

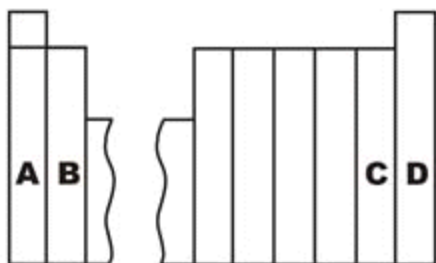


- \_\_\_\_\_ 11. Which sample has the greatest density?
- a. 1 gram of aluminum
  - b. 10 grams of aluminum
  - c. 100 grams of aluminum
  - d. all samples of aluminum have the same density
- \_\_\_\_\_ 12. As the mass of a sample increases, the volume of the sample \_\_\_\_\_, and the density of the sample \_\_\_\_\_.
- a. increases, increases
  - b. increases, decreases
  - c. increases, remains the same
  - d. decreases, remains the same
- \_\_\_\_\_ 13. A student measures the amount sugar in a stick of gum by chewing it up, and spitting it out. The sugar should dissolve while the gum is being chewed. The package said the gum was 74% sugar. The calculated amount of sugar based on their chewing data was 62%. What was their percent error?
- a. 0.16 %
  - b. 16%
  - c. 19%
  - d. Why would someone mass their chewed gum? (Don't choose this answer!)
- \_\_\_\_\_ 14. Neutral atoms become ions when
- a. protons are lost or gained
  - b. neutrons are lost or gained
  - c. electrons are lost or gained
  - d. isotopes are lost or gained
- \_\_\_\_\_ 15. Cations are positive and are formed when atoms \_\_\_\_\_ electrons, anions are negative and are formed when atoms \_\_\_\_\_ electrons.
- a. gain, lose
  - b. lose, gain
  - c. gain, gain
  - d. lose, lose
- \_\_\_\_\_ 16. How does a sulfur atom become a sulfide ion with a -2 charge?
- a. Sulfur loses 2 protons
  - b. Sulfur gains 2 protons
  - c. Sulfur loses 2 electrons
  - d. Sulfur gains 2 electrons
- \_\_\_\_\_ 17. How does a Aluminium atom become a Aluminium ion with a +3 charge?
- a. Aluminium loses 3 protons
  - b. Aluminium gains 3 protons
  - c. Aluminium loses 3 electrons
  - d. Aluminium gains 3 electrons
- \_\_\_\_\_ 18. The mass number of an element is equal to \_\_\_\_\_.
- a. the total number of electrons in the nucleus
  - b. the total number of protons and neutrons in the nucleus
  - c. less than twice the atomic number
  - d. a constant number for the lighter elements
- \_\_\_\_\_ 19. How many protons, electrons, and neutrons does an atom with atomic number 50 and mass number 125 contain?
- a. 50 protons, 50 electrons, 75 neutrons
  - b. 75 electrons, 50 protons, 50 neutrons
  - c. 120 neutrons, 50 protons, 75 electrons
  - d. 70 neutrons, 75 protons, 50 electrons





- \_\_\_\_\_ 37. Which of the following is not a characteristic of a metal?
- |                  |             |
|------------------|-------------|
| a. lustrous      | c. brittle  |
| b. conducts heat | d. flexible |



- \_\_\_\_\_ 38. Which region contains the alkaline earth metal family of elements?
- |      |      |
|------|------|
| a. A | c. C |
| b. B | d. D |

- \_\_\_\_\_ 39. Which element is a metalloid?
- |            |            |
|------------|------------|
| a. oxygen  | c. krypton |
| b. silicon | d. mercury |

- \_\_\_\_\_ 40. Which of the following formulas is incorrect?
- |                                 |                              |
|---------------------------------|------------------------------|
| a. $\text{Al}_2(\text{SO}_4)_3$ | c. $\text{Ca}(\text{OH})_2$  |
| b. $\text{AlOH}_3$              | d. $(\text{NH}_4)_2\text{S}$ |

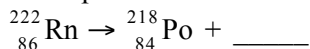
- \_\_\_\_\_ 41. The correct name for  $\text{Fe}_2\text{S}_3$  is \_\_\_\_\_.
- |                      |                     |
|----------------------|---------------------|
| a. iron(III) sulfide | c. iron(II) sulfide |
| b. iron sulfide      | d. iron(I) sulfide  |

