Physics 418, Homework Assignment
Due in Class, Wednesday 25, 2004

1. Griffiths, Problem 1.3
2. Griffiths, Problem 1.12
   The t quark has such a short lifetime that it does not have time to form a well defined bound state. For 5 quarks, how many pairs of distinct mesons and anti-mesons exist? How many mesons states are self-conjugate, i.e. particle and anti-particle are the same state?
3. Griffiths, Problem 1.13
4. Griffiths, Problem 2.1
5. Griffiths, Problem 2.3
6. Griffiths, Problem 2.6
   Since this textbook was written, production of pairs of W's and Z's has been studied at CERN. A web search using Google using **"LEP2" "Z pair"** will yield a number of sources on this including:
   eps2003.physik.rwth-aachen.de/data/ talks/parallel/11SM/11Natale.pdf