

In order for Mr. Santowski to determine who is the best shot put thrower out of his top three throwers, the data has been examined. In order for us to determine who is Mr. Santowski's best shot put thrower, the five number summary, mean and mode of the data has to be considered. The best thrower not only has to make the farthest throws, but also has to consistently make the farthest throws. He also has to have his throws close to the mean and median distance in order to consider the thrower as "the best". The following tables, frequency graphs, box and whisker graphs and data have been used to determine the best thrower out of the top three. After the first set of data has been evaluated, the second set of data, which is from a competition during the track and field season, will be evaluated in the same way as the first.

Who's the Best Thrower Part 1:

Thrower#1	8.43	8.69	8.74	8.79	8.85	8.94	8.95	9.04	9.25	9.26	9.30
	9.39	9.46	9.65	9.66	9.78	10.01	10.01	10.14	10.23	10.25	10.62

Mean: 9.43

Calculation:

$$\frac{8.43+8.69+8.74+8.79+8.85+8.94+8.95+9.04+9.25+9.26+9.30+9.39+9.46+9.65+9.66+9.78+10.01+10.01+10.14+10.23+10.25+10.62}{22}$$

Median: 9.35

$$\text{Calculation: } n = \frac{22+1}{2}$$

n=11.5, so n is between the 11th and 12th values, which are 9.30 and 9.39.

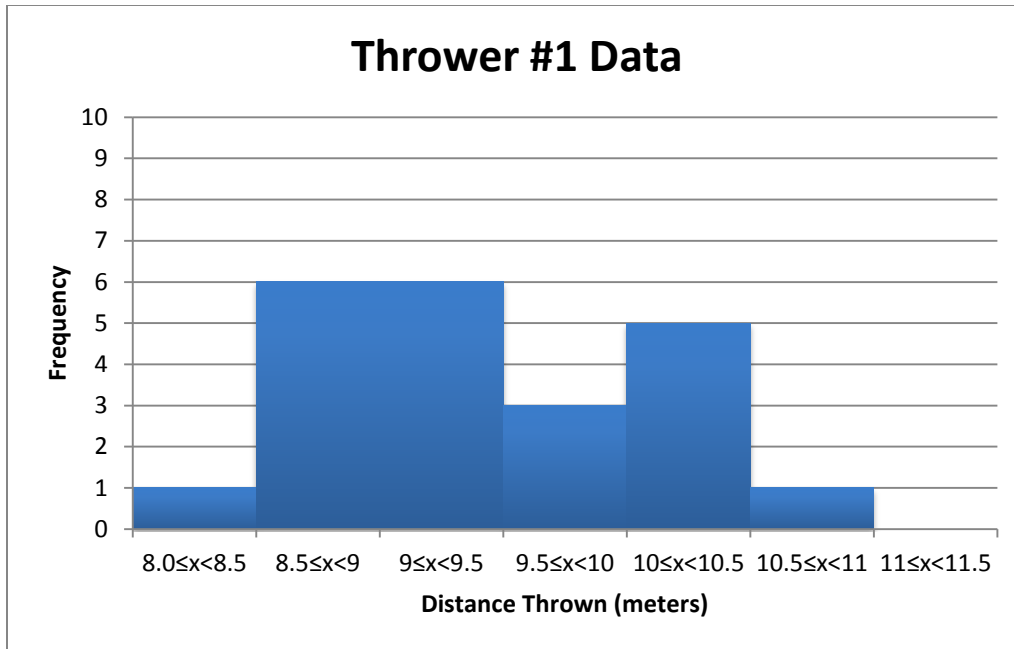
Mode: 10.01

Minimum: 8.43

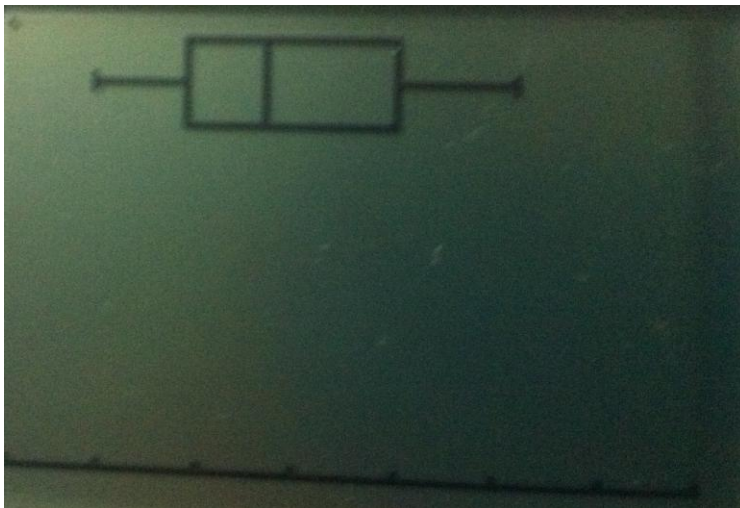
Q1: 8.94

Q3: 10.01

Maximum: 10.62



Thrower 1 Box and Whisker Graph:



Thrower#2	8.03	8.25	8.76	8.85	8.95	8.96	8.96	9.00	9.10	9.15	9.25
	9.35	9.35	9.53	9.68	9.98	10.10	10.20	10.39	10.82	10.86	10.94

Mean: 9.48

Median: 9.3

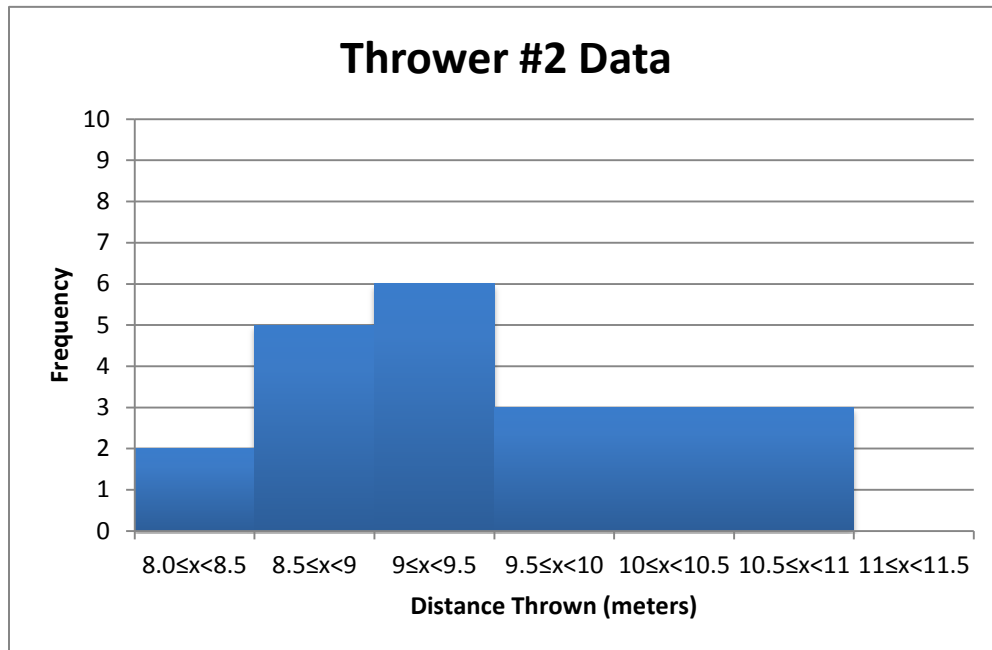
Mode: 8.96

Minimum: 8.03

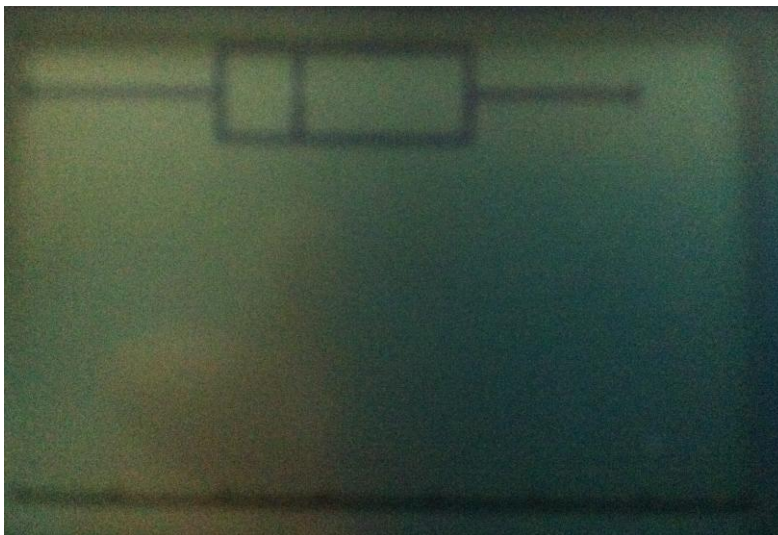
Q1: 8.96

Q3: 10.1

Maximum: 10.94



Thrower 2 Box and Whisker Graph:



Thrower #3	8.49	8.79	8.82	8.83	8.96	9.12	9.12	9.24	9.25	9.38	9.39
	9.49	9.56	9.62	9.63	9.72	9.75	9.83	9.94	9.94	9.98	11.47

Mean: 9.48

Median: 9.44

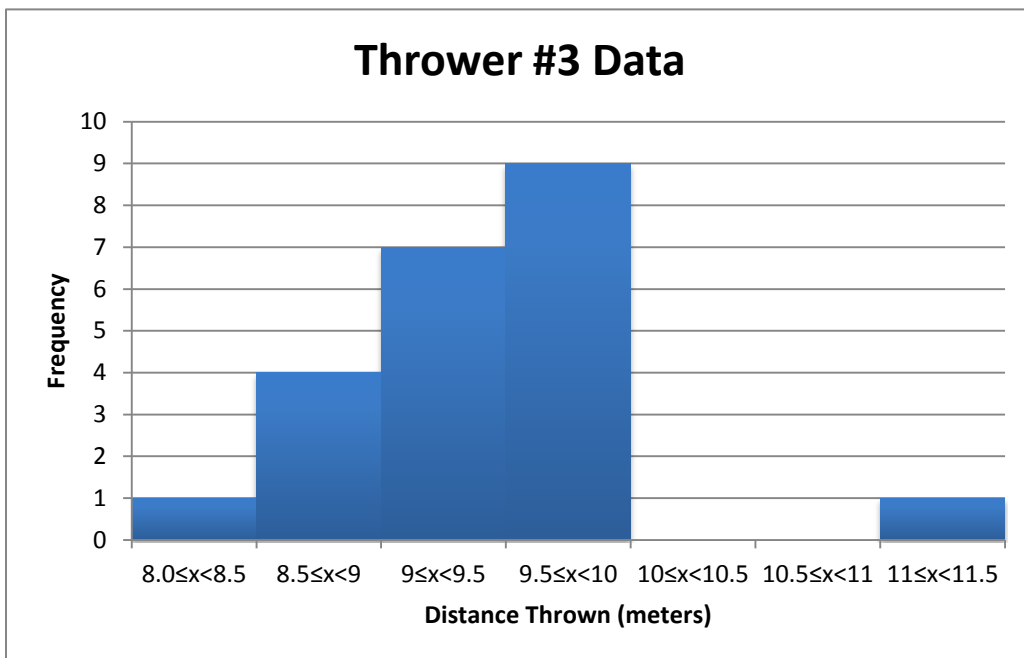
Mode: 8.96

Minimum: 8.49

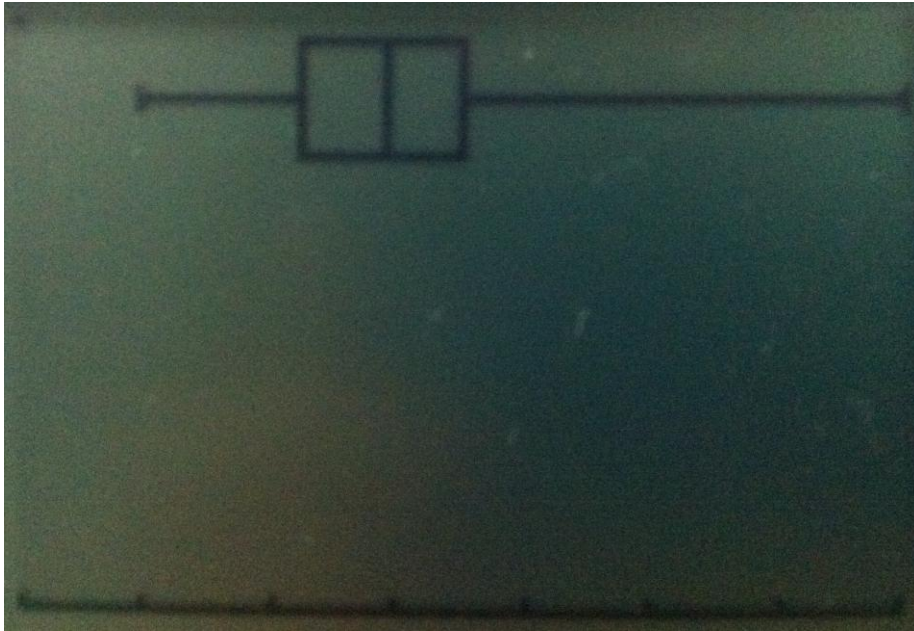
Q1: 9.12

Q3: 9.75

Maximum: 11.47



Thrower 3 Box and Whisker Graph:



Who is the Best Thrower?

