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UNIVERSITY OF CRETE

Academic English

Section: Chemistry Practice Sheet #1: Writing Formulas

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Chemistry Practice Sheet #1: Writing Formulas

Write the correct formula for each compound named below:

1. sodium bromide_____
2. zinc sulfide_____
3. copper(II) chloride_____
4. iron(III) oxide_____
5. sulfuric acid_____
6. copper(II) carbonate_____
7. lead(II) nitrate_____
8. sodium hydroxide_____
9. sodium acetate_____
10. barium chloride_____
11. ammonium chloride_____
12. silicon dioxide_____
13. antimony trichloride_____
14. sodium carbonate_____
15. sodium bisulfite_____
16. silver nitrate_____
17. carbon disulfide_____
18. cobalt (II) chloride_____
19. stannic chloride_____
20. lithium hydroxide_____
21. sodium oxalate_____
22. potassium permanganate_____
23. phosphoric acid_____
24. nickel(II) chlorate_____
25. copper(II) oxide_____
26. magnesium bromide_____
27. iron(II) nitrate_____
28. sulfur trioxide_____
29. ammonium dichromate_____
30. sodium cyanide_____
31. barium hydroxide_____
32. ammonium thiocyanate_____
33. zinc chloride_____
34. dinitrogen trioxide_____
35. cesium sulfate_____
36. chromium(II) nitrate_____
37. silver iodide_____
38. titanium(IV) chloride_____
39. lead(II) acetate_____
40. ammonia_____

Six Types of Chemical Reaction Worksheet

Balance the following reactions and indicate which of the six types of chemical reaction are being represented:

1) _____ NaBr + _____ $Ca(OH)_2$ → ___ $CaBr_2$ + _____ NaOH

Type of reaction: _____

2) _____ NH_3+ _____ H_2SO_4 → _____ $(NH_4)_2SO_4$

Type of reaction: _____

3) _____ C_5H_9O + _____ O_2 → _____ CO_2 + _____ H_2O

Type of reaction: _____

4) _____ Pb + _____ H_3PO_4 → _____ H_2 + _____ $Pb_3(PO_4)_2$

Type of reaction: _____

5) _____ Li_3N + _____ NH_4NO_3 → ___ $LiNO_3$ + ___ $(NH_4)_3N$

Type of reaction: _____

6) _____ HBr + ___ $Al(OH)_3$ → ___ H_2O + ___ $AlBr_3$

Type of reaction: _____

7) What's the main difference between a double displacement reaction and an acid-base reaction?

8) Combustion reactions always result in the formation of water. What other types of chemical reaction may result in the formation of water? Write examples of these reactions on the opposite side of this paper.

Word Equations

Write the word equations below as chemical equations and balance:

1) Zinc and lead (II) nitrate react to form zinc nitrate and lead.

2) Aluminum bromide and chlorine gas react to form aluminum chloride and bromine gas.

3) Sodium phosphate and calcium chloride react to form calcium phosphate and sodium chloride.

4) Potassium metal and chlorine gas combine to form potassium chloride.

5) Aluminum and hydrochloric acid react to form aluminum chloride and hydrogen gas.

6) Calcium hydroxide and phosphoric acid react to form calcium phosphate and water.

7) Copper and sulfuric acid react to form copper (II) sulfate and water and sulfur dioxide.

8) Hydrogen gas and nitrogen monoxide react to form water and nitrogen gas.

Writing Complete Equations Practice

For each of the following problems, write complete chemical equations to describe the chemical process taking place. Important note: There are a few physical processes on this sheet – remember, you can't write an equation for a physical process!

1) When lithium hydroxide pellets are added to a solution of sulfuric acid, lithium sulfate and water are formed.

2) When dirty water is boiled for purification purposes, the temperature is brought up to 100^0 C for 15 minutes.

3) If a copper coil is placed into a solution of silver nitrate, silver crystals form on the surface of the copper. Additionally, highly soluble copper (I) nitrate is generated.

4) When crystalline $C_6H_{12}O_6$ is burned in oxygen, carbon dioxide and water vapor are formed.

5) When a chunk of palladium metal is ground into a very fine powder and heated to drive off any atmospheric moisture, the resulting powder is an excellent catalyst for chemical reactions.

Notes

Reference Note

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