Worksheet #9

(Friday, October 20, 2023)

Name

Question (5 pts):

Consider unitary transformation of an operator A :

A`= U A U$^+$

If U = I + iεG, where I is the identity operator, ε is a real infinitesimal number, and G is a Hermitian operator, what is A` ? In your derivation, neglect a term proportional to ε^2.

If you have time: Under what condition A doesn't change under this unitary transformation ? Can you think of any physical meaning behind this result?