THE CHI-SQUARED DISTRIBUTION: PRACTICE 2; CONTINGENCY TABLES

STUDENT LEARNING OUTCOMES:

- THE STUDENT WILL EXPLORE THE PROPERTIES OF CONTINGENCY TABLES.

GIVEN:

Smoking Level Per Day	Ethnicity					
	African American	Native Hawaiian	Latino	Japanese Americans	White	TOTALS
1-10						
11-20						
21-30						
31+						
TOTALS						

HYPOTHESIS TEST

Conduct a hypothesis test to determine if smoking level and ethnicity are independent.

DATA

Copy the data from Chapter 3, Practice 1, into the above table.

HYPOTHESIS

State the hypotheses.

H_o: _____

H_a: _____

EXPECTED VALUES

Enter expected values on the above table. (Round to two decimal places.)

INFORMATION

Fill in the information below.

1. Degrees of freedom = _____

2. Chi^2 test statistic = _____

3. p-value = _____

4. Is this a right-tailed, left-tailed, or two-tailed test? _____
   Explain why.

5. Graph the situation below. Label and scale the horizontal axis. Shade the area corresponding to the p-value.

REASON AND CONCLUSION

6. State the decision and conclusion (in a complete sentence) for the following preconceived levels of α .

$\alpha = 0.05$

a. Decision:
b. Reason for the Decision:
c. Conclusion:

$\alpha = 0.01$
a. Decision:
b. Reason for the Decision:
c. Conclusion: