1. Identify and test the research hypothesis at the .05 level of significance that boys raise their hands in class more often than girls. Remember to first decide whether this is a one- or two-tailed test. What is your conclusion regarding the research hypothesis?

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| --- |
| **Group Statistics** |
|  | Gender | N | Mean | Std. Deviation | Std. Error Mean |
| hands up | Boys | 14 | 7.93 | 2.369 | .633 |
| Girls | 16 | 5.31 | 2.387 | .597 |

|  |
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| **Independent Samples Test** |
|  | Levene's Test for Equality of Variances | t-test for Equality of Means |
| F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |
| Lower | Upper |
| hands up | Equal variances assumed | .477 | .495 | 3.006 | 28 | .006 | 2.616 | .870 | .833 | 4.399 |
| Equal variances not assumed |  |  | 3.007 | 27.529 | .006 | 2.616 | .870 | .833 | 4.399 |

1. Test the research hypothesis at the .01 level of significance that there is a difference between boys and girls in the number of times they raise their hands in class. What is your conclusion regarding the research hypothesis?



1. You used the same data for both parts a and b, but you have a different hypothesis (one is directional and the other is non-directional). How do the results differ and why?