

Homework 3

1. Consider Fabry-Perot cavity with absorption (α) or gain (γ) per unit length. Derive the expressions for the transmission and reflection coefficients. Define Finesse in the presence of absorption or gain.
2. Plot the diameter of the spotsize at the waist of laser cavity $2w_0$ at the mirror $2w(d/2)$ as a function of ration d/R .