Name: _____ Date: _____ Course: _____ Professor: _____

O5a Prelab: Refraction of Light and Its Application to Thin Converging Lenses

Read the lab instructions before answering the questions

1. Write the definition and equation for the index of refraction (η).

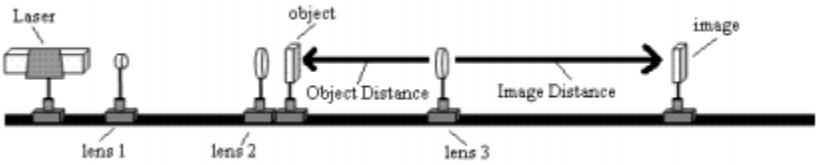
2. Write the equation for Snell's law of Refraction.

3. Write the equation given in the lab to calculate the Angle of Refraction (Θ_r).

4. Use the equation you found above to calculate the Angle of Refraction if $\Theta_i = 79.2°, t = 9.06\ mm, and\ d = 3.92\ mm.$

5. Write the Thin Lens equation and the Magnification Factor equation

6. For the following optical arrangement:



Object Position = 1000mm

Lens 3 Position = 1280mm

Image Position = 1603mm

Calculate:

a) Object distance (d_0)

b) Image distance (d_i)

c) Focal length of lens 3 (*f*)

d) Magnification factor of lens 3 (*m*)