Thrower #3 is the best thrower because he frequently makes more throws that are between 9.5 and 10meters than the other throwers. The minimum, Q1, median and maximum distance is also higher than the other two throwers.

Part 4 – Revising Decisions:

Thrower	8.84	9.04	9.3	9.39	9.43	9.43	9.46	9.68	9.76	9.87	10.04
#1	10.05	10.15	10.16	10.25	10.26	10.26	10.42	10.45	10.56	10.67	

Mean: 9.88

Median: 10.04

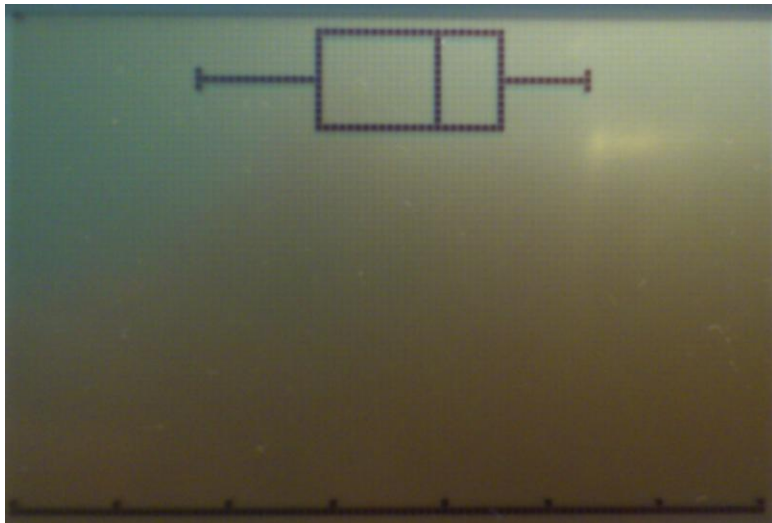
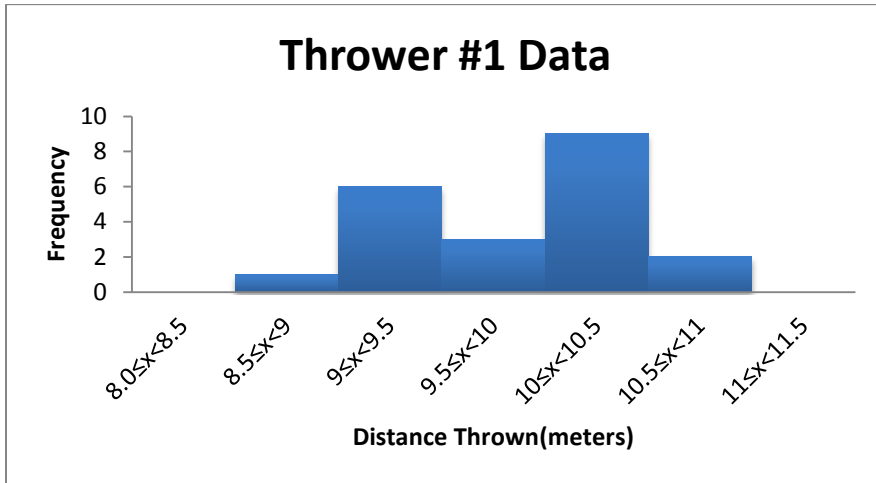
Mode:

Minimum: 8.84

Q1: 9.43

Q3: 10.26

Maximum: 10.67



Thrower	8.35	8.97	9.05	9.12	9.42	9.61	9.76	9.83	9.96	10.15
#2	10.25	10.28	10.45	10.49	10.5	10.68	10.76	10.78	10.84	10.85

