

## Chapter 7 HW

Review Questions: 2, 15, 29

Exercises: 1, 11, 26, 32, 38

Problems: 4, 6

Additional:

A. How many Joules of energy are required to melt 4 grams of water at  $0^{\circ}\text{C}$ , to change the temperature of this water by  $100^{\circ}\text{C}$ , and then to vaporize the boiling water at  $100^{\circ}\text{C}$ ?

B. List the three materials from your handout which have the greatest specific heat capacity. List the three materials from your handout which have the greatest conductivity.

- a) Are the materials in each list the same?
- b) Does a material that has the ability to conduct heat well necessarily have the ability to hold onto that heat? Explain.

C. How does buoyancy relate to convection?

D. Why does the temperature of boiling water remain the same, even if you turn up the heat source?