

Periodicity Part 1

- Who first published the classification of the elements that is the basis of our periodic table today?
- By what property did Mendeleev arrange the elements?
- By what property did Moseley suggest that the periodic table be arranged?
- What is the periodic law?
- What is a period? How many are there in the periodic table?
- What is a group (also called a family)? How many are there in the periodic table?
- State the number of valence electrons in an atom of:
 - sulfur
 - calcium
 - chlorine
 - arsenic
- Give the names and chemical symbols for the elements that correspond to these atomic numbers:
 - 10
 - 18
 - 36
 - 90
- List, by number, both the period and group of each of these elements.

	<u>Symbol</u>	<u>Period</u>	<u>Group</u>
a. beryllium	Be		
b. iron	Fe		
c. lead	Pb		
- Which of the following pairs of elements belong to the same period?
 - Na and Cl
 - Na and Li
 - Na and Cu
 - Na and Ne
- Which of the following pairs of elements belong to the same group?
 - H and He
 - Li and Be
 - C and Pb
 - Ga and Ge
- How does an element's period number relate to the number of the energy level of its valence electrons?
- What are the transition elements?
- In what type of orbitals are the actinide and lanthanide electrons found?
- Would you expect strontium to be, chemically, more similar to calcium or rubidium and WHY?
- What are the coinage elements?
- What is the heaviest noble gas? What is the heaviest alkaline earth metal?
- What are the Group 1 elements called?
- What are the Group 2 elements called?
- What are the Group 17 elements called?
- What are the Group 18 elements called?
- What is the name given to the group of elements that have the following valence shell electron configurations?
 - s^2
 - s^2p^6
 - s^2p^5
 - s^1
- List the three lightest members of the noble gases.
- List all of the alkali metals.
- Which alkali metal belongs to the sixth period?
- Which halogen belongs to the fourth period?
- What element is in the fifth period and the eleventh group?
- Why do all the members of a group have similar properties?