

Class Time: \_\_\_\_\_ Name: \_\_\_\_\_

**SOLUTION SHEET: The Chi-Square Distribution**

a.  $H_0$ : \_\_\_\_\_

b.  $H_a$ : \_\_\_\_\_

c. degrees of freedom = \_\_\_\_\_

d. State the distribution to use for the test. \_\_\_\_\_

e. Test Statistic:  $\chi^2 =$  \_\_\_\_\_

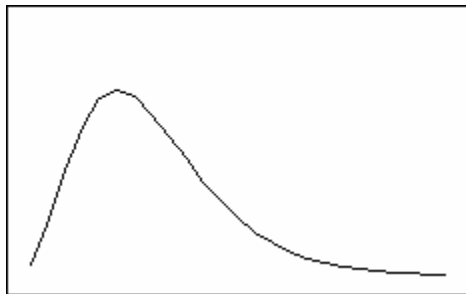
f. p-value = \_\_\_\_\_ In 1 – 2 complete sentences, explain what the p-value means for this problem.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

g. Use the previous information to sketch a picture of this situation. **CLEARLY**, label and scale the horizontal axis and shade the region(s) corresponding to the p-value.



h. Indicate the correct decision (“reject” or “do not reject” the null hypothesis) and write appropriate conclusions, using COMPLETE SENTENCES.

alpha	decision	reason for decision
_____	_____	_____
		_____

**Conclusion:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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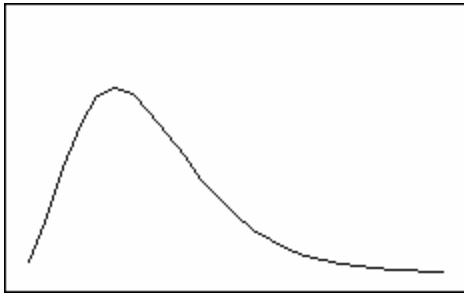
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**alpha**

**decision**

**reason for decision**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Conclusion:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_