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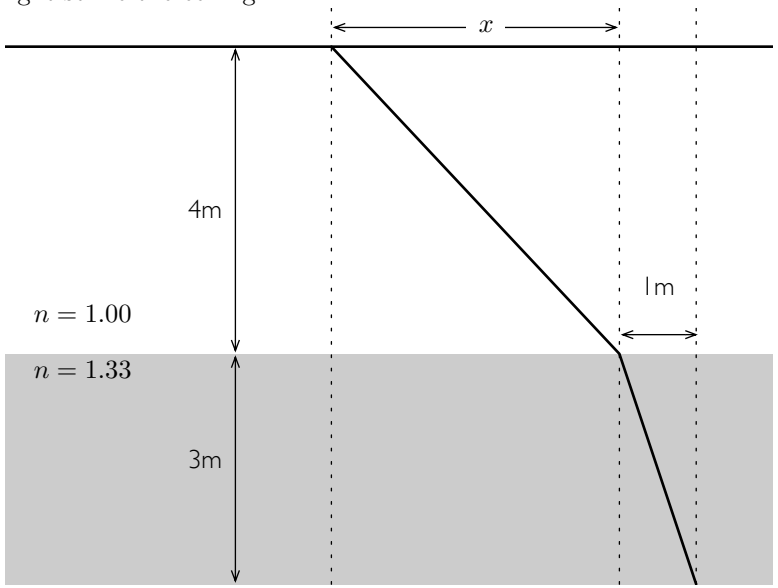

Physics 11 - Quiz 17 5/-4/2020

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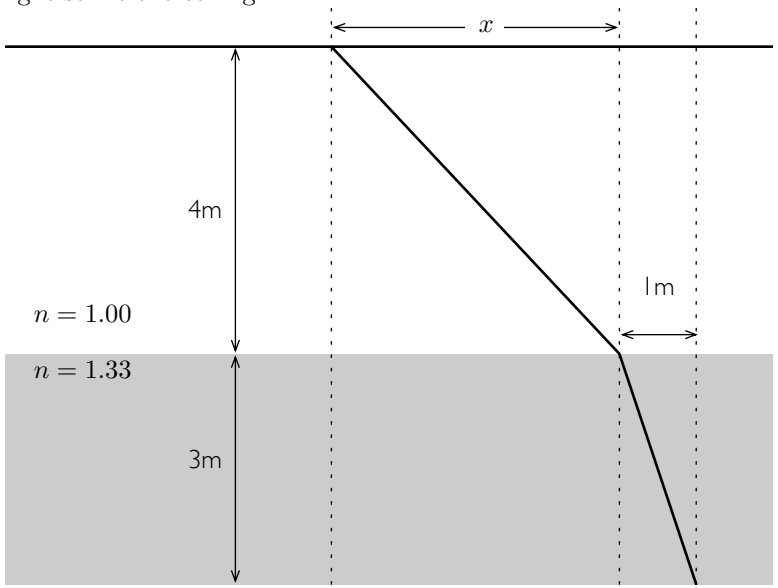

Solution:

$\tan\theta_2 = \frac{1}{3} \longrightarrow \sin\theta_2 = 0.31623$ or just $\sin\theta_2 = \frac{1}{\sqrt{3^2+1^2}} = 0.31623$

$$
\begin{aligned}
n_1 \sin\theta_1 &= n_2 \sin\theta_2 \\
1.00 \sin\theta_1 &= 1.33(0.31623) = 0.42058 \\
\tan\theta_1 &= 0.46358 \\
\frac{x}{4\text{m}} &= 0.46358 \\
x &= 1.8543
\end{aligned}
$$