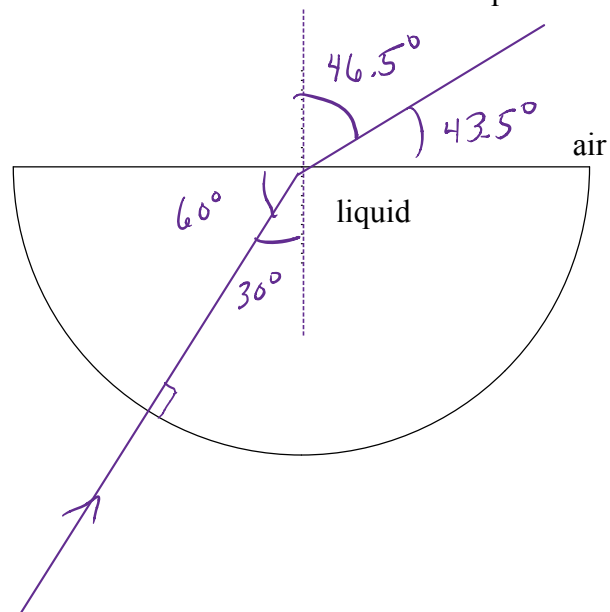
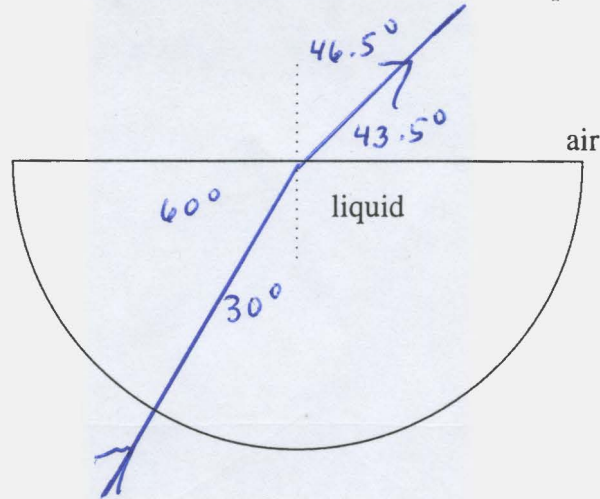


(10 pts.) Light of wavelength $\lambda = 632.8 \text{ nm}$ (in air) is incident on a semi-circular disk of radius 5 cm filled with an unknown liquid, as shown in the figure. The refracted ray exits the dish as shown. What is the index of refraction of the liquid?



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$$n_1 \sin \theta_1 = n_2 \sin \theta_2$$

$$n_1 \sin 30^\circ = 1.00 \sin 46.5^\circ$$

$$n_1 = \frac{\sin 46.5^\circ}{\sin 30^\circ} = 1.45$$

[LAB]