F DISTRIBUTION AND ANOVA: PRACTICE; ANOVA

STUDENT LEARNING OUTCOMES:

- **THE STUDENT WILL EXPLORE THE PROPERTIES OF ANOVA.**

GIVEN:

Suppose a group is interested in determining whether teenagers obtain their drivers licenses at approximately the same average age across the country. Suppose that the following data are randomly collected from five teenagers in each region of the country. The numbers represent the age at which teenagers obtained their drivers licenses.

	Northeast	**South**	**West**	**Central**	**East**
	16.3	16.9	16.4	16.2	17.1
	16.1	16.5	16.5	16.6	17.2
	16.4	16.4	16.6	16.5	16.6
	16.5	16.2	16.1	16.4	16.8
$\bar{x}$ =	_____	_____	_____	_____	_____
s^2 =	_____	_____	_____	_____	_____

HYPOTHESES

1. State the hypothesis:

H_o: _____

H_a: _____

DATA ENTRY

Enter the data into your calculator or computer.

2. degrees of freedom - numerator: df(n) = _____

3. degrees of freedom - denominator: df(d) = _____

4. F test statistic = _____

5. p-value = _____

DECISIONS AND CONCLUSIONS

State the decisions and conclusions (in complete sentences) for the following preconceived levels of α .

6. $\alpha = 0.05$

   Decision:

   Conclusion:

7. $\alpha = 0.01$

   Decision:

   Conclusion: