

Problem 1

Problem 5.1 from your textbook.

Problem 2

Problem 5.3 from your textbook.

Problem 3

Consider a Fabry-Perot interferometer with two mirrors having the same power reflectivity R . Assume that there is no loss within the cavity. Compare the two formulae for the line width of the transmission line Eqs. (5.3.7 and 10) and (4.5.12) by:

- 1- plotting them as a function of R in the range between $R = 0.1$ and 0.99 .
- 2- analytically showing that they are the same up to the second order in $(1-R)$.

Problem 4

Problem 5.9 from your textbook.

Problem 5

Problem 5.10 from your textbook.