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

**1) binomial test**

Seasonal effective disorder can lead to depression during the winter months. A study of mortality in Norway reveals that in a one year period there were 1236 suicides. Of this total 572 occurred between October 10th and March 25th.

**a)** Use an appropriate test to evaluate the null hypothesis that risk of suicide is unrelated to the season.

**2)** **Chi-Square**

You are teaching a class of 126 students. Of this number 47 are first generation college students. 14

**3) sample t-test**

Two lakes were freshly stocked with fish last season. You go to the field and seine fish from both lakes and catch the following fish.

Lake 1: 7.69 10.27 9.38 9.89 9.89 8.81 9.82 9.48 9.78 9.45

Lake 2: 9.06 8.93 11.32 10.10 9.80 11.22 8.61 10.07 8.49 9.02 10.01 8.94 9.02 10.97

**a)** State the null hypothesis of the statistical test you will perform?

**b)** Is the mean fish size in the two lakes significantly different?

1. Paired sample t-test

You are performing a study to determine whether insects can learn to distinguish colors. You have feeding structures that

1. levenes test
2. Mann-whitney
3. Permutation test
4. anova
5. tukey