

# Types of Reactions Worksheet

Balance the following equations and indicate the type of reaction taking place:

Type of reaction:

- add state symbols

Mark

1.  $3 \text{NaBr}_{(aq)} + \text{H}_3\text{PO}_4 \rightarrow \text{Na}_3\text{PO}_4 + 3 \text{HBr}_{(aq)}$
2.  $3 \text{Ca(OH)}_2 + \text{Al}_2(\text{SO}_4)_3 \rightarrow 3 \text{CaSO}_4 + 2 \text{Al(OH)}_3$
3.  $3 \text{Mg}_{(s)} + \text{Fe}_2\text{O}_3 \rightarrow 2 \text{Fe}_{(s)} + 3 \text{MgO}_{(s)}$
4.  $\text{C}_2\text{H}_4 + 3 \text{O}_2 \rightarrow 2 \text{CO}_2 + 2 \text{H}_2\text{O}$
5.  $\text{PbSO}_4 \rightarrow \text{PbSO}_3 + \frac{1}{2} \text{O}_2$
6.  $2 \text{NH}_3 + 3 \text{I}_2 \rightarrow \text{N}_2\text{I}_6 + 3 \text{H}_2$
7.  $\text{H}_2\text{O} + \text{SO}_3 \rightarrow \text{H}_2\text{SO}_4$
8.  $\text{H}_2\text{SO}_4 + 2 \text{NH}_4\text{OH} \rightarrow 2 \text{H}_2\text{O} + (\text{NH}_4)_2\text{SO}_4$

DRR / nonrx?

DRR

SDR

complete combustion

decomposition

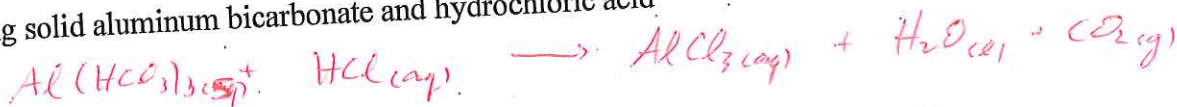
SDR

synth.

DRR / neutralization

Write balanced chemical equations for any reactions that are likely to take place.

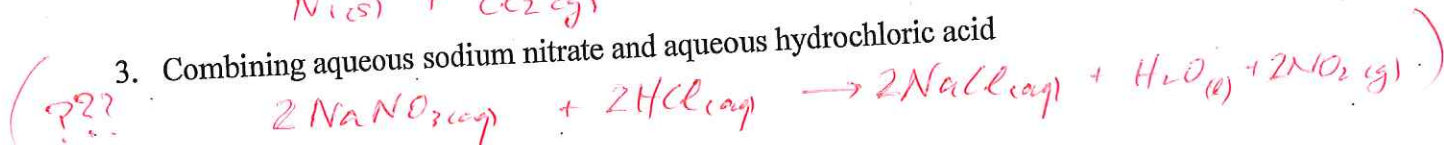
1. Combining solid aluminum bicarbonate and hydrochloric acid



2. Combining solid nickel and chlorine gas



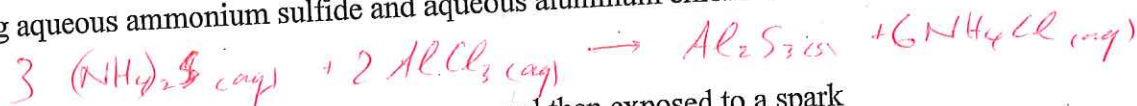
3. Combining aqueous sodium nitrate and aqueous hydrochloric acid



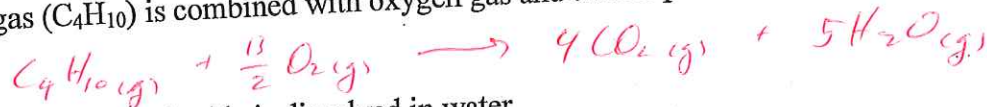
4. Heating solid iron(III) carbonate



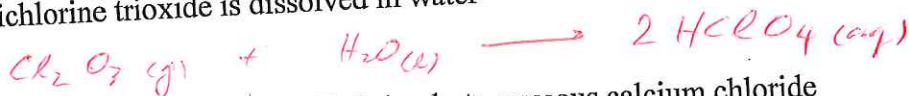
5. Combining aqueous ammonium sulfide and aqueous aluminum chloride



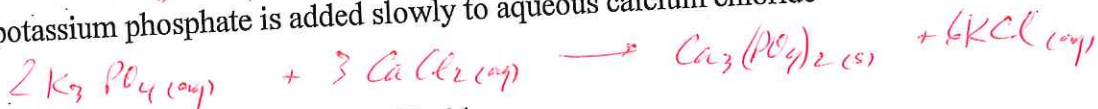
6. Butane gas (C<sub>4</sub>H<sub>10</sub>) is combined with oxygen gas and then exposed to a spark



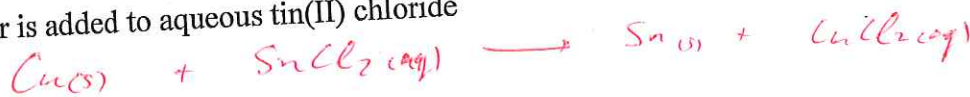
7. Gaseous dichlorine trioxide is dissolved in water



8. Aqueous potassium phosphate is added slowly to aqueous calcium chloride



9. Solid copper is added to aqueous tin(II) chloride



10. Solid zinc is added to aqueous iron(III) nitrate



+ bal + state symbols!

# REACTION TYPES WORKSHEET

NAME Mark

Determine what type of reaction each of the equations below

shows using the following key: a) combination b) decomposition PERIOD \_\_\_\_\_ DATE \_\_\_\_\_  
c) single replacement d) double replacement e) combustion f) acid + carbonate

