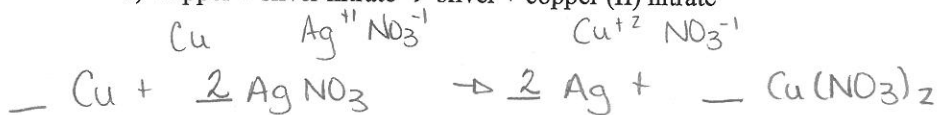


6. Why do we balance chemical equations? What Law is being used here?

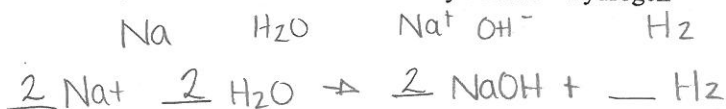
We balance equations to show matter cannot be created or destroyed.  
LAW of Conservation of mass.

7. Write the complete balanced chemical equation for each of the following. (value 10)

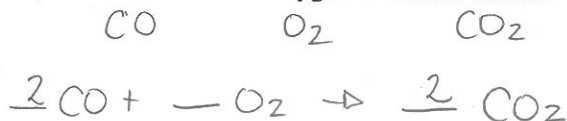
1) copper + silver nitrate  $\rightarrow$  silver + copper (II) nitrate



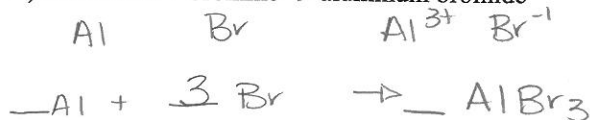
2) sodium + water  $\rightarrow$  sodium hydroxide + hydrogen



3) carbon monoxide + oxygen  $\rightarrow$  carbon dioxide



4) aluminum + bromine  $\rightarrow$  aluminum bromide



5) hydrogen + oxygen  $\rightarrow$  water



8. List 3 ways the rate of a reaction can be increased or decreased. Give examples.

- Increase the surface area. Ex: sugar cube vs. spoon of sugar
- Increase the temperature. Ex: cooking steak at a higher temperature will cook faster
- Increasing the concentration of one of the reactants.  
Ex: Coke and mentos  
OR  
Elephant Toothpaste.