

Name: _____

Period: _____

Metal or Non-metal?	Ionic or Covalent?	Name These Ionic Compounds	Use the Polyatomic Ion Chart on the front of the worksheet to name these Polyatomic Ions:
M N Iron Oxide	<u>Ionic</u>	MgF ₂ Magnesium Fluor- <u>ide</u>	
M N Barium Chloride	<u>Ionic</u>	Li ₂ O Lithium Ox- <u>ide</u>	HCO ₃ ¹⁻ <u>Hydrogen carbonate</u>
N N Carbon Dioxide	<u>covalent</u>	NaCl Sodium Chlor- <u>ide</u>	SO ₄ ²⁻ <u>sulfate</u>
M N Magnesium Oxide	<u>Ionic</u>	K ₂ O Potassium Ox- <u>ide</u>	O ₂ ²⁻ <u>peroxide</u>
M N Aluminum Fluoride	<u>Ionic</u>	CaS <u>calcium</u> Sulf- <u>ide</u>	SO ₃ ²⁻ <u>sulfite</u>
N N Nitrogen Tribromide	<u>covalent</u>	BeI ₂ <u>beryllium</u> Iod- <u>ide</u>	NO ₃ ¹⁻ <u>nitrate</u>
M N Chromium Fluoride	<u>Ionic</u>	AlBr ₃ <u>Aluminum</u> Brom- <u>ide</u>	NH ₄ ⁺ <u>ammonium</u>
M N Potassium Oxide	<u>Ionic</u>	CaF ₂ <u>calcium</u> Fluoride	CrO ₄ ²⁻ <u>chromate</u>
		MgO <u>magnesium</u> oxide	OH ¹⁻ <u>hydroxide</u>
		LiCl <u>Lithium</u> chloride	PO ₄ ³⁻ <u>phosphate</u>
			CO ₃ ²⁻ <u>carbonate</u>

Define these Greek Prefixes		1. CO ₂ B	A Carbon monoxide	Name These Covalent Compounds	
Penta = <u>5</u>	Tetra = <u>4</u>	2. C ₂ O ₄ E	B Carbon dioxide	Si ₂ O ₃	Disilicon <u>tri</u> oxide
Nona = <u>9</u>	Hexa = <u>6</u>	3. C ₃ O ₅ D	C Dicarbon monoxide	N ₃ Cl ₄	<u>tri</u> -nitrogen tetrachloride
Mono = <u>1</u>	Hepta = <u>7</u>	4. CO-A	D Tricarbon pentoxide	SO ₂	Sulfur <u>di</u> oxide
Octa = <u>8</u>	Deca = <u>10</u>	5. C ₂ O C	E Dicarbon tetroxide	PO ₅	Phosphorous <u>penta</u> oxide
Tri = <u>3</u>	Di = <u>2</u>	6. CO ₈ F	F Carbon octoxide	S ₂ F ₄	<u>di</u> sulfur <u>tetra</u> fluoride

Name these Polyatomic Compounds (Remember — no prefixes!)		Classify and Name These Compounds	
		Ionic, Covalent, or Polyatomic	Name
CaSO ₄	Calcium <u>sulfate</u>	1. BaCl ₂	<u>Ionic</u> <u>Barium chloride</u>
K ₂ CO ₃	<u>Potassium</u> carbonate	2. CO	<u>covalent</u> <u>carbon monoxide</u>
CuNO ₃	Copper (I) <u>nitrate</u>	3. Ag ₂ O	<u>Ionic</u> <u>silver oxide</u>
NH ₄ Cl	<u>ammonium</u> chloride	4. K ₂ SO ₄	<u>polyatomic</u> <u>potassium sulfate</u>
Mg(NO ₃) ₂	Magnesium <u>nitrate</u>	5. MgBr ₂	<u>Ionic</u> <u>magnesium bromide</u>
K ₃ PO ₄	Potassium <u>phosphate</u>	6. SO ₃	<u>covalent</u> <u>sulfur trioxide</u>
Li ₂ (CrO ₄)	Lithium <u>chromate</u>	7. P ₂ O ₄	<u>covalent</u> <u>di phosphorous tetroxide</u>
Mg(OH) ₂	Magnesium <u>Hydroxide</u>	8. Be(CrO ₄)	<u>polyatomic</u> <u>beryllium chromate</u>
Al(PO ₄)	Aluminum <u>Phosphate</u>	9. LiF	<u>ionic</u> <u>lithium fluoride</u>
K(NO ₃)	<u>Potassium</u> <u>nitrate</u>	11. CO ₂	<u>covalent</u> <u>carbon monoxide</u>
Ca ₂ SO ₃	<u>calcium</u> <u>sulfite</u>	12. OF ₂	<u>covalent</u> <u>oxygen di fluoride</u>