

PMgt 630, Statistical Analysis

HW # 7

Fall 2008

Note: Please turn in electronically (empastats@gmail.com) by 7:30pm on 5 November.

Complete The Following Problems:

1. Test the hypothesis that the mean number of criminal cases adjudicated in juvenile court is different for communities with curfews versus communities without curfews.
 - (a) State H_O : and H_A :.
 - (b) Check the conditions necessary for inference, including histograms of both groups (number of criminal cases adjudicated in juvenile court with and without curfews), and test of equal variances. Assume both samples are derived from a simple random sample.
 - (c) Test the claim of equal mean number of criminal cases adjudicated in juvenile court at $\alpha = 0.05$.
 - (d) Make an appropriate conclusion about your findings.
 - (e) Compute a 95% Confidence Interval for the differences between the mean number of criminal cases adjudicated in juvenile court for communities with and without curfews.
 - (f) Is there agreement between the conclusion in part 3 and part 4? Please comment.

2. A public policy researcher is interested in the effect of anger management programs in High Schools and whether the violence decreases with the implementation of these anger management programs. She randomly assigns 15 schools to implement an anger management program, and randomly assigns 13 schools to continue their existing methods (no anger management program). The table below represents the number of violent incidents for the in each group.

AM Program	16	22	18	17	16	14	18	11	12	14	17	17	22	19	18
No AM Program	14	15	12	11	11	14	10	14	14	7	10	14	14		

- (a) State H_O : and H_A :.
- (b) Check the conditions necessary for inference, including histograms of both groups (number of violent incidents for both groups), and test of equal variances. Assume both samples are derived from a simple random sample.
- (c) Test the claim of equal mean number of violent incidents at $\alpha = 0.05$.
- (d) Make an appropriate conclusion about your findings.
- (e) Compute a 95% Confidence Interval for the differences between the mean number of violent incidents for schools with and without anger management programs.
- (f) Is there agreement between the conclusion in part 3 and part 4? Please comment.