**CST Review Topic 1- Atomic and Molecular Structure:** 1. Complete this table below : Chemistry Textbook (p. 98-101)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Symbol of Element** | **Atomic Number** | **Mass Number** | **Number of Protons** | **Number of Neutrons** | **Number of Electrons** | **Atom, Ion, or Isotope** |
|  | 9 |  |  | 10 | 10 |  |
|  |  |  | 14 | 15 | 14 |  |
|  |  | 55 | 25 |  | 25 |  |

2. Compare the relative size and relative density of an atom with its nucleus. (p.95, 97)

3. How many electrons are available for bonding in the following atoms? (p. 159-161)

a) barium

b) sodium

c) aluminum

4. Name the following groups: Group 1A, Group 2A, Group 7A, and Group 8A. (p. 155- 158)

5. Where are the transition metals? (p. 154-158)

6. What elements are considered semi-metals (metalloids)? (p. 154-158)

7. Write a general statement identifying the locations of metals, nonmetals, and metalloids? (p. 156-157)

8. Where on the periodic table would you find the elements with large atomic numbers and large atomic masses? (p. 156-157)

9. Indicate which element in each pair has the larger atomic radius. (p. 163)

a) sodium, lithium

b) strontium, magnesium

c) carbon, germanium

d) selenium, oxygen

10. Indicate which element in each pair has the highest electronegativity. (p. 169)

a) chlorine, bromine

b) carbon, nitrogen

c) magnesium, neon

d) arsenic, calcium

11. Why don’t we include noble gases in the trend for electronegativity? (p. 169)

12. Which of the following properties increases as you move from left to right across a period: electronegativity & atomic radius? (p. 163-169)