Worksheet: Types of Reactions

Name_____
Period_____
Date_____

For each equation:

1. Balance the equation.
2. Identify the type of reaction (synthesis, decomposition, etc.).

**Reaction Type**

1. _____$KClO_3$ → _____$KCl$ + _____$O_2$ _____
2. _____$KBr$ + _____$F_2$ → _____$KF$ + _____$Br_2$ _____
3. _____$S_8$ + _____$F_2$ → _____$SF_6$ _____
4. _____$Na_2SO_4$ + _____$Pb(NO_3)_2$ → _____$NaNO_3$ + _____$PbSO_4$ _____
5. _____$C_3H_8$ + _____$O_2$ → _____$CO_2$ + _____$H_2O$ _____
6. _____$Zn$ + _____$HCl$ → _____$ZnCl_2$ + _____$H_2$ _____
7. _____$FeCl_3$ + _____$Na_2CO_3$ → _____$Fe_2(CO_3)_3$ + _____$NaCl$ _____
8. _____$C_2H_6$ + _____$O_2$ → _____$CO_2$ + _____$H_2O$ _____
9. _____$HgO$ → _____$Hg$ + _____$O_2$ _____
10. _____$CaCl_2$ + _____$Na_3PO_4$ → _____$NaCl$ + _____$Ca_3(PO_4)_2$ _____
11. _____$N_2O_5$ + _____$H_2O$ → _____$HNO_3$ _____

12. _____$Mg$ + _____$CuCl_2$ → _____$MgCl_2$ + _____$Cu$ _____

13. _____$Cu_{(s)}$ + _____$O_{2(g)}$ → _____$CuO_{(s)}$ _____

14. _____$H_2O_{(l)}$ → _____$H_{2(g)}$ + _____$O_{2\ (g)}$ _____

15. _____$Fe_{(s)}$ + _____$H_2O_{(g)}$ → _____$H_{2(g)}$ + _____$Fe_3O_{4(s)}$ _____

16. _____$AsCl_{3(aq)}$ + _____$H_2S_{(aq)}$ → _____$As_2S_{3(s)}$ + _____$HCI_{(aq)}$ _____

17. _____$Fe_{(s)}$ + _____$S_{8(s)}$ → _____$FeS_{(s)}$ _____

18. _____$H_2S_{(aq)}$ + _____$KOH_{(aq)}$ → _____$H_2O_{(l)}$ + _____$K_2S_{(aq)}$ _____

19. _____$NaCl_{(l)}$ → _____$Na_{(l)}$ + _____$Cl_{2(g)}$ _____

20. _____$Al_{(s)}$ + _____$H_2SO_{4(aq)}$ → _____$H_{2(g)}$ + _____$Al_2(SO_4)_{3(aq)}$ _____

21. _____$H_3PO_{4(aq)}$ + _____$NH_4OH_{(aq)}$ → _____$H_2O_{(l)}$ + _____$(NH_4)_3PO_{4(aq)}$ _____

22. _____$Al_{(s)}$ + _____$O_{2(g)}$ → _____$Al_2O_{3(s)}$ _____

23. _____$CH_{4(g)}$ + _____$O_{2(g)}$ → _____$CO_{2(g)}$ + _____$H_2O_{(l)}$ _____

24. _____$K_2SO_{4(aq)}$ + _____$BaCl_{2(aq)}$ → _____$KCI_{(aq)}$ + _____$BaSO_{4(s)}$ _____

25. _____$Ca_{(s)}$ + _____$N_{2(g)}$ → _____$Ca_3N_{2(s)}$ _____

26. _____$BN_{(s)}$ + _____$F_{2(g)}$ → _____$BF_{3(s)}$ + _____$N_{2(g)}$ _____

Write a balanced chemical equation for each of the following, and identify the type of reaction.

27. potassium iodide + chlorine → potassium chloride + iodine

_____

28. calcium sulfate + sodium carbonate → calcium carbonate + sodium sulfate

_____

29. lead(II) nitrate→ lead (II) oxide + nitrogen dioxide + oxygen

_____

30. water + diphosphorous pentoxide → phosphoric acid

_____