas).
 - They tend to gain or lose the same number of electrons.
 - They react in a similar manner with a given element.
15. When involved in a chemical reaction with metals, atoms of a nonmetal tend to
- | | |
|------------------------|--------------------|
| A. exchange electrons. | B. remain neutral. |
| C. gain electrons. | D. lose electrons. |
16. Potassium is a metal and oxygen is a nonmetal that reacts to form K_2O , an ionic compound. How many electrons did an atom lose during the reaction? Each
- | | |
|--------------------------------------|---------------------------------------|
| A. potassium atom lost one electron. | B. potassium atom lost two electrons. |
| C. oxygen atom lost one electron. | D. oxygen atom lost two electrons. |
17. In a covalent molecule you would find atoms that
- | | |
|--|--|
| A. have lost electrons to become ions. | B. have gained electrons to become ions. |
| C. are sharing at least one pair of electrons. | D. are sharing at least one electron. |
- T F 18. The breaking and making of chemical bonds can explain chemical reactions and energy flow.
- T F 19. An atom becomes a positive ion by gaining an electron.

20. Evidence of a chemical reaction includes
- a color change
 - a change in temperature
 - the production of a gas
 - all of these
21. Atoms that have eight valence electrons would tend to
- be very reactive.
 - be inert.
 - form positive ions.
 - form negative ions.
22. The element M forms a stable ionic compound MCl_2 . If M were allowed to react with bromine, the resulting compound would have the formula
- MBr.
 - M_2Br .
 - MBr_2 .
 - there is not enough information to tell for sure.
23. Which combination of elements results in the formation of a white crystalline solid that dissolves to form a solution that conducts electricity?
- metal and metal
 - non-metal and non-metal
 - metal and non-metal
 - metal and metalloid
24. When hydrocarbons and carbohydrates burn with sufficient O_2 they
- | | |
|---|---|
| A. always give off CO_2 and H_2O . | B. sometimes give off CO_2 , but never H_2O . |
| C. sometimes give off H_2O , but never CO_2 . | D. never give off CO_2 or H_2O . |
25. Adding a solute, such as salt, will have what effect on the freezing point of water? It
- is lowered.
 - is raised.
 - remains the same.
26. A chemical reaction is balanced by changing (the)
- subscripts
 - superscripts
 - coefficients
 - any of the above as needed.
27. Air is considered to be a homogeneous mixture that is 79% nitrogen gas, 20% oxygen gas and 1% all the other gases. In this mixture, nitrogen can be considered
- a solvent
 - a solute
 - a solution
 - saturated
28. Water solutions of ionic substances that conduct electricity are called
- electrical solutions
 - polar solutions
 - electrolytes
 - indicators