Final

- Covers material from Chapters 1 - 9
  - Except the sections I said you could skip (see lecture notes)
- In this class room, 2:00 - 5:00 pm, December 11
- The exam is closed book and closed notes.
- You may bring **two** sheets of paper, letter size (8.5 x 11 in), on which you may write what you wish – on both sides
- Bring a calculator – that does not connect to internet or mobile network
  (i.e. you cannot use your phone, Ipod, laptop, etc.)
  - I will bring the tables needed (normal, t, χ^2, F)

WARNING: As you know there have been typos on my slides from time to time. If the formula given on my slides is different from what is given in the book: TRUST THE BOOK.

Homework 10

- The last homework is due this **Monday (Dec 3) at 10am**
- You can pick up your homework by dropping by my office:
  223 C Old Chemistry building
  Thursday (Dec 6), 11am - 1:pm or Friday (Dec 7)10am-3pm.

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- Make sure you check your grades on Sakai
- If grades are missing or wrong in Sakai, bring your homework (or midterm) to me – same time and place as above

Exercise 9.8.3

- Failures in an electronic system are due to either a *minor* or a *major* defect
- 80% of failures are caused by minor defects
- 20% of failures are caused by major defects
- If failure occurs: n independent soundings are made:

$$X_1, \ldots, X_n \sim \begin{cases} \text{Poisson}(\lambda = 3) & \text{if minor defect} \\ \text{Poisson}(\lambda = 7) & \text{major defect} \end{cases}$$

- Cost of wrong decisions:
  - Deciding major defect when it was minor: \$400
  - Deciding minor defect when it was major: \$2500
- Cost of right decision: \$0

Given $X_1, \ldots, X_n$ what decision minimizes expected cost?