It is widely believed that 10% of the human population is left-handed. According to research conducted by retired SLU Professor of Psychology Alan Searleman, left-handers are more likely to have a high IQ (140+) and a better vocabulary. He also claims that lefties have poorer memories, but they are twice as good at problem-solving tasks. Given this, one might wonder if the rate of left-handedness among St. Lawrence students is higher than that for the general human population.

In a sample of 191 St. Lawrence students, 26 reported being left-handed. Assume that this sample of students can represent all St. Lawrence students on the topic of handedness.

Step 1: Parameter & Hypotheses

**Parameter**

**Null Hypothesis**

**Alternative Hypothesis**

Step 2: Checking Conditions

Which hypothesis (null or alternative) are we assuming to be true? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
Check conditions (using what we assume to be “the truth”) to determine if the sampling distribution is approximately Normal:

Find the Sampling distribution of the sample proportion assuming the null hypothesis is true.

Step 3: Test Statistic

Step 3 (continued): p-value

Step 4: Decision (about Ho)

Step 4 (Continued): Conclusion (about Ha)