9.1 Worksheet 1

Significance Tests with Proportions

**★I can identify the proportion parameter that I am interested in based on sample data★**

**★I can determine if a test is one sided or two sided★**

**★I can compute the value of the test and the p-value when conditions have been met★**

**★I can compare the p-value to α to make a decision about the null hypothesis★**

Do the following significance tests. Show ALL Steps!! (PHCTAC)

1. LeRoy, a starting player for a college basketball team, made only 40% of his free throws last season. During the summer he worked on developing a softer shot in hopes of improving his free throw accuracy. In the first eight games of this season, LeRoy made 25 free throws out of 40 attempts. Did LeRoy’s work over the summer help him improve? Test at 0.05 significance.
2. Does fluoridated water effect dental health by causing fewer cavities? It is known (in the dental world) that 62% of children have tooth decay. In a sample of 119 children who drink fluoridated water, 67 of them had tooth decay. Is this enough evidence to support the claim that fluoridated water may result in fewer decayed teeth? Test at α = 0.03