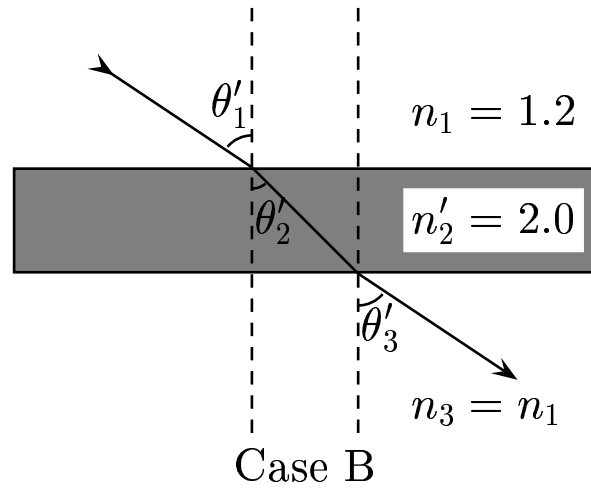
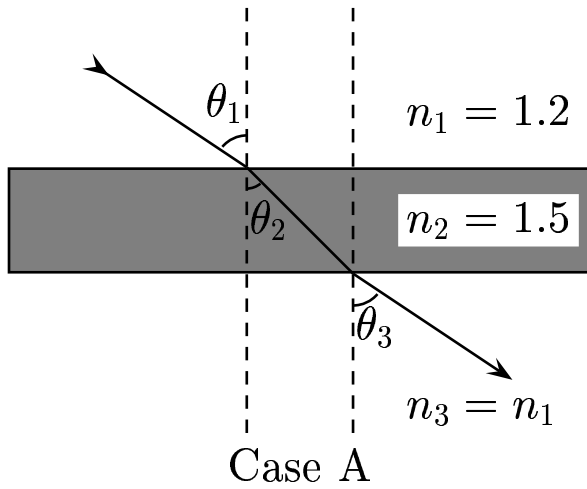


A light ray passes through a slab with index of refraction n_2 , which is submerged in a liquid with index of refraction $n_1 = n_3 = 1.2$.

Case A: $n_2 = 1.5$.

Case B: $n_2 = n'_2 = 2.0$.



Assuming the incident angle of case B θ'_1 is the same as θ_1 of case A, compare θ'_3 of case B with θ_3 of case A.

- A) $\theta'_3 > \theta_3$
- B) $\theta'_3 = \theta_3$
- C) $\theta'_3 < \theta_3$

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 $\theta_3 = \theta_1$. Similarly, $\theta'_3 = \theta'_1 = \theta_1$. So $\theta'_3 = \theta_3$.

Answer **B**.

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