

## Vasquez High School -- Chemistry -- Spring '15 Quest #1 -- Chapter 8 -- 60 points

Write TRUE if the statement is true OR write the word that substitutes for the underlined word that would make it true. Writing false only earns partial credit. Three points each.

- \_\_\_\_\_ 1) Precipitates are solid compounds formed in a chemical reaction.
- \_\_\_\_\_ 2) Neutralization reactions take place between a salt and water.
- \_\_\_\_\_ 3) Acids donate  $H^+$  ions according to Dalton's definition of acids
- \_\_\_\_\_ 4) Combustion means rapid combination with fire.
- \_\_\_\_\_ 5) The balanced chemical reaction is usually the same as the molecular chemical equation.
- 6) What makes a base a strong base? Be specific and give an example of a strong base. \_\_\_\_\_

\_\_\_\_\_

7) If we stirred the following ions into an aqueous solution, what would you expect to happen?  $Na^+$ ,  $NH_4^+$ ,  $NO_3^-$ , and  $C_2H_3O_2^-$  \_\_\_\_\_

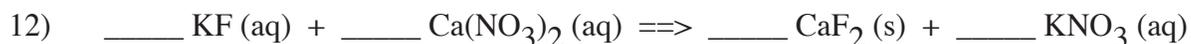
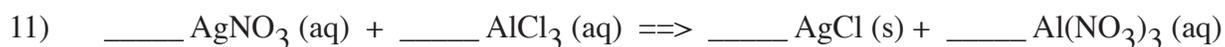
8) Give the NAME of any precipitate you formed in the most recent lab experiment: \_\_\_\_\_

\_\_\_\_\_

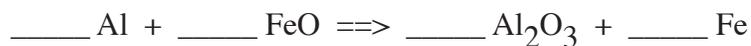
Characterize the following chemical reactions in as many of the seven types as pertains to each: (three points)



Balance each equation. Then write the complete ionic equation for each. State what the spectator ion(s) is(are). Then write the net ionic equation. Five points apiece.



13) You are the staff chemist on the Mars colony...oh wait, just kidding...consider this reaction...



Balance this chemical reaction using the half-reaction redox method. Ten points. Show it all.

14) You mix a solution of potassium phosphate,  $\text{K}_3\text{PO}_4$ , with a solution of lead (II) nitrate. A precipitate is produced. Ten points.

a) Write the reaction and balance it the “easy” way.

b) Write the complete ionic equation.

c) Write the net ionic equation.

d) Are any spectator ions present? If so, what are they?

**EXTRA CREDIT.** Five points, all or nothing. Guessing is okay. In mathematics we often use the designation  $5!$  to mean “five factorial,” or  $5 \times 4 \times 3 \times 2 \times 1 = 120$ .

How many zeroes does the number represented by  $127!$  end with?