

**Worksheet # 4**

(Wednesday, October 4, 2023)

**Name****Questions (5 pts):**

Consider operators A, B, and C as well as a complex number  $\alpha$  and the bra  $\langle\psi|$ . What kind of an object (bra, ket or operator) is the following:

(a)  $\langle\psi|AB\alpha$

(b)  $|\psi\rangle\langle\varphi|$

Find the Hermitian conjugate of these objects.