Exercise 5.2.1 Fresnel Cofficients

Consider an unpolarized light beam hitting the surface of an isotropic glass with **n = 1,5** at right angles ($\alpha = 0^\text{O}$).
Hint: to avoid **0/0** situations consider small α and β with **cos**α, β **= 1**.

- Derive the simplified Fresnel equations <u>as given in the script</u> for $\alpha = 0^\text{O}$

- How much of the light will be reflected?

- What is the phase relation between incoming, reflected and transmitted light?

- How does the beam leave the crystal (Intensity and polarization)

- Now consider these questions for some polarization of the incoming light.

Link to the <u>solution</u>

Illustration