

## Enriched Atomic Model Notes

**Chadwick: 1932**

- Agreed with Rutherford-Bohr model, but believed something was still missing in the nucleus.

- **What is missing from model and why are they necessary?**

Neutrons are missing. They are necessary because they prevent the  $p^+$  from repelling off each other and causing the nucleus to explode.

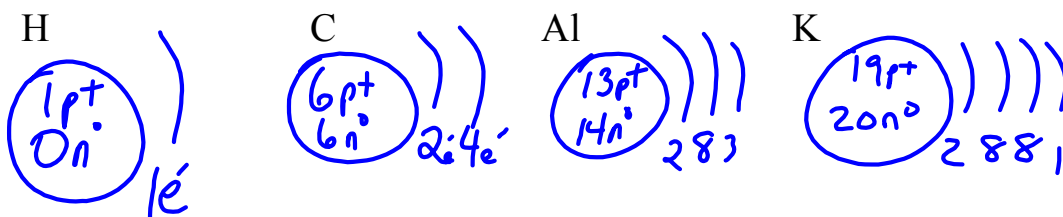


**How to calculate neutron number?**

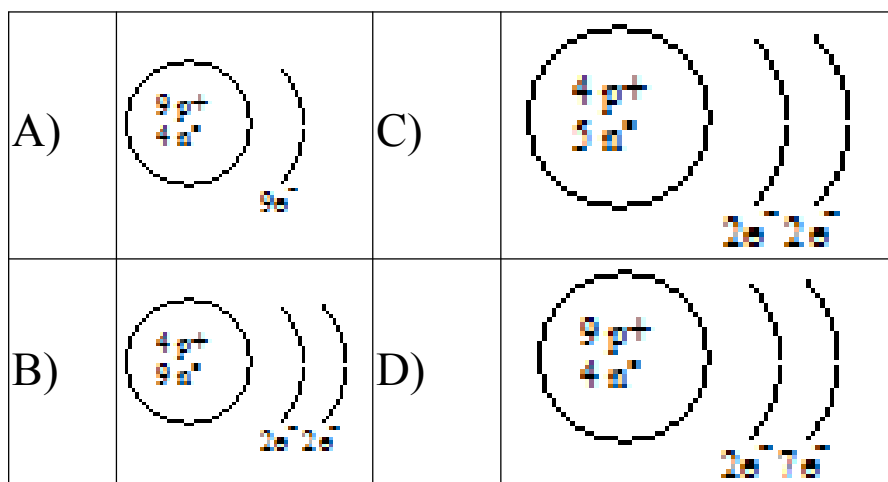
**Carbon**

6	A #  atomic mass : nucleus = # of $p^+$ + $n^0$ mass # = atomic mass rounded off
C	
12.011	

**Simplified atomic model**



1. Which of the following diagrams correctly represents the simplified Bohr-Rutherford model of the beryllium (Be) atom?



1. Which of the following characteristics describe an atom in terms of the simplified model?

1- The number of electrons is equal to the number of protons.
2- The number of protons is equal to the number of neutrons.
3- The nucleus is made up of neutrons, protons and electrons.
4- The nucleus is made up of neutrons and electrons.
5- The nucleus is made up of protons and neutrons.
6- Protons revolve around the nucleus.
7- Electrons revolve around the nucleus.

- A) 1, 2 and 3  
 B) 1, 4 and 6  
 C) 1, 5 and 7  
 D) 2, 5 and 7