

PHYS 451 Quantum Mechanics I (Spring 2020)
Online Quiz #5

Compute or simplify the following expressions (here α is a real constant and σ 's are Pauli matrices):

1. $e^{-i\alpha\hat{\sigma}_x}$
2. $e^{i\alpha\hat{\sigma}_x}\hat{\sigma}_ze^{-i\alpha\hat{\sigma}_x}$