

WKS #2-2: Review Chapter 2

Name _____

Problems from pp. 69-72 #2.9, 2.68, 2.70, 2.88; Mixed Naming & Formulas

2.9 Use the helium-4 isotope to define atomic number and mass number. Why does a knowledge of atomic number enable us to deduce the number of electrons present in an atom?

2.68 What is wrong with the chemical formula for each of the following compounds? Write the correct formula.

(a) $(\text{NH}_3)_2\text{CO}_3$ (ammonium carbonate):

(b) CaOH (calcium hydroxide):

(c) CdSO_3 (cadmium sulfide):

(d) ZnCrO_4 (zinc dichromate):

2.70 (a) Which elements are likely to form ionic compounds?

(b) Which metallic elements are most likely to form cations with different charges?

2.88 Fill in the blanks in the following table.

Cation	Anion	Formula	Name
Mg^{2+}	HCO_3^-	$\text{Mg}(\text{HCO}_3)_2$	
Sr^{2+}	Cl^-		Strontium chloride
		$\text{Fe}(\text{NO}_2)_3$	Iron(III) nitrite
Mn^{2+}	ClO_3^-	$\text{Mn}(\text{ClO}_3)_2$	
Sn^{4+}	Br^-		Tin(IV) bromide
		$\text{Co}_3(\text{PO}_4)_2$	Cobalt(II) phosphate
		Hg_2I_2	Mercury(I) iodide
Cu^+	CO_3^{2-}		Copper(I) carbonate
Li^+	N^{3-}	Li_3N	
		Al_2S_3	Aluminum sulfide

Naming & Formulas of Ionics, Acids & Molecular Compounds

- | | |
|--|----------------------------|
| a) KBr | _____ |
| b) H ₂ SO ₄ (aq) | _____ |
| c) N ₂ O ₅ | _____ |
| d) NH ₄ Cl | _____ |
| e) FeCl ₃ | _____ |
| f) HI (aq) | _____ |
| g) H ₂ SO ₃ (aq) | _____ |
| h) IF ₇ | _____ |
| i) Ba(ClO ₂) ₂ | _____ |
| j) HNO ₃ (g) | _____ |
| k) P ₄ O ₁₀ | _____ |
| l) TiO ₂ | _____ |
| m) CO | _____ |
| n) HClO ₂ (aq) | _____ |
| o) _____ | lithium fluoride |
| p) _____ | phosphorous acid |
| q) _____ | boron trifluoride |
| r) _____ | ammonium sulfate |
| s) _____ | nickel(II) acetate |
| t) _____ | carbon disulfide |
| u) _____ | carbonic acid |
| v) _____ | silver phosphite |
| w) _____ | nitrous acid |
| x) _____ | disulfur dichloride |
| y) _____ | phosphoric acid |
| z) _____ | lead(II) oxide |
| aa) _____ | carbon tetraiodide |
| bb) _____ | nitrogen monoxide |
| cc) _____ | hydrosulfuric acid |