

Worksheet: Chemical Reactions, Types of Reactions

1. Is the equation balanced?

- a. $S(s) + O_2(g) \rightarrow SO_3(g)$
 - b. $2Al(s) + 3Cl_2(g) \rightarrow 2AlCl_3(s)$
 - c. $C_3H_8(g) + 5O_2(g) \rightarrow 3CO_2(g) + 4H_2O(g)$
 - d. $Na_2CO_3(s) + HNO_3(aq) \rightarrow CO_2(g) + H_2O(l) + NaNO_3(aq)$
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2. Balance the following equations:

- a. $N_2(g) + O_2(g) \rightarrow NO(g)$
- b. $Na(s) + Cl_2(g) \rightarrow NaCl(s)$
- c. $Fe(s) + O_2(g) \rightarrow Fe_2O_3(s)$
- d. $Fe_2O_3(s) + C(s) \rightarrow CO_2(g) + Fe(s)$

3. Classify the following reactions:

- a. $Mg(s) + 2AgNO_3(aq) \rightarrow Mg(NO_3)_2(aq) + 2Ag(s)$

- b. $CuCO_3(s) \rightarrow CuO(s) + CO_2(g)$

- c. $NaOH(aq) + HCl(aq) \rightarrow NaCl(aq) + H_2O(l)$

- d. $2Ag(s) + Cl_2(g) \rightarrow 2AgCl(s)$
