

Common Reaction Review Name _____

PUT ALL ANSWERS ON A SEPARATE SHEET OF PAPER.

Given the following list of substances and the common reaction templates answer the questions below:

NaOH H₂ C₈H₁₈ CaCO₃ Zn H₂SO₄ O₂ Cu(NO₃)₂

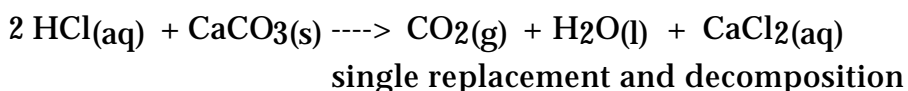
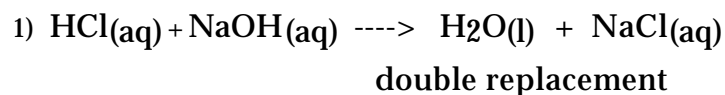
acid + base ----> water + ionic compound
metal + oxygen ---> ionic compound
metal + acid ---> hydrogen gas + ionic compound
ionic compound1 + ionic compound2 ---> ionic compound3 + ionic compound4
acid + carbonate ---> carbon dioxide + water + ionic compound
metal1 + ionic compound1 ---> metal2 + ionic compound2
hydrocarbon + oxygen ---> carbon dioxide + water

When asked for a type of reaction below, choose from the following: synthesis, decomposition, single replacement, double replacement, or combustion. Indicate all that apply.

- 1) If you spill some hydrochloric acid during a lab what are the possible substances that you could use which would safely react with it. Write a separate balanced chemical equation for each substance that will react with the acid. Also state the type of reaction for each equation written.
- 2) Let's say you want to surprise your friend with a small hydrogen explosion. What two substances could you use from above? Write the chemical reaction and give the type.
- 3) When you drive around in your car you are burning gasoline (C₈H₁₈). Write the chemical reaction for what is happening in the car engine and state the type.
- 4) Let's say you needed some copper in a hurry but the only kind you had was in a compound that is dissolved in solution (Cu(NO₃)₂). What could you combine with this to give you copper metal instead of a copper(II)nitrate solution? What type of reaction is this?
- 5) During a dangerous chemical experiment that could spread flames everywhere you decide to take some extra precautions. You know that carbon dioxide is good at putting out flames. Many fire extinguishers work this way. What two chemicals could you combine together to create carbon dioxide gas? Write the chemical reaction?

- 6) The space shuttle combines two of the above chemicals to create water in a large explosion which forces the spacecraft into the air. Which two substances will react to form water? Write the chemical reaction and state the type.
- 7) Darn. You find you need some Sodium Nitrate and all you have is Sodium Hydroxide. What chemical would react with Sodium Hydroxide to produce some Sodium Nitrate. Write the chemical reaction and state the type. What if you wanted Sodium Sulfate instead? Write the chemical reaction and state the type.

Answers:



not that safe but would work as well

