

Name _____
Honors Physics
Period _____

Date _____
Thermodynamics WS #2H
Mrs. Nadworny

Thermal Equilibrium

Directions: Read online textbook pages 357 – 360 and 365 - 368. Answer the following questions using your knowledge of physics.

1. Two cups of hot chocolate, one at 50°C and one at 60°C , are poured together into a large container.
 - a. The final temperature of the double batch will be
(A) less than 50°C (B) between 50°C and 60°C (C) greater than 60°C
 - b. Explain your choice using complete sentences.

2. A cup of hot tea is poured from a teapot into a cup. A swimming pool is filled with cold water.
 - a. Which one has a higher total internal energy? Explain your choice using complete sentences.

 - b. Which one has a higher average kinetic energy? Explain your choice using complete sentences.

3. A hot copper pan is dropped into a tub of water.
 - a. If the temperature of the water rises, what will happen to the temperature of the pan?

 - b. How will you know when the water and copper pan reach thermal equilibrium?