

Chemistry – Chapter 4 Book assignment #1: Atom theory - number of protons, neutrons, electrons

1. How many protons and electrons are in each atom?

- a. Fluorine (atomic number = 9)
- b. Calcium (atomic number = 20)
- c. Aluminum (atomic number = 13)
- d. Potassium (atomic number = 19)

2. Complete the table:

Element	Atomic #	Protons	Electrons
S	16	a. _____	b. _____
V	c. _____	23	d. _____
e. _____	f. _____	g. _____	5

3. How many neutrons are in each atom?

- a. $^{80}\text{Br}^{35}$
- b. $^{32}\text{S}^{16}$
- c. $^{108}\text{Ag}^{47}$
- d. $^{207}\text{Pb}^{82}$

4. Use the atomic numbers of each element along with the other information below to express the composition of each atom below in shorthand form.

- a. carbon-12
- b. boron-11
- c. beryllium-9
- d. oxygen-16