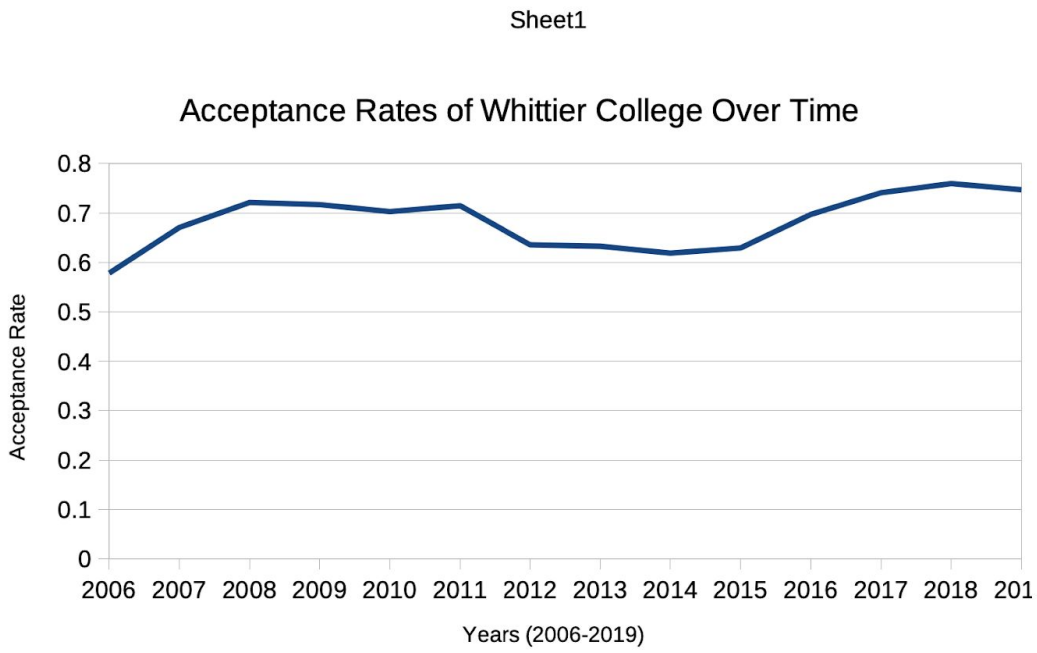
1.

a. Sample size: S = {59, 60, 70, 75, 76, 77, 78}
b. Mean: 72.2 bpm
c. Standard deviation: 7.0364
d. The sample is too small to be accurately representative of the entire student population at Whittier College. To get a more complete sample of the population, we could measure the resting heart rates of at least three students from each class, without the effects of coffee and during a normal week, not finals week, when everyone is typically stressed out and on edge.

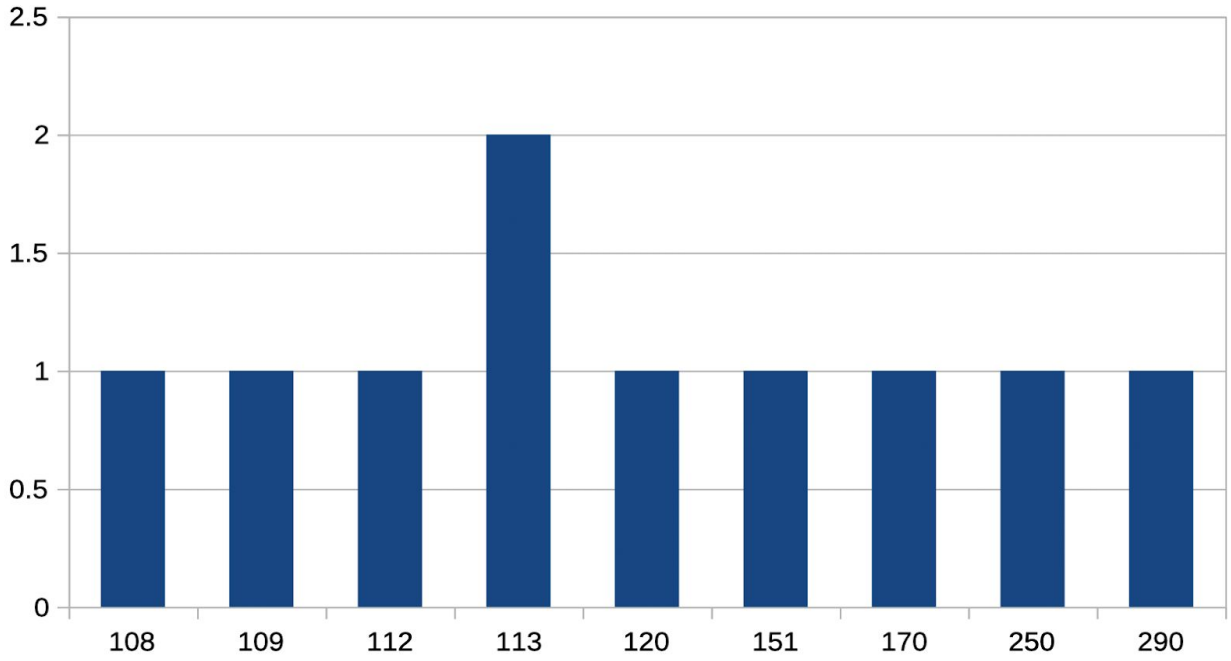
2.

a. 425.21
b. Average acceptance rate: 68.32%
c. Standard deviation: 0.0558, no outliers
d.




3.

a. 75th percentile: 190
b. 113 corresponds with the 40th percentile
c. Mean: 153.6, Standard deviation: 65.32

d. 


The data is skewed to the right

4.

a. 1.5625%
b. 0.0001079

5.

a. 0.00390625
b. 0.00390625
c. Both paths are equally common because the probability and chances of the movements are equal because it is a fair chance.

6. Expectation value of profit of one share: $0.44, $440 profit for 1000 shares

7.

a.

| | | | |
|---|---|---|---|
| 0 | 0 | 0.000977 | 00 |
| 1 | 0 | 0.009766 | 0.009766 |
| 2 | 0 | 0.043945 | 0.087891 |
| 3 | 0 | 0.117188 | 0.351563 |

| | | | |
|---|---|---|---|
| 4 | 1 | 0.205078 | 0.820313 |
| 5 | 0 | 0.246094 | 1.23047 |
| 6 | 3 | 0.205078 | 1.23047 |
| 7 | 6 | 0.117188 | 0.820313 |
| 8 | 0 | 0.043945 | 0.351563 |
| 9 | 0 | 0.009766 | 0.087891 |
| 10 | 0 | 0.000977 | 0.009766 |

b. Yes, the participants are guessing randomly because they only had 2.0 seconds to make a decision.

c. The data is following a binomial distribution.