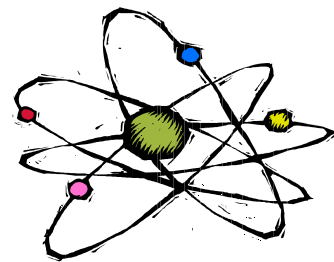


# ATOM & PERIODIC TABLE pre-TEST



## MULTIPLE CHOICE:

- Which group is the least reactive of all of the elements?
  - alkali metals
  - alkaline earth metals
  - halogens
  - noble gases
- Most nonmetallic elements are found on the \_\_\_\_\_ side of the periodic table.
  - upper right
  - bottom right
  - upper left
  - bottom left
- As you read the periodic table from left to right, the mass numbers of the elements:
  - increase
  - decrease
  - stay the same
  - decrease then increase
- Isotopes are atoms that have the same number of \_\_\_\_\_, but differing numbers of \_\_\_\_\_.
  - electrons, protons
  - protons, neutrons
  - neutrons, electrons
  - neutrons, protons
- The first person to group the elements in a periodic manner according to their properties was:
  - Mendeleev
  - Einstein
  - Curie
  - Rutherford
- Lithium, potassium, and cesium are what types of metals?
  - transition
  - alkaline earth
  - alkali
  - inner transition
- A particle in the nucleus of an atom whose charge is opposite to the that of an electron is the:
  - proton
  - neutron
  - core
  - quark

## FILL IN THE BLANK:

- The horizontal rows (left to right) on the periodic table are called \_\_\_\_\_.
- Elements in Group 17 are called \_\_\_\_\_.
- The first energy level or shell of an atom can hold a maximum of \_\_\_\_\_ electrons.
- The electrons in the outermost energy level of an atom are called \_\_\_\_\_ electrons.
- The smallest particle of an element that retains all of the properties of that element is an \_\_\_\_\_.
- The modern model of the atom shows that most of the mass comes from the atom's \_\_\_\_\_.
- In a neutral atom, the number of \_\_\_\_\_ is equal to the number of protons.
- Elements that have properties of metals and nonmetals are called \_\_\_\_\_.

**PERIODIC TABLE:** Use the periodic table to answer the following questions.

16. Rb is the chemical symbol of \_\_\_\_\_.
17. The chemical symbol of copper is \_\_\_\_\_.
18. An atom of this element contains 74 protons.
19. What gas has an atomic mass number of 20?
20. What period 5 transition element has 51 neutrons?
21. How many neutrons does barium have?
22. Name the alkali metal in the same period as nitrogen.
23. If silicon has a charge of  $-4$ , how many electrons does it have?
24. How many protons does beryllium have?
25. How many neutrons does potassium have?
26. For a neutral atom of silver, how many electrons does it have?
27. If cesium has a charge of  $+1$ , how many electrons does it have?
28. The noble gas with the least number of protons is \_\_\_\_\_.
29. Which element has 30 electrons when it is neutral?



**DIAGRAM:** Use the diagram and your periodic table to answer the following questions.

30. What is the atomic number of this element?
31. What is the name of this element?
32. What is the atomic mass number of this element?
33. What group does this element belong to?
34. How many energy levels does this element have?
35. How many valence electrons does this atom have?

