

Name: \_\_\_\_\_

Math 130 Day 22 In Class Worksheet

Date: \_\_\_\_\_ Sections 12.1 and 12.2 part 1: The Goodness-Of-Fit Test and The Test For Independence

1. **Ages of Rio Hondo Students** In the Fall 1990 – Spring 1991 school year at Rio Hondo, 27% of students were teenagers, 34% of students were in their 20's, 24% of students were in their 30's, and 15% of students were 40 or older. In order to see if the age distribution has changed since then, 200 current Rio Hondo students were polled and asked for their age. The results are in the following table:

Age	Frequency
teenager	72
20-29	75
30-39	34
40 or older	19

At the  $\alpha = 0.10$  significance level, test the claim that the age distribution of current Rio Hondo students is the same as it was in the Fall 1990 – Spring 1991 school year.

2. **Profile of Smokers** The following data represent the smoking status from a random sample of 1054 U.S. residents 18 years or older by level of education.

		Smoking Status		
		Current	Former	Never
Number of Years of Education	<12	178	88	208
	12	137	69	143
	13-15	44	25	44
	16 or more	34	33	51

Test whether smoking status and level of education are independent at the  $\alpha = 0.05$  level of significance.