

- Compare and contrast atomic number and mass number.
The atomic mass tells the average mass of the atoms of an element, while the atomic number is the protons in the nucleus of an atom.
- What is an isotope? Give examples.
Atoms of the same element which have the same atomic number but different number of neutrons.
- What is an ion?
An ion is atoms that have gained or lost electrons and therefore have a negative or positive charge.
- Chlorine is a greenish, poisonous gas. What is the **atomic number** of Chlorine? 17
- How many protons does an atom of Chlorine have? 17
- If the **mass number** of a Chlorine atom is 37, how many neutrons does it have? 20
- How many **electrons** does a neutral atom of Chlorine have? 35
- If an ion of Chlorine has the symbol Cl^{1-} , how many electrons does it have? 33

Isotope symbol	Element name	Atomic number	Mass number	Number of protons	Number of neutrons	Number of electrons
$^{14}_6\text{C}$	Carbon	6	14	6	8	6
$^{109}_{47}\text{Ag}^{1+}$	Silver	47	109	47	62	46
$^{114}_{50}\text{Sn}$	Tin	50	114	50	64	114
$^{117}_{50}\text{Sn}$	Tin	50	117	50	67	119
$^{81}_{35}\text{Br}^{1-}$	Bromine	35	81	35	46	79
$^{42}_{20}\text{Ca}^{2+}$	Calcium Ion	20	42	20	22	40