

Answer Key

Atomic Number = # of Protons = # of Electrons

Mass Number = Protons + Neutrons

Substance	Symbol	Atomic Number	Mass Number	Number of Protons	Number of Neutrons	Number of Electrons
Sulfide	S^{2-}	16	32	16	16	18
Chloride	Cl^{-}	17	37	17	20	18
Magnesium	Mg^{2+}	12	26	12	14	10
Fluoride	F^{-}	9	19	9	10	10
Sodium	Na^{+}	11	24	11	13	10
Phosphide	P^{3-}	15	31	15	16	18
Potassium	K^{+}	19	39	19	20	18
Bromide	Br^{-}	35	79	35	44	36
Zinc	Zn^{2+}	30	64	30	34	28
Oxide	O^{2-}	8	16	8	8	10



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Magnesium	Mg	12	26	12	14	12
Helium	He	2	4	2	2	2
Gold	Au	79	201	79	122	79
Lead	Pb	82	207	82	125	82
Fluorine	F	9	19	9	10	9
Germanium	Ge	32	74	32	42	32
Lithium	Li	3	6	3	3	3
Potassium	K	19	39	19	20	19
Bromine	Br	35	81	35	46	35
Radon	Rn	86	219	86	133	86



Answer Key

1. Using the following words, answer the questions below.

electrons, neutrons, nucleus, protons, shells

- (a) The center of the atom is called the nucleus.
- (b) Protons have a positive charge.
- (c) Electrons have a negative charge.
- (d) Neutrons have no charge.
- (e) Protons and neutrons are contained within the nucleus of the atom.
- (f) Electrons are contained in the shells of an atom.
- (g) The protons and the neutrons of the atom have the same mass.

2. A neutral atom has 54 protons and 70 neutrons.

- (a) What is the atomic number? 54
- (b) What is the mass number of the atom? 124
- (c) How many electrons does the atom have? 54
- (d) What is the name of the atom? Xenon

3. Assuming all the atoms have neutral charge, complete the following table using the information already provided.

	Protons	Electrons	Neutrons	Mass Number
Atom 1	30	30	20	50
Atom 2	26	26	24	50
Atom 3	44	44	26	70
Atom 4	12	12	18	30
Atom 5	37	37	43	80
Atom 6	19	19	11	30

