

Thermal Energy worksheet

1. How many joules of heat are given off when 70 grams of water at  $70^{\circ}\text{C}$  is cooled to  $20^{\circ}\text{C}$ ?
2. What is the final temperature when 80 grams of  $80^{\circ}\text{C}$  water is poured into a container with 20 grams of  $20^{\circ}\text{C}$  water?
3. What is the final temperature when 350 grams of iron at  $300^{\circ}\text{C}$  is placed in a 75 gram aluminum calorimeter containing 250 grams of water at a temperature of  $30^{\circ}\text{C}$ ?
4. How many joules of heat must be absorbed by 350 grams of  $0^{\circ}\text{C}$  ice so that it is converted to  $0^{\circ}\text{C}$  water?