**Revised August 2010**

# AP WORKSHEET 2e: Inorganic Nomenclature II

Add either a name or a formula to complete each table. (100)

| | |
|---|---|
| 1. Potassium dichromate | $K_2Cr_2O_7$ |
| 2. Lithium sulfide | $Li_2S$ |
| 3. Potassium bromide | $KBr$ |
| 4. Cesium iodide | $CsI$ |
| 5. Calcium phosphide | $Ca_3P_2$ |
| 6. Sodium fluoride | $NaF$ |
| 7. Strontium oxide | $SrO$ |
| 8. Beryllium sulfide | $BeS$ |
| 9. Magnesium bromide | $MgBr_2$ |
| 10. Lithium oxide | $Li_2O$ |
| 11. Strontium chloride | $SrCl_2$ |
| 12. Barium bromide | $BaBr_2$ |
| 13. Magnesium sulfide | $MgS$ |
| 14. Magnesium iodide | $MgI_2$ |
| 15. Hydrogen fluoride (Hydrogen monofluoride) | $HF$ |
| 16. Barium phosphide | $Ba_3P_2$ |
| 17. Sodium hydrogen phosphate | $Na_2HPO_4$ |
| 18. Potassium chloride | $KCl$ |
| 19. Lithium nitride | $Li_3N$ |
| 20. Calcium sulfide | $CaS$ |
| 21. Rubidium oxide | $Rb_2O$ |
| 22. Strontium nitride | $Sr_3N$ |
| 23. Cesium phosphide | $Cs_3P$ |
| 24. Magnesium carbonate | $MgCO_3$ |
| 25. Beryllium sulfate | $BeSO_4$ |

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|---|---|
| 26. Dinitrogen Tetraoxide | $N_2O_4$ |
| 27. Carbon dioxide | $CO_2$ |
| 28. Mercury(I) chloride | $HgCl$ |
| 29. Hydroiodic acid | $HI_{(aq)}$ |
| 30. Iodic acid | $HIO_{3(aq)}$ |
| 31. Perbromic acid | $HBrO_{4(aq)}$ |
| 32. Hypobromous acid | $HBrO_{(aq)}$ |
| 33. Phosphorus pentachloride | $PCl_5$ |
| 34. Iodine monochloride | $ICl$ |
| 35. Antimony(III) fluoride | $SbF_3$ |
| 36. Bromine monofluoride | $BrF$ |
| 37. Bromine dioxide | $BrO_2$ |
| 38. Dinitrogen pentoxide | $N_2O_5$ |
| 39. Carbon monosulfide | $CS$ |
| 40. Tellurium dioxide | $TeO_2$ |
| 41. Phosphorus tribromide | $PBr_3$ |
| 42. Carbon tetraiodide | $CI_4$ |
| 43. Vanadium(V) chromate | $V_2(CrO_4)_5$ |
| 44. Zinc carbonate | $ZnCO_3$ |
| 45. Silver hydroxide | $AgOH$ |
| 46. Vanadium(III) chromate | $V_2(CrO_4)_3$ |
| 47. Mercury(II) iodide | $HgI_2$ |
| 48. Uranium(V) nitrate | $U(NO_3)_5$ |
| 49. Nickel (III) nitride | $N.N$ |
| 50. Sulfuric acid | $H_2SO_{4(aq)}$ |

## *MOLES ↔ GRAMS, MOLARITY, AND STOICHIOMETRY*

a. *Use the Periodic Table included in this packet for the atomic masses.* ***Do not*** *round the atomic masses.*
b. *Show cancellation of units and report the final answer with the correct unit and correct number of sig figs.*

1. Convert the following to moles :
   a. 36.85 g C = 3.071 mol
   b. 170 g $O_2$ = 5.3 mol
   c. 24.0 g Cu = .676 mol
   d. 165.02 g $H_2O$ = 9.1678 mol
   e. 320.0 g $CaCO_3$ = 3.200 mol
   f. 50.020 g $Ca_3(PO_4)_2$ = .16135 mol

2. Convert the following to grams:
   a. 1.20 mol $H_2$ = 2.42 g
   b. 0.052 mol Ca = 2.1 g
   c. 10.0 mol $CO_2$ = $4.00 \times 10^3$ g
   d. 0.00650 mol $AgNO_3$ = 1.11 g
   e. 1.025 mole $Al_2(SO_4)_3$ = 153.75 g

$1.20 \text{ mol } H_2 \times \frac{2.02 \text{ g}}{1 \text{ mol } H_2} =$

$.052 \text{ mol Ca} \times \frac{40.08 \text{ g}}{1 \text{ mol}}$

5. Translate the following word equations to a balanced chemical

a. iron (II) oxide + aluminum → iron + aluminum oxide

b. hydrochloric acid + sodium hydroxide → water + sodium chloride

c. calcium phosphate + sulfuric acid → calcium sulfate + phosphoric acid

d. calcium carbonate → calcium + carbon + oxygen gas

e. sodium chloride + silver nitrate → sodium nitrate + silver chloride

f. potassium hydroxide + sulfuric acid → potassium sulfate + water

6. Identify each of the equations you balanced in #5 as **reduction-oxidation**, **precipitation** or **acid-base (neutralization)** reactions.

a.
b.
c.
d.
e.
f.