PHYS 391, Homework #2
Due Tuesday, October 20, start of class.

Key Concepts

- Mean, Standard Deviation
- Standard Deviation of the Mean
- Gaussian Distribution

Reading: Taylor Chapters 4-5

Homework Problems (taken from Taylor):

1. Problem 4.7
2. Problem 4.12
3. Problem 4.18
4. Problem 4.26 - You may use python to make this easier, although in this case it may be just as quick to do "by hand"
5. Problem 5.12
6. Problem 5.18 - The table in the back of the book is probably the best source of this information.
7. Problem 5.21 - Either use the tables in the back of the book, or use the python `math.erf(x)` function. If you use the python function, check very carefully the Error function definition on Wikipedia and compare with Eqn. 5.35 in Taylor.
8. Problem 5.24
9. Problem 5.28 - Remember, percent usually indicates a relative uncertainty.
10. Problem 5.36 - The phrase "at the 5% level" sets the threshold in this problem where a low probability is deemed "unlikely" and hence the results are inconsistent. Note that this is always an arbitrary threshold.