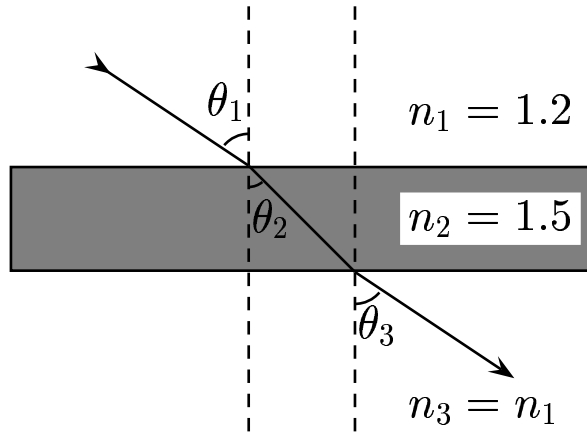


A light ray passes through a slab with index of refraction  $n_2 = 1.5$ , which is submerged in a liquid with index of refraction  $n_1 = n_3 = 1.2$ .



Compare  $\theta_3$  with  $\theta_1 = 30^\circ$ .

- A)  $\theta_3 > 30^\circ$
- B)  $\theta_3 = 30^\circ$
- C)  $\theta_3 < 30^\circ$

Based on Snell's law and the set up,  $n_1 \sin \theta_1 = n_2 \sin \theta_2 = n_3 \sin \theta_3$ .  
Since  $n_3 = n_1$ , so  $\theta_3 = \theta_1$ .

Answer **B**.

35.04-02 Light Passing Through a Slab 2004-3-24