You have a slab of linear dielectric (given dielectric constant  $\varepsilon_r$ ), with air above it.

Just below the surface, the E field makes an angle  $\theta_1$  with respect to the normal. Just above, the E field makes an angle  $\theta_2$ . (See fig.)

Use boundary conditions on **E** and **D** to figure out  $tan(\theta_1)/tan(\theta_2)$ .

Assume there are no "free charges" in the region shown.



In the figure above, I'm not sure if I drew the arrows correctly. Given your final result, should the E vector tilt a little more "towards the normal" in the lower (dielectric) region, or is a little LESS "towards the normal" (i.e. is  $\Box_1$  smaller, or larger, than  $\Box_2$ ?) (Is this like Snell's law from optics?)