- \_\_\_\_\_ 42. Which is the correct formula for the compound formed between beryllium and nitrogen?
- |                          |                            |
|--------------------------|----------------------------|
| a. $\text{BeN}$          | c. $\text{Be}_3\text{N}_2$ |
| b. $\text{Be}_3\text{N}$ | d. $\text{Be}_2\text{N}_3$ |

- \_\_\_\_\_ 43. Which is the correct formula for the compound Chromium (II) Nitrate?
- |                               |                               |
|-------------------------------|-------------------------------|
| a. $(\text{Cr})_2\text{NO}_3$ | c. $\text{CrNO}_2$            |
| b. $\text{Cr}_2\text{NO}_3$   | d. $\text{Cr}(\text{NO}_3)_2$ |

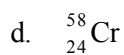
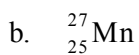
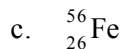
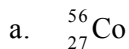
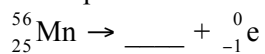
- \_\_\_\_\_ 44. The least penetrating form of radiation is \_\_\_\_\_.
- |                    |                    |
|--------------------|--------------------|
| a. beta radiation  | c. alpha radiation |
| b. gamma radiation | d. X rays          |

- \_\_\_\_\_ 45. What particle is needed to complete this nuclear reaction?

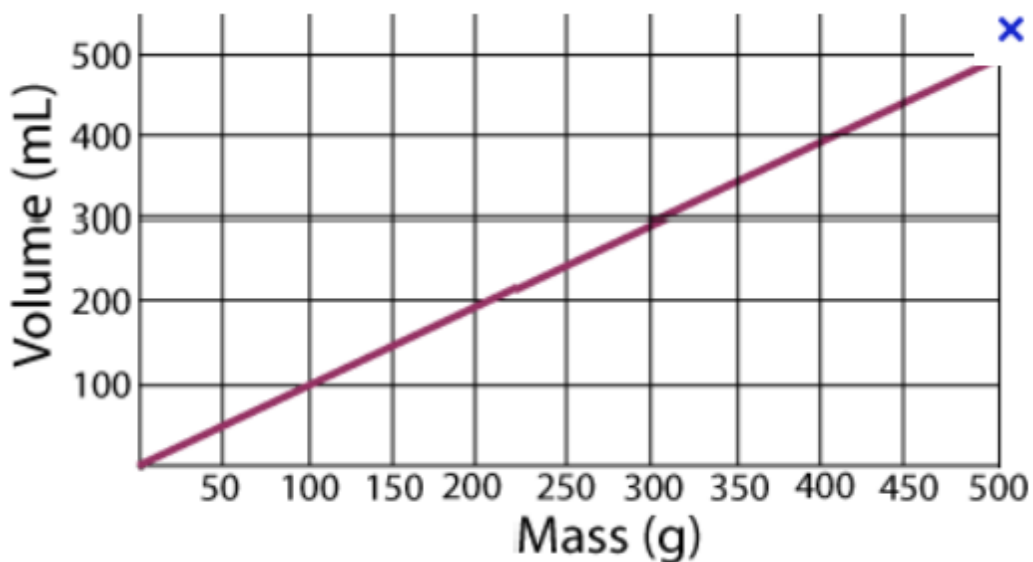


- |                        |                     |
|------------------------|---------------------|
| a. ${}^4_2\text{He}$   | c. ${}^1_1\text{H}$ |
| b. ${}^0_{-1}\text{e}$ | d. ${}^1_0\text{n}$ |

\_\_\_\_\_ 46. What particle is needed to complete the following nuclear equation?



\_\_\_\_\_ 47.



A student conducted an experiment to see how many mL of water came from different size blocks of ice. They melted three different blocks. The first block they chose was a 100 gram block, the second a 200 gram block, the final a 400 gram block. After the blocks were melted they measured the volume using a graduated cylinder.

