

PHYS 4310, Homework 1 due on September 9th, 2015

Griffiths (2nd edition): 1.3 (10 points), 1.5 (12 points), 1.7 (6 points), 1.9 (12 points), 1.14 (8 points), 1.18 (10 points)

7. (5 points) Find the eigenstates and normalized eigenvectors of $M = \begin{bmatrix} 1 & 2 & 4 \\ 2 & 3 & 0 \\ 5 & 0 & 3 \end{bmatrix}$.

For the three eigenvector combinations, find their direct product (i.e., $\langle a|b \rangle$). Are the eigenvectors orthogonal?