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 $\theta_1'$ is the same as $\theta_1$ of case A, compare $\theta_3'$ of case B with $\theta_3$ 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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