A sample of 500 were selected and their musical preferences were recorded. Compare these results to previous studies of musical preference in the general population. Do the results obtained in this study agree with the expectations, or does this suggest that the musical preference of the group in question is different from the general population?

Musical Preference	Observed $(n = 500)$	Expected
Classical	8	4%
Country	210	36%
Gospel	72	11%
Oldies	10	2%
Рор	75	18%
Rock	125	29%

Do these results provide evidence that the musical preferences of the sample are the same as the general population? Use an 0.01 level of significance. Assume that the mean differences are approximately normally distributed.

- 1. State the Type of Hypothesis or the TI calculator function to be used (and any settings):
- 2. State the Null and Alternative Hypotheses:  $H_0$ :
  - $H_a$ :
- 3. List all the data entered into your calculator to find the test statistic, or state the formula used if solving by hand.

4. Provide the output of the calculator. If solving by hand, find the test statistic and convert this value to a P-value using your calculator or the table.

5. Graph the critical values and the test statistic on the normal distribution.

6. What is your conclusion based on the critical values/test statistic, or the significance levels/p-values? Do you reject the null or fail to reject the null?

7. Restate your conclusion in the context of the problem (circle your choice):

There IS/IS NOT sufficient evidence the sample DOES/DOES NOT have the same musical preferences as the general population.