META

Distributions, Variance, Inequalities, Confidence Intervals

1 General Comments

1. In distributions section, ok to just do expectation and variance in terms of trials (instead of days/minutes or whatever, unless you want to make the point that variances units are in units squared)
2. 1.1:1) c) is probably skippable (definitely depends on the variance section later, if your do this problem you should go over variance section first)
3. Important questions to get to:
   - If your students are struggling on Expectation and Variance, 2.1
   - If your students are feeling fine with Expectation/Variance calculations, skip straight to 2.2/2.3
   - 2.4/2.5 is necessary for everyone
   - 3.1
   - 3.3
   - 3.4
   - 3.5
4. Make sure your students can calculate Expectation and Variance; they should feel comfortable calculating it for different Random Variables before moving on.
5. Distributions should also be easy; go over the expectations/variances of the important ones
6. The proofs with Variance are important; variance proofs appear a lot

7. For most people, these bounds will be new (taught Monday or Wednesday), but theyre not terribly difficult to teach. Prove Markovs if they are uncomfortable with it. Make sure they are aware of the restrictions on the random variables that Markov requires. Recommand to draw diagrams to help students to understand what Chebyshev bound is calculating.
8. Only Friday sections will probably get to CIs, will be repeated next week most likely.
9. Most of this stuff is pretty easy to teach; Distributions, Expectation, and Variance are pretty basic to teach; just make sure you are getting your math right (review the worksheet); make sure to explain how to find E(f(X)) in order to find E(X2)
10. 2.6/2.7 will require a lot of steps; review each one carefully before teaching these The best way to talk about inequalities is to derive them all

2 Questions