

Review Sheet

Chapters 3 & 4

- 1) Draw pictures of each of the three main states of matter below:
- 2) Is each state of matter compressible? Which ones are?
Does each state of matter have a definite shape? Which ones do?
- 3) List three chemical changes that could happen to a piece of raw meat.
- 4) List three physical changes that could happen to a piece of raw meat.
- 5) Are solutions a subset of mixtures?
- 6) Are mixtures a subset of solutions?
- 7) What is the difference between a homogeneous and a heterogeneous substance?
- 8) All elements and compounds are which type (see #7) of substance?
- 9) How are compounds and mixtures the same? How are they different?
- 10) What process is used to separate two substances based on a difference in their boiling points? Does this process cause a physical or chemical change?
- 11) What are the two types of pure substances? How are they the same? How are they different?
- 12) Copy down the symbol for the element hydrogen and draw a square around it. Write the atomic number at the top and the atomic mass at the bottom. Where can the mass number be found on the periodic table?
- 13) How many protons and neutrons are in the nucleus of P-31? How many in P-32?

14) Make the following conversions:

- | | |
|--------------|------------|
| a. 548 J = | _____ cal |
| b. 548 cal = | _____ J |
| c. 548 kJ = | _____ cal |
| d. 548 J = | _____ kcal |
| e. 350 K = | _____ °C |

f. $350\text{ }^{\circ}\text{C} =$
g. $-350\text{ }^{\circ}\text{C} =$

_____ K
_____ K