You are looking down at a 60° angle from the horizontal onto a clear lake and see the bottom of a 1 m long vertical branch, half of which is below and half above the water. At what angle from the vertical does the light ray that reaches your eyes leave the bottom of the branch? (index of refraction for water is 1.33)

\[
\begin{align*}
N_1 \sin 30^\circ &= N_2 \sin \theta_2 \\
1 \sin 30^\circ &= 1.33 \sin \theta_2 \\
\theta_2 &= 22^\circ
\end{align*}
\]