Lab Assignment 9.5

Name:_____Date:_____Row:_____

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1. From generation to generation, the mean age when smokers first start to smoke varies.

However, the standard deviation of that age remains constant of around 2.1 years. A survey of 40 smokers of this generation was done and the sample mean was 18.1. Do the data support the claim at the 5% significance level, that the mean starting age is at least 19.

1. Null and Alternative Hypothesis
2. Calculator Work
3. Test Statistic and P-Value
4. Conclusion about the null hypothesis
5. Final conclusion that addresses the original claim

2. The mean number of sick days an employee takes per year is believed to be about ten. Members of a personnel department do not believe this figure. They randomly survey eight employees. The number of sick days they took for the past year are as follows: 12; 4; 15; 3; 11; 8; 6; 8. Use a 0.05 significance level to test the claim that the mean number of sick days an employee takes per year is ten.

1. Null and Alternative Hypothesis

1

2. Calculator Work
3. Test Statistic and P-Value
4. Conclusion about the null hypothesis
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3. Your statistics instructor claims that more than 60 percent of the students who take her Elementary Statistics class go through life feeling more enriched. For some reason that she can't quite figure out, most people don't believe her. You decide to check this out on your own. You randomly survey 64 of her past Elementary Statistics students and find that 34 feel more enriched as a result of her class. Use a 0.05 significance level to test the claim that more than 60 percent of the students who take her Elementary Statistics class go through life feeling more enriched.

1. Null and Alternative Hypothesis
2. Calculator Work
3. Test Statistic and P-Value
4. Conclusion about the null hypothesis

2

5. Final conclusion that addresses the original claim

4. Toastmasters International cites a report by Gallop Poll that 40% of Americans fear public speaking. A student believes that less than 40% of students at her school fear public speaking. She randomly surveys 361 schoolmates and finds that 135 report they fear public speaking. Use a 0.05 significance level to conduct a hypothesis test to determine if the percent at her school is less than 40%.

1. Null and Alternative Hypothesis
2. Calculator Work
3. Test Statistic and P-Value
4. Conclusion about the null hypothesis

5. Final conclusion that addresses the original claim

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5. Registered nurses earned an average annual salary of $69,110. For that same year, a survey was conducted of 41 California registered nurses to determine if the annual salary is higher than $69,110 for California nurses. The sample average was $71,121 with a sample standard deviation of $7,489. Conduct a hypothesis test using a 0.05 significance level.

1. Null and Alternative Hypothesis
2. Calculator Work
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