

Atom 1	Atom 2	Relationship between atom 1 and atom 2
${}^{12}_{6}\text{C}$	${}^{13}_{6}\text{C}$	<input type="checkbox"/> Isotopes <input type="checkbox"/> Same Atom, Not Isotopes of Each Other <input type="checkbox"/> Different Element
Carbon-12	${}^{12}_{6}\text{C}$	<input type="checkbox"/> Isotopes <input type="checkbox"/> Same Atom, Not Isotopes of Each Other <input type="checkbox"/> Different Element
Argon-40	Argon-41	<input type="checkbox"/> Isotopes <input type="checkbox"/> Same Atom, Not Isotopes of Each Other <input type="checkbox"/> Different Element
${}^{11}_{5}\text{B}$	Boron-10	<input type="checkbox"/> Isotopes <input type="checkbox"/> Same Atom, Not Isotopes of Each Other <input type="checkbox"/> Different Element
An atom with 13 protons and 13 neutrons	An atom with 14 protons and 13 neutrons	<input type="checkbox"/> Isotopes <input type="checkbox"/> Same Atom, Not Isotopes of Each Other <input type="checkbox"/> Different Element

1. Determine the number of protons, neutrons and electrons in each of the following:

${}^{208}_{82}\text{Pb}^{4+}$
 _____ protons
 _____ neutrons
 _____ electrons

${}^{34}_{16}\text{S}^{2-}$
 _____ protons
 _____ neutrons
 _____ electrons

${}^{63}_{29}\text{Cu}^{+}$
 _____ protons
 _____ neutrons
 _____ electrons

2. Give the complete symbols for ions with the following numbers of subatomic particles:

15 protons, 16 neutrons, and 18 electrons _____

56 protons, 82 neutrons, and 54 electrons _____

13 protons, 14 neutrons, and 10 electrons _____