LEARNING AS ONE NATION

Expanded Project

GC1 Q1_7

SHS LEARNING ACTIVITY

Name: _____ **Score/Mark:** _____

Grade and Section: _____ **Date:** _____

Strand: ☑ STEM ☐ ABM ☐ HUMSS ☐ ICT (*TVL Track*)

Subject: *General Chemistry 1*

Type of Activity: ☑ Concept Notes ☐ Skills: Exercise/Drill ☐ Illustration ☐ Performance Task ☐ Essay/Report ☐ Others: _____

Activity Title: **A-05. Exercises on Subatomic Particles**

Learning Target: To determine the number of protons, neutrons, and electrons in a given atom or ion

References: *(Author, Title, Pages)* V. Sojo and M.D.A.D. Cadeliña, CVIF-DLP Learning Activities

With the knowledge from the earlier activity, you can determine the number of protons, neutrons, and electrons. Given a bromide (Br^-) ion, you can determine its proton, electron, and neutron number by looking for additional information in the periodic table.

35
Br
79.904

1. **Number of Protons**. Look at the atomic number of Br in the periodic table. The atomic number is the number above the element symbol which is 35. Therefore, the number of protons is also **35**.
2. **Number of Electrons**. In a neutral Br atom, the number of protons and electrons are the same, which is 35. However, we are given a Br^- ion, which means that the Br atom has gained 1 electron. Thus, the number of electrons is **36**.
3. **Number of Neutrons**. To calculate the number of neutrons, the number of protons is subtracted from the isotopic number. Since the isotopic number is not given, you can utilize the number below the element symbol, which is 79.904. This must be rounded off to the nearest whole number to obtain the mass number 80 (Note: If the isotopic number is given, there is no need to undergo this process). The neutron number is **45** (35 subtracted from 80)**.**

Exercise: Fill in the boxes for the number of protons, neutrons, and electrons.

Element/Ion	No. of protons	No. of electrons	No. of neutrons
Sb^{3+}			
Sb^{5+}			
Sb			
F			
N^{3-}			
Se^{2-}			
^{15}N			
^{14}N			