Name _____ Date _____

CONCEPTUAL Physics PRACTICE PAGE

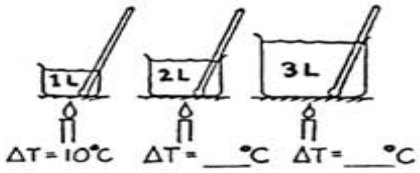
Chapter 15 Temperature, Heat, and Expansion

Measuring Temperatures

1. Complete the table:

TEMPERATURE OF MELTING ICE	°C	32 °F	K
TEMPERATURE OF BOILING WATER	°C	212°F	K

2. Suppose you apply a flame and heat one liter of water, raising its temperature 10°C. If you transfer the same heat energy to two liters, how much will the temperature rise? For three liters? *Record your answers on the blanks in the drawing at the right.*

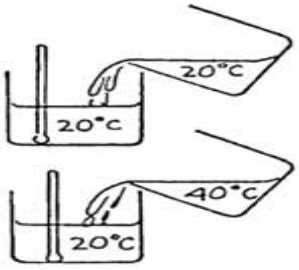


3. A thermometer is in a container half-filled with 20°C water.

   a. When an equal volume of 20°C water is added, the temperature of the mixture is
   (10°C) (20°C) (40°C)

   b. When instead an equal volume of 40°C water is added, the temperature of the mixture will be
   (20°C) (30°C) (40°C)

   c. When instead a small amount of 40°C water is added, the temperature of the mixture will be
   (20°C) (between 20°C and 30°C) (30°C) (more than 30°C)



4. A red-hot piece of iron is put into a bucket of cool water. *Mark the following statements true (T) or false (F).* (Ignore heat transfer to the bucket.)

   a. The decrease in iron temperature equals the increase in the water temperature._____

   b. The quantity of heat lost by the iron equals the quantity of heat gained by the water. _____

   c. The iron and water both will reach the same temperature. _____

   d. The final temperature of the iron and water is halfway between the initial temperatures of each. _____