

Physics 10L Final

Name _____
Group# _____
Day _____

<I> Use $\frac{1}{f} = \frac{1}{S_o} + \frac{1}{S_i}$ and thin lens lab experiment set-up to find the unknown positive lens focal length. Compare with the measured focal length from the lamp at the top of the ceiling.

<II> Use specific Heat lab exp. set-up to measure specific heat of Aluminum. Compare to the known value of 0.22 cal/gm°C. (Energy lost by hot metal) = (Energy gained by cool water).

$$C_2 = \frac{M_1(T_f - T_i)}{M_2(T_2 - T_f)} \left(\frac{\text{Cal}}{^\circ\text{Cgm}} \right)$$

<III> Use the Electrical Equipment of Heat lab set-up to measure the conversion factor Q

$$Q \left(\frac{\text{Cal}}{\text{Joules}} \right) = \frac{(T_f - T_i)M_{\text{water}}}{IVT} \left(\frac{\text{Cal}}{^\circ\text{Cgm}} \right)$$

Compare the known values of 0.239 Cal/Joule.