

Name: **Student 4**

ID: \_\_\_\_\_

8. You want to conduct a simulation to answer the research question. To test the hypotheses above, you set the one-proportion applet to have the following values: [1pt each]

a. Probability of heads: 0.69

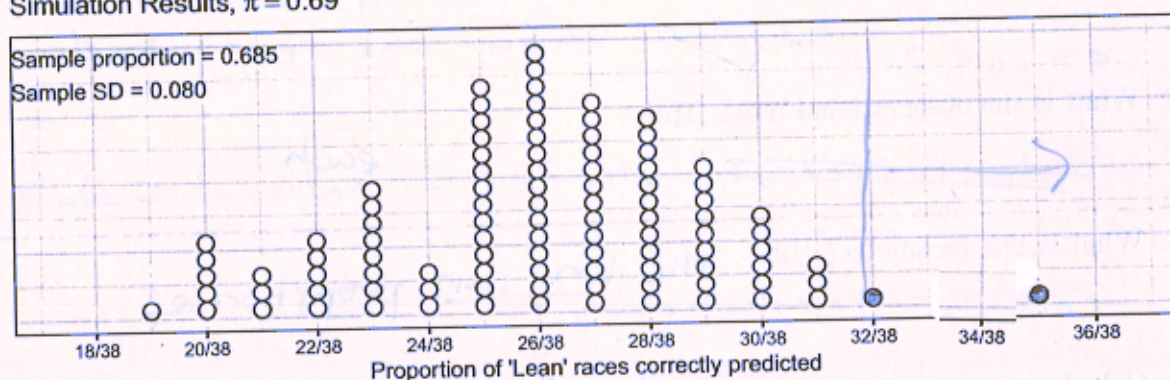
b. Number of tosses: 539

c. Number of repetitions: 100

9. In this simulation, what does a heads represent? [1pt]

a set of each time the prediction was correct

10. Your simulation produces the data shown in the plot below:  
Simulation Results,  $\pi = 0.69$



- a. What does a dot represent in the plot? [2pt]

a single set out of 100 simulations

- b. On the plot, draw one or two vertical line(s) to indicate the cutoff(s), and an arrow(s) indicating the direction(s) of  $H_A$ . Shade in the dots corresponding to the simulation p-value calculation. [3pt]

- c. Calculate the simulation p-value: [2pt]

$$\frac{2}{100} = 0.02$$

$$p\text{ value} = 0.02$$

- d. What is your conclusion? [3pt]

with a p-value 0.02 we have moderate evidence to reject the null hypothesis.