

QUESTIONS TO HAND IN – EXPERIMENT 15

NAME _____

LAB INSTRUCTOR _____ LAB DAY/TIME _____

1. What are the three main processes of heat transfer?
2. Which of the three processes above requires *matter* to be present to transfer heat?
3. Equation (1) tells us that the larger the difference between the sample's temperature and that of its surroundings, the (circle one) **GREATER/SMALLER** is the absolute value of the rate of change in its temperature.
4. The quantity K in Equation (2) would be (circle one) **LARGER/SMALLER** for a body immersed in a liquid compared to when it is in a gaseous environment.
5. The time constant for the cool-down process, as expressed in Equation (3), is a measure of how long it takes for the object to reach the temperature of its environment. After 2 time constants (2τ) have elapsed, the body's temperature should be within (circle one) **63% / 14% / 5%** of its initial value.