1)   More Linear Algebra Practice

Review Appendix A of Griffiths to brush up on your linear algebra skills and make sure you are comfortable with his notation, especially the "tilde" for transpose (page 470) and the "dagger" for the hermitian conjugate or transpose conjugate (page 471). Then complete Problem A.9 on page 473.

2)   Treating Functions as Vectors – Inner Products

Complete Part III Questions A-F of our Section 3.1 in-class activity titled "Treating Functions as Vectors". Skip questions G and H.

One student will present Questions A-C, and one student will present Questions D-F.

3)   Hilbert Space

(a) For what range of ν is the function $f(x) = x^\nu$ in Hilbert space on the interval (0,1)? Assume ν is real, but not necessarily positive.

(b) For the specific case $\nu = 1/2$, is $f(x)$ in Hilbert space? What about $x f(x)$? How about $(d/dx) f(x)$?