

SYNTHESIS AND DECOMPOSITION WORKSHEET

NAME _____ DATE _____

1) Identify each reaction as synthesis or decomposition and 2) write a balanced chemical equation for each reaction.

Phosphorous + oxygen \rightarrow tetraphosphorous decaoxide

Iron(III) hydroxide \rightarrow iron(III) oxide + water

Ammonia + sulfuric acid \rightarrow ammonium sulfate

Carbon monoxide + oxygen \rightarrow carbon dioxide

Potassium + chlorine \rightarrow potassium chloride

Manganese (II) sulfate heptahydrate \rightarrow manganese (II) sulfate + water

Sodium nitrate \rightarrow sodium nitrite + oxygen

Potassium chlorate \rightarrow potassium chloride + oxygen

2) a- What is the difference between synthesis and decomposition?

b- How can an exothermic synthesis reaction become a decomposition reaction?

c- What traits to synthesis and decomposition share?