MATH 119 HW #5: CHAPTERS 8-11

FALL 2008 – 3RD EDITION OF TRIOLA'S ESSENTIALS

Write your name and class time and clearly separate sections! See syllabus.
Show work where appropriate, and use "good form and procedure," as in class!
This is due when you take the Final.
You should photocopy your homework if you're not going to pick it up later.
Graded out of 10 points.
"*" denotes "See Hint/Comment below."
Ask me about answers to even-numbered problems in class.

Suggestions on rounding for Chapters 8-11:

Round off to at least four decimal places or four significant digits, whichever is more detailed. Round off *z* values to two decimal places. Round off *t* and χ^2 values to three decimal places, except round off χ^2 values to four decimal places in Chapter 11.

CHAPTER 8

Section 8-2: #1, 4, 9-15 odd.

SKIP SECTION 8-3 FOR NOW; GO AHEAD TO …
Section 8-4: #1, 4, 5-15 odd, 19* (see Hint below!).

Hint on #19: $n = 40$, and $\bar{x} \approx 5.6393$ [grams].

On all these problems: Use the *P*-value method and then use the traditional/classical method.

For the *P*-value method, do the following. (List given on Final, if needed.)

- State the null and alternative hypotheses using notation (as in class), and identify which is the claim.
- Compute the value of the appropriate test statistic.
- Give the corresponding *P*-value.
- State whether or not the null hypothesis is rejected.
- Write your final conclusion relative to the claim using the kind of wording we used in class.

THERE'S MORE ….

For the traditional method, do the following. (List given on Final, if needed.)

- State the null and alternative hypotheses, and identify which is the claim.
  You must use the kind of notation that we have used in class.
- Compute the value of the appropriate test statistic.
  For a given homework problem, you only need to compute it once; the value will be the same as for the *P*-value method.
- Find the critical value(s), and indicate the critical region.
- State whether or not the null hypothesis is rejected.
- Write your final conclusion relative to the claim using the kind of wording we used in class.

Notice that many of the steps are the same for the two methods, although it's good practice to work out all the steps for both.

Section 8-5: #1-4 all, 5, 7, 9, 11, 13, 18*, 20*, 21*, 23*.

On #18, 20, 21, 23: Use the *P*-value method and then use the traditional/classical method. Ask for answers to #18 and #20 during our question session.

NOW, GO BACK TO …
Section 8-3: #1, 3, 5, 9*, 13*, 17*, 19*, 21*, 23*.

On #9-23 (those listed): Use the *P*-value method and then use the traditional/classical method.

Section 8-6: Skip. This section was covered on the Final from Spring 2008; it will not be covered on your Final.

CHAPTER 9 (TWO POPULATIONS; TWO-SAMPLE STATISTICS)

No homework and not on the Final, although this material is useful, and it reinforces your knowledge of Chapter 8.

THERE'S MORE ….

CHAPTER 11 (MORE CHI-SQUARE TESTS)

Section 11-2: #1, 2, 3, 7ac, 9, 11, 23, 27.

Read: The Chapter Problem on p.551.
Look at: #7, 19 (for baseball fans), 21, 24, 25.

Section 11-3: Skip. This section was covered on the Final from Spring 2008; it will not be covered on your Final.

Section 11-4: Skip.

CHAPTER 10 (CORRELATION AND REGRESSION)

Section 10-2: #2, 4, 33-36 all. Understand my notes, lecture, and handout.

Look at: #37.

Section 10-3: Understand my notes and lecture.

Section 10-4: #5, 7. Understand the coefficient of determination, r^2. See p.527. For more background, you can read pp.525-527.

Section 10-5: Skip. Rank correlation is an interesting topic, though. It deals with…rankings (matched pairs of them). It is an example of a nonparametric (or distribution-free) test. We don't need such assumptions as a roughly normal distribution. If you're interested, read the section, especially pp.535-536 on "Advantages" and "Disadvantage" compared to the parametric approach to correlation.