

Name: Key Period: _____ Date: _____

Problem Set #3 – Subatomic Particles

Solve the following problems and report your final answer using the correct number of significant figures. Show all work!

Counting subatomic particles: Fill in the boxes and complete symbol if mass number and/or charge are blank:

Atom/ion	Mass #	Atomic #	Protons	Neutrons	Electrons	Charge
^2H	2	1	1	1	1	0
$^3\text{H}^{+1}$	3	1	1	2	0	+1
^{12}C	12	6	6	6	6	0
$^7\text{Li}^{+1}$	7	3	3	4	2	+1
$^{35}\text{Cl}^{-1}$	35	17	17	18	18	-1
$^{25}\text{Mg}^{+2}$	25	12	12	13	10	+2
$^{76}\text{As}^{-3}$	76	33	33	43	36	-3
^{109}Ag	109	47	47	62	47	0

Complete the following chart

Element	Chemical Symbol	Type of ion formed	Charge of ion formed	Name of ion formed
Lithium	Li	cation	+1	lithium ion
Radium	Ra	cation	+2	radium ion
Oxygen	O	anion	-2	oxide ion
Aluminum	Al	cation	+3	Aluminum ion
Bromine	Br	anion	-1	Bromide ion
Potassium	K	cation	+1	potassium ion

