

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

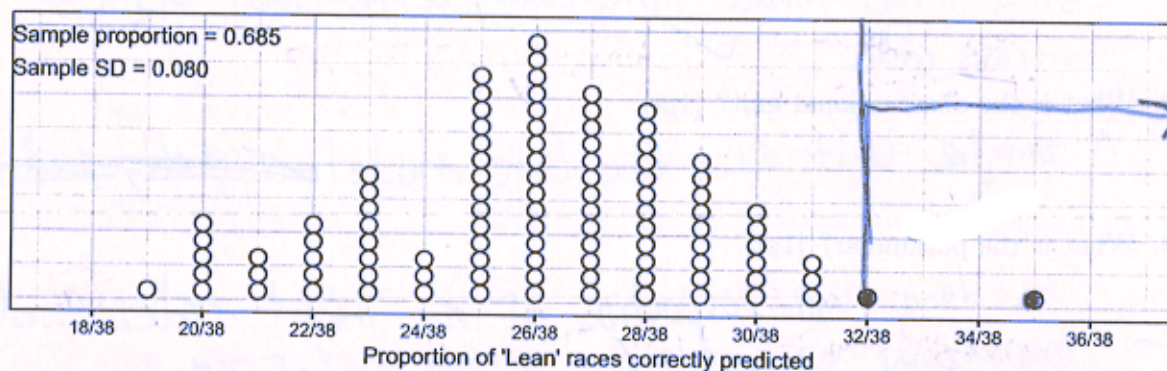
b. Number of tosses: 38

c. Number of repetitions: 100

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

A successful prediction from the light model in a sample of 38

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]

1 sample case of correct lite model predictions in a sample of 38 attempts

- 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]

$$p\text{-value} = \frac{2}{100} = .02$$

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

With a p-value of .02 it is lower than 0.05 therefore H_0 can be rejected and the Lite model predicts significantly better at a rate greater than 0.69.