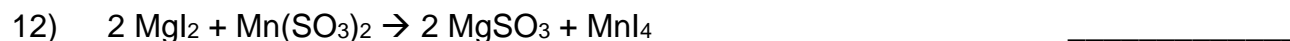
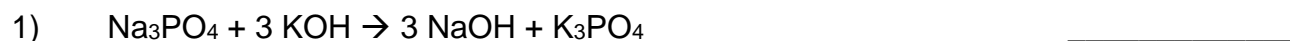


A Voyage through Equations

Name _____ Per. _____

Section 1: Identify the type of reaction

For the following reactions, indicate whether the following are examples of synthesis(S), decomposition(D), combustion(C), single displacement(SD) or double displacement(DD).

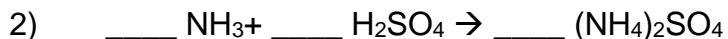


Five Types of Chemical Reaction Worksheet

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



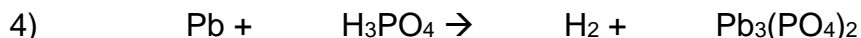
Type of reaction: _____



Type of reaction: _____



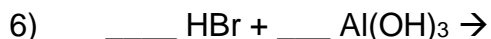
Type of reaction: _____



Type of reaction: _____



Type of reaction: _____



Type of reaction: _____

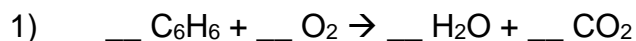
7) What's the main difference between the reactants of a double displacement reaction and the reactants of a single displacement reaction?

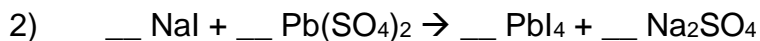
8) Combustion reactions always have one reactant and two products in the reaction that remain the same what are they?

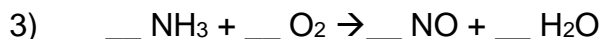
Section 2: Practicing equation balancing

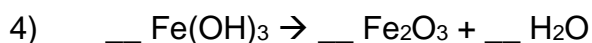
Before you can write a balanced equation for a problem which asks you to predict the products of a reaction, you need to know how to balance an equation. Because some of you may not fully remember how to balance an equation, here are some practice problems:

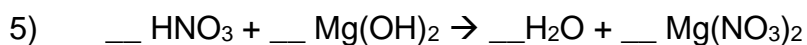
REACTION TYPE









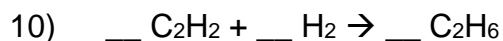








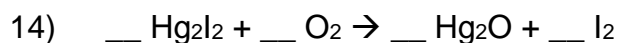














Worksheet: Writing/Predicting Equations

Write balanced equations for the following reactions (start with the skeleton equation)

- 1) The reaction of ammonia with iodine to form nitrogen triiodide (NI_3) and hydrogen gas.
- 2) The combustion of propane (C_3H_8).
- 3) The incomplete combustion of propane (C_3H_8) to form CO and water.
- 4) The reaction of nitric acid with potassium hydroxide.
- 5) The reaction of copper (II) oxide with hydrogen to form copper metal and water.
- 6) The reaction of iron metal with oxygen to form iron (III) oxide.
- 7) The complete combustion of butane (C_4H_{10}) in oxygen.
- 8) The reaction of AlBr_3 with $\text{Mg}(\text{OH})_2$
- 9) The decomposition of hydrogen peroxide to form water and oxygen.

Section 3: Predicting the products of chemical reactions

Predict the products of the following reactions:



13) ___ AlCl_3 + ___ Cs \rightarrow Type: _____

14) ___ $\text{Al}(\text{NO}_3)_3$ + ___ Ga \rightarrow Type: _____

15) ___ H_2SO_4 + ___ NH_4OH \rightarrow Type: _____

16) ___ CH_3COOH + ___ O_2 \rightarrow Type: _____

17) ___ C_4H_8 + ___ O_2 \rightarrow Type: _____

18) ___ KCl + ___ $\text{Mg}(\text{OH})_2$ \rightarrow Type: _____

19) ___ Zn + ___ $\text{Au}(\text{NO}_2)_2$ \rightarrow Type: _____

20) ___ KOH + ___ H_2SO_4 \rightarrow Type: _____

21) ___ BaS + ___ PtCl_2 \rightarrow Type: _____

22) ___ Na_2O \rightarrow Type: _____