Prob & Stats	Name(s):		
Application of Confidence Intervals 1	Date:		Period:

You may work in pairs.

The company *Mr. Beans* is in the process of distributing a blend of red and white beans for market. They wish to produce bags that contain an equal mix of red and white beans in each bag. To do this a new machine was ordered to speed up the process. The machine was designed to create bags containing roughly 100 beans each. Suppose you were an inspector and you opened a bag at random and counted the proportion of white beans. You discovered that the sample contains 73% white beans.

a.) Construct the sampling distribution that is necessary to answer this problem. Provide the dot-plot of your distribution and write a short description explaining how you created the distribution and what information the sampling distribution is providing. Be specific.

b.) Choose an appropriate confidence interval and explain whether the observed sample of 73% white beans is sufficient evidence to claim that the machine is malfunctioning. In your explanation be sure to provide a reason for your cutoff values and provide all references to your graph you used to support your argument.