

Quiz #4

Friday, September 22

PHYSICS 851, FALL 2000

1. Calculate the following matrix elements

(a) $\langle m | a^\dagger a^\dagger a a | n \rangle$

(b) $\langle m | a^\dagger a a a a^\dagger a^\dagger | n \rangle$

(c) $\langle m | a a^\dagger a a^\dagger a^\dagger | n \rangle$