Based on the description of the experiment, what was the independent variable?

a. the type of material melted

c. the volume of the melted water

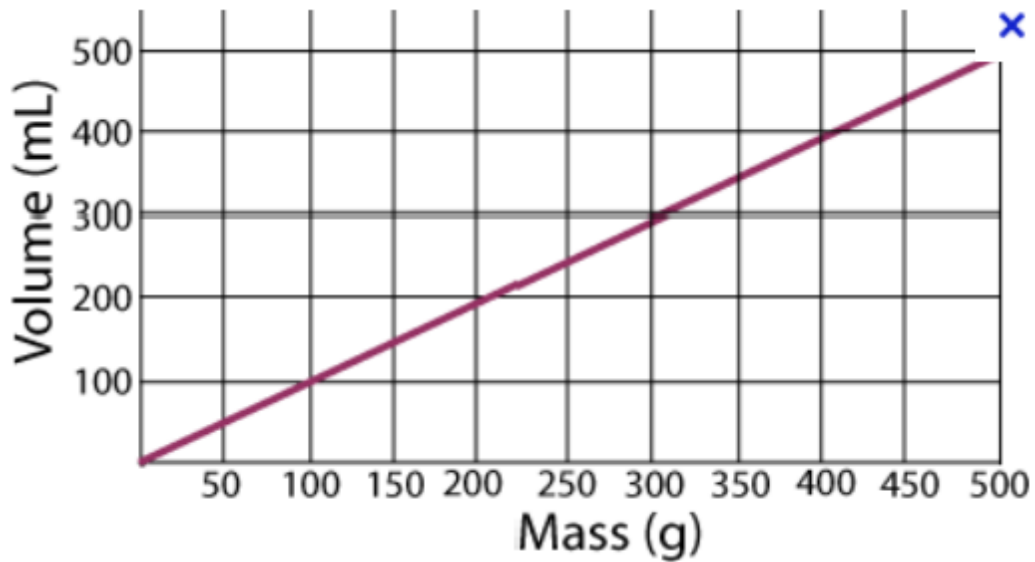
b. the mass of the ice blocks

d. cannot be determined

Name: \_\_\_\_\_

ID: A

\_\_\_\_\_ 48.

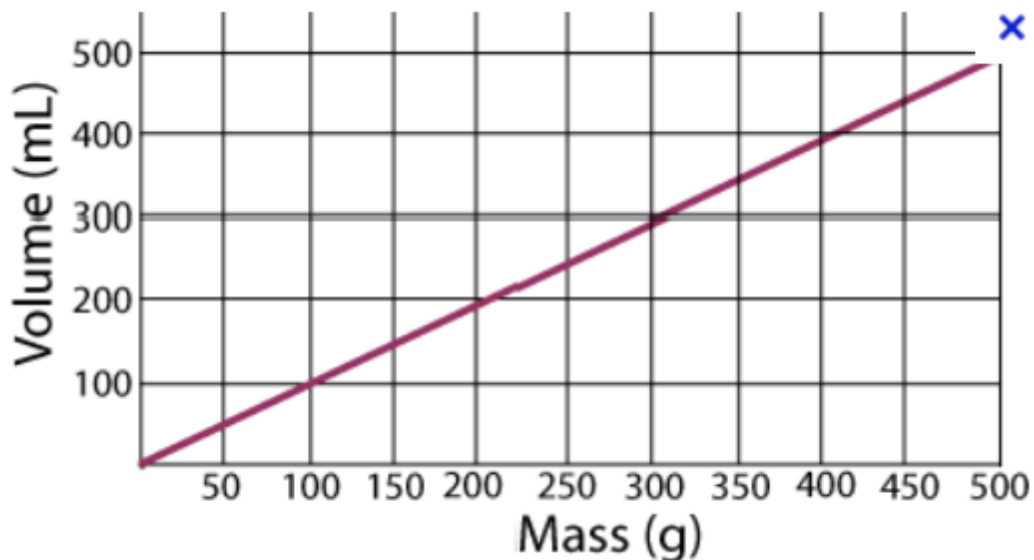


A student conducted an experiment to see how many mL of water came from different size blocks of ice.

Based on the graph above, what was the dependent variable?

- a. the type of material melted
- b. the mass of the ice blocks
- c. the volume of the melted water
- d. cannot be determined

\_\_\_\_ 49.



A student conducted an experiment to see how many mL of water came from different size blocks of ice.

What is the slope of the graph above?

- a. 100 mL / 50 grams
- b. 1 g / mL
- c. 1 mL / g
- d. 150 mL / 150 g

\_\_\_\_ 50.



What is the most important holiday of the year?

- a. Halloween
- b. Labor Day
- c. Pi Day
- d. Mole Day