

Bonding Review

- How many valence electrons do the following elements have?

a. Na	_____	e. Ne	_____
b. Li	_____	f. Ca	_____
c. O	_____	g. Ge	_____
d. Si	_____	h. Al	_____
- Describe how ionic bonds are formed.
- Ionic bonds _____ electrons, covalent bonds _____ electrons and metallic bonds _____ electrons.
- Ionic bonds occur between _____ and covalent bonds occur between _____.
- What type of bonds exist between the following compounds?

a. NaCl	_____	d. Hg	_____	g. Fe	_____
b. CO ₂	_____	e. NH ₃	_____	h. CsCl	_____
c. KF	_____	f. H ₂ O	_____	i. CCl ₄	_____
- Draw the Lewis structures for the following. For the molecules, state the shape and polarity of the molecule (linear, bent, trigonal planar, pyramidal or tetrahedral):
 - Br
 - Sn
 - CH₄
 - H₂O
 - CO₃²⁻
 - N₂
 - CO₂
 - NH₃
- Name the following compounds:

a. KBr	b. H ₂ O	c. Cu ₂ O (be careful!)	d. Na ₃ PO ₄	e. C ₂ H ₄
f. (NH ₄) ₂ O	g. P ₄ O ₁₀	h. Fe ₂ (SO ₄) ₃ (be careful!)	i. KNO ₃	j. N ₂ O ₄
- Write the formulas for the following compounds:

a. sodium chloride	b. diphosphorus pentoxide	c. carbon dioxide	d. aluminum oxide
e. copper (II) phosphate	f. ammonium sulfate	g. iron (III) chloride	h. lithium sulfide

The Mole Review:

What is Avogadro's number? What does it mean? What is it based on?

Complete the following: p. 346 #91, p. 347 #99, 101ab, 103ab, 111, p.348 # 127, 128, 136, 147, 150

Equations: Complete the following: p. 305 #74(chromate is CrO₄²⁻), 78, 83, 88, 89

Stoichiometry: Complete the following: p. 379 #63, 65, 68, p. 380 #70, 72