Abdulmonem Alhajji

MATH 080

Mid-term exam

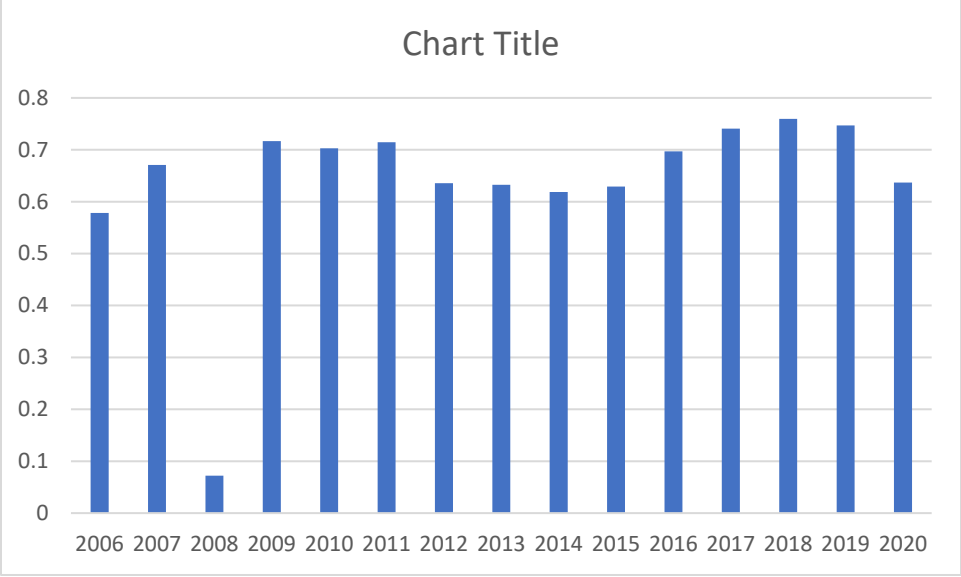
07/31/2020

Unite 0

Q1.

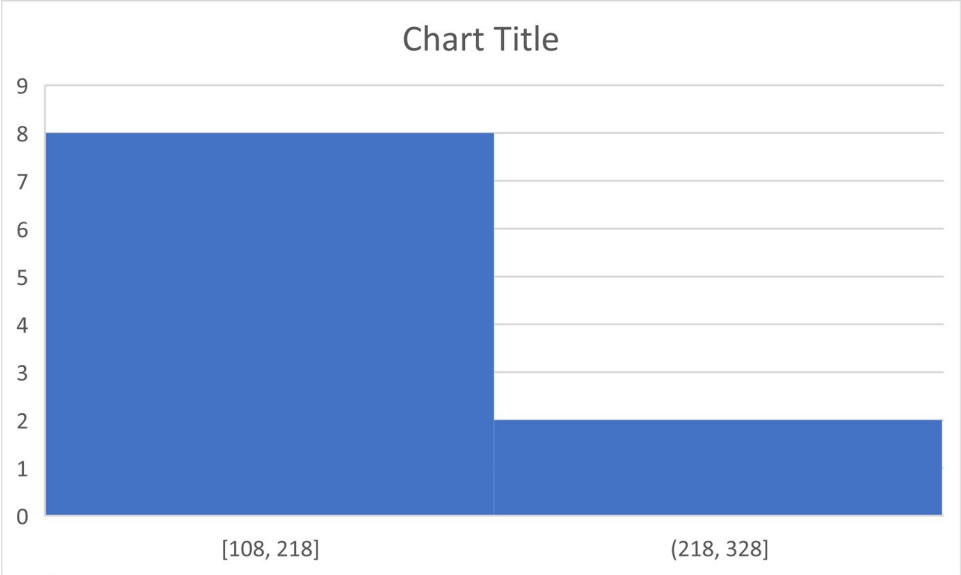
- The sample size is 10 college students.
- The mean is 72.2
- The standard division is 6.70
- The sample was taking during the finals and plus the students already drank coffee, which could influence the accuracy of the statistics. AS for Whittier college students, I'd pick the students during a less stressful time, like maybe during a break or at the beginning of the semester.

Q2.

- 425.92
- We divide the admitted by applied students each year and then average the answers to get 0.68 which means the average acceptance rate is 68%
- Slandered division = 0.051, no.
- 

Q3.

A- The 75th percentile is = 165.25
B- 113 correspond to the 35th percentile.
C- The mean = 153.6 and the standard deviation = 65.31
D-



Q4.

A- 1/7776
B- 1/46656

Q5.

A. 1/256
B. 1/256
C. Since the model has 0.5 probability fir both movements, there will always be a 50/50 chance for each path.

Unite 1

Q1.

Outcome	x	p(x)	x*p(x)	
1	90	0.01	0.9	
2	16	0.49	7.84	
3	-15	0.49	-7.35	
4	-95	0.01	-0.95	
		1	0.44	440

The expectation value of her profit is $0.44 and her profit if she buys 1000 shares would be $440.

Q.2

A.

x	N	p(x)	x*p(x)
0	0	0	0
1	0	0.1	0.1
2	0	0.2	0.4
3	0	0.3	0.9
4	1	0.4	1.6
5	0	0.5	2.5
6	3	0.6	3.6
7	6	0.7	4.9
8	0	0.8	6.4
9	0	0.9	8.1
10	0	1	10
Sum	10	5.5	38.5

B. given what we know from the experiment, the participants are guessing randomly, because they are looking at a picture of a person for 2 seconds and then the decide if the have an IQ over a 100. Logically, it won't make sense that it's not random.

C. Yes, the data is a binomial distribution. There are two independent values in the trial, and that's either the person has an IQ above 100 or not. P value = 55.