Name: _____

Period: ____ Subject: _____

Date: _____

# Conservation of Matter

**Solve for the appropriate value. Be sure to *show your work* and remember to use the correct number of significant figures.**

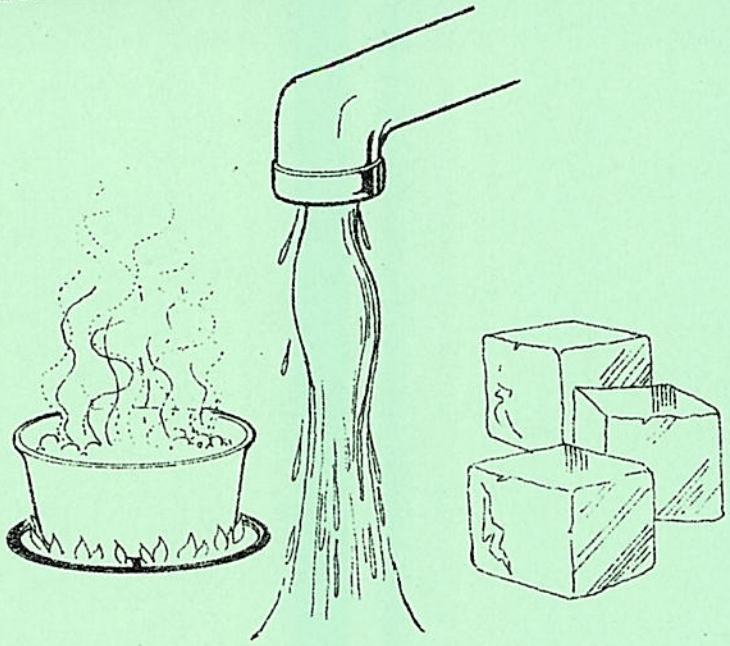
1. _____ 91.96 g of sodium is reacted with chlorine to form 233.76 g of sodium chloride. How many grams of chlorine reacted with the sodium?

2. _____ In a flask, 20.6 grams of aluminum reacted with 200.0 g of liquid bromine to form aluminum bromide. After the reaction, 17.0 g of bromine remained unreacted. How many grams of aluminum bromide were formed?

3. _____ 71.0 grams of substance X reacts with substance Y to form 175.2 g of compound XY. There are 20.0 g of substance Y remaining unreacted after the reaction occurs. How many grams of substance Y were present before the reaction?

# PHYSICAL VS. CHEMICAL CHANGE

Name _____



In a physical change, the original substance still exists, it has only changed in form. Energy changes usually do not accompany physical changes, except in phase changes and when substances dissolve.

In a chemical change, a new substance is produced. Energy changes always accompany chemical changes. Chemical changes are always accompanied by physical changes.

Classify the following as examples of a physical change, a chemical change or both kinds of change.

1. Sodium hydroxide dissolves in water. _____
2. Hydrochloric acid reacts with sodium hydroxide to produce a salt, water and heat. _____
3. A pellet of sodium is sliced in two. _____
4. Water is heated and changed to steam. _____
5. Potassium chlorate decomposes to potassium chloride and oxygen gas. _____
6. Iron rusts. _____
7. Ice melts. _____
8. Acid on limestone produces carbon dioxide gas. _____
9. Milk sours. _____
10. Wood rots. _____