Name: _____ Date: _____ Bock: _____

Chemical reactions for a Snow Day #3 (Blizzard Bag #3)

For each of the following reactions, write it in formula (including states), ID the type of reaction (S, D, C, SR), predict products to the reaction, and balance the equation.

Reaction type: (S, D, C, SR or DR)	**Reaction**: Show reactants and products in formula form, symbols and balanced.
	1. You light your propane (C_3H_8) grill to roast marshmallows on such a snowy day; don't forget about oxygen from air being needed too.
	2. You pour some aluminum nitrate solution over some copper pennies. Show the resulting reaction.
	3. While scraping snow from your car, you notice some rust on your car. Show how Iron and Oxygen react to make this. (Rust is made of Iron (III) ion)
	4. You bake some cookies and use sodium bicarbonate (baking soda). Show how this breaks down with heat.
	5. Your mom wants you to clean her expensive Silverware, because it has tarnish on it. Show the reaction between oxygen and silver, which causes the tarnish.
	6. You decide to have fun and react magnesium with Hydrochloric acid. (Do NOT try this at home)

	7. Sodium is reacted with copper (II) sulfate solution.
	8. Your car uses a high octane fuel. Show the reaction that octane (C_8H_{18}) undergoes as it combusts with oxygen to make your car's power.
	9. You heat potassium carbonate and it gives off an invisible gas. Show this reaction.
	10. You heat Aluminum bromide until it reacts, show the reaction that will occur.

Extra questions:

1. From reaction #4, why do you think you use sodium bicarbonate in baking?

2. Many gas distributors rate the octane of their fuel (Ex: 89, 93 etc...) This tells you the percentage that is octane fuel. What else is in fuel and why? (look this up if needed, cite your source)