

Mono-Atomic Ions & Ionic Compound Formation name: _____

When a metal atom loses one or more electrons it becomes a positive ion called a cation. When a nonmetal gains one or more electrons it becomes a negative ion called an anion. Atoms will lose or gain electrons to change their ground state electron configurations into noble gas configurations. When an ion forms, it is said to be _____ to a noble gas, meaning it now has a noble gas electron configuration.

For each metal atom show the ion it forms. For each cation, combine it with three different anions (one each from groups A, B, and C. Show the formula for the neutral ionic compound, and give the proper chemical name.

When naming ionic compounds we also name the cation first, using just the name of the metal atom. The anion comes second, and we always change the name of the nonmetal atom to -ide. Oxygen becomes oxide, nitrogen becomes nitride, and bromine becomes bromide (for examples).

On the second page, using the cations and anions provided:

PUT THE ION CHARGES IN, don't leave the atoms as atoms!

Determine the proper name for the neutral ionic compound that forms from these kinds of ions.

Write the proper chemical formula for these compounds, using the ion charges to determine the ratios of cations to anions.

Use the first three as examples.

1A	Li ⁺¹	F ⁻¹	lithium fluoride	LiF
1B	Na ⁺¹	O ⁻²	sodium oxide	Na ₂ O
1C	K ⁺¹	N ⁻³	potassium nitride	K ₃ N
2A	Rb	Cl		
2B	Cs	S		
2C	Fr	P		
3A	Be	Br		
3B	Mg	O		
3C	Ca	N		
4A	Sr	I		
4B	Ba	S		
4C	Al	P		
5A	Li	Br		
5B	Na	O		
5C	K	P		
6A	Rb	I		
6B	Cs	O		
6C	Fr	P		
7A	Be	Cl		
7B	Mg	S		
7C	Ca	P		
8A	Sr	S		
8B	Ba	P		
8C	Al	F		
9A	Li	O		
9B	Na	N		
9C	K	Cl		
10A	Rb	S		
10B	Cs	P		
10C	Fr	Br		
11A	Be	O		
11B	Mg	N		
11C	Ca	I		
12A	Zn	P		
12B	Ag	O		
12C	Ga	S		