**Answer on Question #44577-Physics-Optics**

A beam of light strikes the side of a glass of water with an angle of incidence of 25 degrees, find the angle of refraction?

**Solution**

We can use formula

$$n = \frac{\sin\theta_{\text{incidence}}}{\sin\theta_{\text{refraction}}},$$

where $n = 1.333$ is the index of refraction of water, $\theta_{\text{incidence}}$ is an angle of incidence, $\theta_{\text{refraction}}$ is the angle of refraction.

So

$$\theta_{\text{refraction}} = \sin^{-1}\left(\frac{\sin\theta_{\text{incidence}}}{n}\right) = \sin^{-1}\left(\frac{\sin 25^\circ}{1.333}\right) = 18.5^\circ.$$

**Answer:** $\mathbf{18.5}^\circ$.