Name(s):

Key Terms
Provide the definitions for the following terms:

- hypothesis testing:
- hypothesis:
- null hypothesis:
- alternative hypothesis:
- Type I error:
- Type II error:
- rare event rule:
- p-value:

Data
What random sampling method did you use and why did you use such a method?

Summary Data:
Number of trials (number of students I surveyed): \( n = \)
Number of events (number of students I surveyed who own at least one dog at home): \( x = \)

Hypotheses
- State the claim that you are testing.
  -
- State the null and alternative hypotheses.
  - \( H_0: \)
  - \( H_1: \)
- Is this a right-tailed, left-tailed, or two-tailed test?
  -
- Define the random variable for this test.
  - \( p' = \)
**Hypothesis Test**

**Interpretation**

Decisions on Null Hypothesis

<table>
<thead>
<tr>
<th>$\alpha$</th>
<th>p-value</th>
<th>decision (reject or do not reject $H_0$)</th>
<th>reason for decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.05</td>
<td></td>
<td></td>
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</tbody>
</table>

Conclusion

**Discussion**

1. 
2. 
3.