## Worksheet \# 1

Friday, April 5, 2024

## Name

## Question (5 pts):

As we discussed, the probability of transition from some initial state a to some final state $b$ as a result of interaction with EM field is proportional to $t^{2} \operatorname{sinc}^{2}\left(\left(\omega_{b a}-\omega\right) t / 2\right)$. Sketch this function vs $\omega$. Indicate the amplitude and the first zeroes. Analyze and comment on your result - what physical picture and trends do you see?

