

Warm-up:

1. Fill in the blanks in the following chart.

Element Name	# Valence Electrons	Electron Dot Diagram	Metal or Nonmetal?	Most likely Ionic Charge	Name of Ion
Calcium	2	Ca·	M	2+	
Sulfur	6	·S·	NM	2-	
Potassium	1	K·	M	1+	
Nitrogen	5	·N·	NM	3-	
Chlorine	7	·Cl·	NM	1-	
Aluminum	3	·Al·	M	3+	
Phosphorus	5	·P·	NM	3-	

2. Write the electron configurations for the following ions:



Cation = positive Anion = negative

Ion Naming Conventions:

① Metal Cations keep elemental name

↳ ex: Na = Sodium

Na⁺ = Sodium ion

↳ ex: Cu = Copper

Cu²⁺ = Copper [II] Ion } D block has multiple stable states

Cu⁺ = Copper [I] Ion

② Non-metal anions keep stem of the elemental name

but replace the end "-ide" as a suffix

↳ F = Fluorine

↳ F⁻ = Fluoride ion
stem suffix

• Ionic Compounds: oppositely charged ions bonded together

↳ Cation + Anion = Metals + Non-Metal

Examples: a. write the dot diagram b. write the formula c. Name compound

