

CHEMISTRY 3A --- WORKSHEET 10

CHAPTER 7

1. Identify the following as examples of kinetic or potential energy. If both are present, choose the one which is present in the greatest amount.
 - a. the sun
 - b. an icicle hanging from a roof
 - c. a bowling ball rolling toward the pins
 - d. Hurricane Andrew, as it headed toward the Florida coast
 - e. the water in the ocean
 - f. a three year old child playing outside

2. Identify the following processes as endothermic or exothermic.
 - a. a dead tree rots in the forest
 - b. a comet begins to vaporize as it approaches the sun
 - c. dry ice sublimates (evaporates) to form carbon dioxide gas

3. A 100.0 g bar of gold at a temperature of 100 °C was immersed in 100 g of water which was at a temperature of 0 °C. As heat is transferred from the gold to the water, the temperature of the water will
- increase to 50 °C.
 - increase to a temperature above 50 °C, but below 100 °C.
 - increase to a temperature above 0 °C, but below 50 °C.
 - remain unchanged.
4. A single serving can of Campbell's Pork & Beans contains 9.0 g of protein, 43 g of carbohydrates, and 3.0 g of fat. Proteins and carbohydrates each contain 4.0 Cal/g and fats contain 9.0 Cal/g. Calculate the total Calorie content of the beans.
5. The contents of the above can of beans were burned to release the chemical energy stored in the food. The energy was used to heat 10.0 kg of water at an initial temperature of 25.0 °C. After the beans were burned, what was the temperature of the water?