

Lab 3 Pre-Laboratory Exercise

1) a) What is Snell's Law? What is it expressed mathematically? What does it mean?

b) What is the index of refraction?

c) What is the index of refraction of air?

2) Three different students observe the same source pin behind a rectangular tank filled with an unknown fluid (see figure shown below). All the students are directly looking at the apparent location of the source pin through the tank. Student A follows her line of sight to the tank and proclaims that the apparent location of the source pin is at point i. Student B follows his line of sight to the tank and proclaims that the apparent location of the source pin is at point ii. Student C argues that there is only one apparent location of the source pin at point iii. (a) Which student or students are correct? Indicate in the figure all of the apparent locations for the source pin if this has not already been done. Explain! (b) An image may be defined as an apparent source of light rays. Is an image formed by the fluid filled tank in this physical set up? If not, what would one need to form an image? Explain!

