

# ECE 341 - Homework #15

F-Test and ANOVA. Due Friday, June 13th

## Test of a 3+ Populations

1) The temperature drop of 3 different mugs over 15 minutes when filled with boiling water is measured

- A: Mean = 2.43 Standard Deviation = 0.0155,  $N_A = 3$  (sample size)
- B: Mean = 2.50 Standard Deviation = 0.06557,  $N_B = 3$  (sample size)
- C: Mean = 2.73 Standard Deviation = 0.08145,  $N_C = 3$  (sample size)

Determine if the means are the same using an ANOVA test.

2) The height three people can jump is recorded (units = meters)

A: 0.413, 0.370, 0.345, 0.328, 0.424, 0.276, 0.494, 0.306, 0.419, 0.405  
B: 0.390, 0.411, 0.543, 0.370, 0.425, 0.387, 0.556, 0.557, 0.603, 0.497  
C: 0.649, 0.605, 0.628, 0.603, 0.645, 0.593, 0.637, 0.687, 0.635, 0.687

Determine if the means are the same using an ANOVA test.

The reflex time of a person in the morning and evening measured

Trial	Person A		Person B		Person C	
	morning	evening	morning	evening	morning	evening
#1	0.2253	0.2559	0.1924	0.2721	0.2419	0.3012
#2	0.1923	0.3488	0.1893	0.2197	0.1976	0.2556
#3	0.1854	0.244	0.2081	0.2438	0.3063	0.2451

3) Use an ANOVA table to determine if the means are the same for all six populations: Persons A, B, and C, morning, and evening.