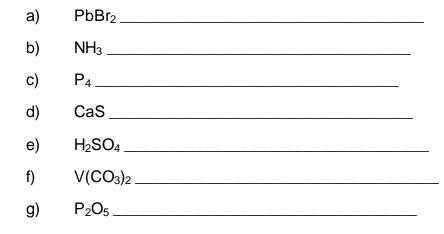
Final Exam Review Worksheet

- 1) How many milligrams are there in 420 micrograms?
- 2) How many feet are there in 341 centimeters? (There are 2.54 centimeters in 1 inch)
- 3) How many significant figures are in the following numbers?
 - a) 4.30 _____ c) 120 _____
 - b) 1020 _____ d) 1020.010 _____
- 4) How many protons, neutrons, and electrons are there in 40 K?
- 5) What is the electron configuration of mercury?

6) Name the following chemical compounds:



- 7) Write the chemical formulas for the following compounds:
 - a) ammonium nitrate _____
 - b) fluorine _____
 - c) boron trichloride _____
 - d) iron (III) phosphate _____
 - e) nitric acid _____
 - f) potassium carbonate _____
 - g) dinitrogen tetrachloride _____
- 8) How many grams of methane are there in 1.23×10^{24} molecules?
- 9) How many grams of carbon dioxide will be made when 100 grams of methane burn in an excess of oxygen?

- 10) If 45 grams of carbon dioxide were actually formed from the reaction in problem #9, what is the percent yield of this reaction?
- 11) Name the intermolecular force most important for each of the following compounds:
 - a) ammonia _____
 - b) boron trichloride _____
 - c) hydrogen fluoride _____

Final Exam Review Worksheet

- How many milligrams are there in 420 micrograms?
 0.42 mg
- How many feet are there in 341 centimeters? (There are 2.54 centimeters in 1 inch)
 11.2 feet
- 3) How many significant figures are in the following numbers?

a)	4.30	<u>3</u>	c)	120	<u>2</u>	
b)	1020	<u>3</u>	d)	1020.01	10	<u>7</u>

- How many protons, neutrons, and electrons are there in ⁴⁰K?
 19 protons, 21 neutrons, 19 electrons
- 5) What is the electron configuration of mercury? 1s²2s²2p⁶3s²3p⁶4s²3d¹⁰4p⁶5s²4d¹⁰5p⁶6s²4f¹⁴5d¹⁰ [Xe] 6s²4f¹⁴5d¹⁰
- 6) Name the following chemical compounds:
 - a) PbBr₂ lead (II) bromide
 - b) NH₃ ammonia
 - c) P₄ phosphorus
 - d) CaS calcium sulfide
 - e) H_2SO_4 sulfuric acid
 - f) V(CO₃)₂ vanadium (IV) carbonate
 - g) P₂O₅ diphosphorus pentoxide
- 7) Write the chemical formulas for the following compounds:

F₂

BCI₃

HNO₃

- a) ammonium nitrate NH₄NO₃
- b) fluorine
- c) boron trichloride
- d) iron (III) phosphate FePO₄
- e) nitric acid
- f) potassium carbonate K₂CO₃
- g) dinitrogen tetrachloride N₂Cl₄

- How many grams of methane are there in 1.23 x 10²⁴ molecules?
 32.7 grams
- 9) How many grams of carbon dioxide will be made when 100 grams of methane burn in an excess of oxygen?
 275 grams
- 10) If 45 grams of carbon dioxide were actually formed from the reaction in problem #9, what is the percent yield of this reaction?
 16.4%
- 11) Name the intermolecular force most important for each of the following compounds:
 - a) ammonia
 - b) boron trichloride
 - c) hydrogen fluoride

hydrogen bonding Van der Waals forces hydrogen bonding