

Parts Of An Atom

Worksheet Answer Key

An atom is made up of protons and neutrons, which are in the nucleus, and electrons which are in the electron cloud surrounding the nucleus.

The atomic number equals the number of protons. The electrons in a neutral atom equal the number of protons.

The mass number equals the sum of the protons and neutrons.

The charge indicates the number of electrons that have been lost or gained. A positive charge indicates the number of electrons (which are negatively charged) that have been lost. A negative charge indicates the number of electrons that have been gained.

This structure can be written as part of a chemical symbol.

Element / Ion	Atomic Number (Protons)	Mass Number (Protons & Neutrons)	Charge	Protons (Atomic #)	Neutrons (Mass # - Atomic #)	Electrons (= Protons)
$^{24}_{12}\text{Mg}$	12	24	0	12	$24 - 12 = 12$	12
$^{39}_{19}\text{K}$	19	39	0	19	$39 - 19 = 20$	19
$^{23}_{11}\text{Na}^{+1}$	11	23	+1	11	$23 - 11 = 12$	10
$^{19}_{9}\text{F}^{-1}$	9	19	-1	9	$19 - 9 = 10$	10
$^{27}_{13}\text{Al}^{+3}$	13	27	+3	13	$27 - 13 = 14$	10
^1_1H	1	1	0	1	$1 - 1 = 0$	1
$^{24}_{12}\text{Mg}^{+2}$	12	24	+2	12	$24 - 12 = 12$	10
$^{108}_{47}\text{Ag}$	47	108	0	47	$108 - 47 = 61$	47
$^{32}_{16}\text{S}^{-2}$	16	32	-2	16	$32 - 16 = 16$	18
^2_1H	1	2	0	1	$2 - 1 = 1$	1
$^{35}_{17}\text{Cl}^{-1}$	17	35	-1	17	$35 - 17 = 18$	18
$^9_4\text{Be}^{+2}$	4	9	+2	4	$9 - 4 = 5$	2