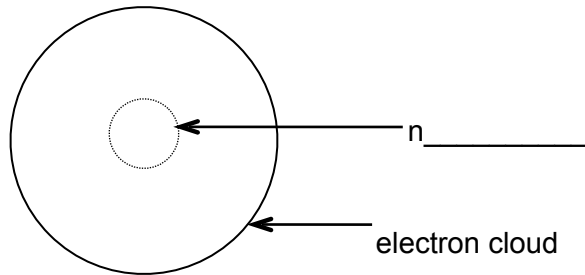


## Structure of an Atom Questions



The e\_\_\_\_\_ move around outside the n\_\_\_\_\_. These electrons are n\_\_\_\_\_ charged.

The **nucleus** of an atom contains:

- p\_\_\_\_\_ which are \_\_\_\_\_ charged
- n\_\_\_\_\_ which have \_\_\_\_\_ charge i.e are n\_\_\_\_\_.

**An atom always has the same number of protons as electrons**, so the number of positive charges is the same as the number of negative charges and so an atom is \_\_\_\_\_ overall.

### **Atomic Number:**

This tells us the number of p\_\_\_\_\_ an atom has. Examples: The atomic number for carbon is 6. So a carbon atom has \_\_\_ p\_\_\_\_\_ in its nucleus. A carbon atom also has \_\_\_ electrons. Atomic number for oxygen is 8: Oxygen atoms have \_\_\_ protons and \_\_\_ electrons.

### **Mass number:**

This number tells us the total number sub-atomic particles in the nucleus. It tells us the number of protons **plus** the number of neutrons in a nucleus.

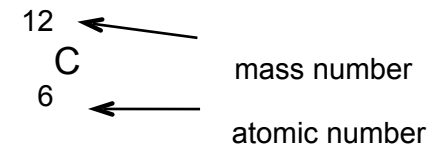
So, if magnesium has a mass number of 24, this tells us that the total number of p\_\_\_\_\_ **plus** n\_\_\_\_\_ = 24.

*Can you complete the table below?*

Atom	atomic number	mass number	number of protons	number of electrons	number of neutrons
nitrogen	7	14			
sulfur	16	32			
lithium	3	7			
hydrogen	1	1			
potassium		39	19		
oxygen			8		8
carbon		12		6	
chlorine	17				18
mercury		201		80	
tin		119	50		

### **Atomic symbols:**

We represent the atomic number and the mass number of an atom as follows:



*Can you write similar symbols for:*

Oxygen

Sulphur