Mean: 10.01

Median: 10.04

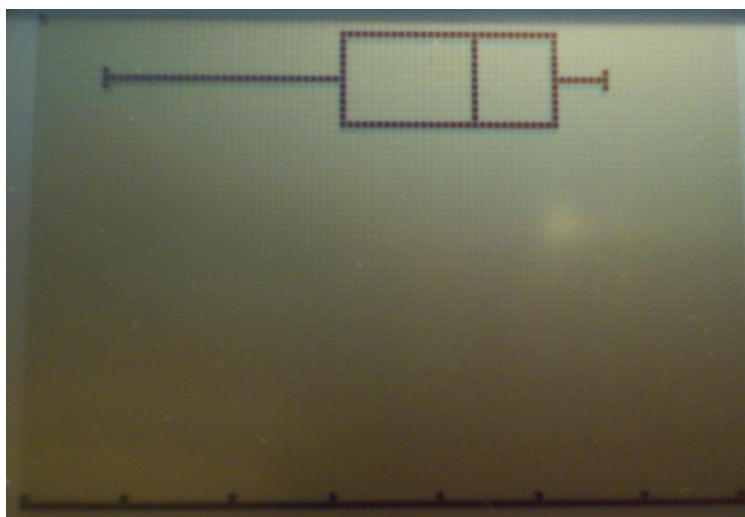
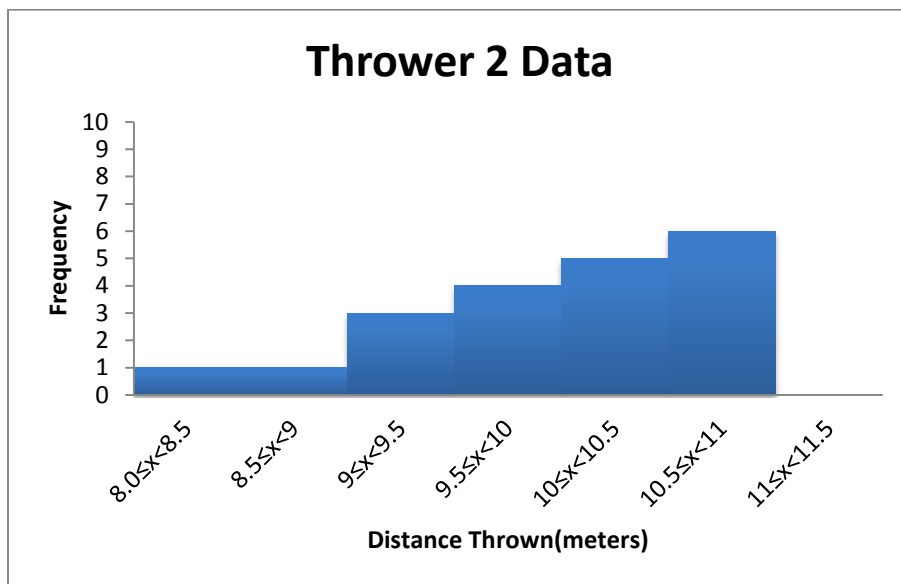
Mode:

Minimum: 8.35

Q1: 9.52

Q3:10.59

Maximum: 10.85



Thrower #3	8.48	8.8	9.12	9.13	9.25	9.49	9.7	9.72	9.75	9.92
	10.06	10.25	10.34	10.52	10.61	10.62	10.98	11.02	11.26	11.45

Mean: 10.02

Median: 9.99

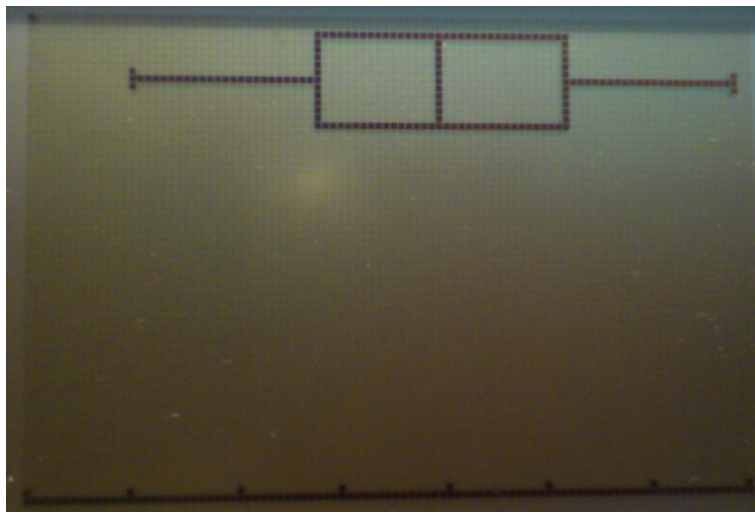
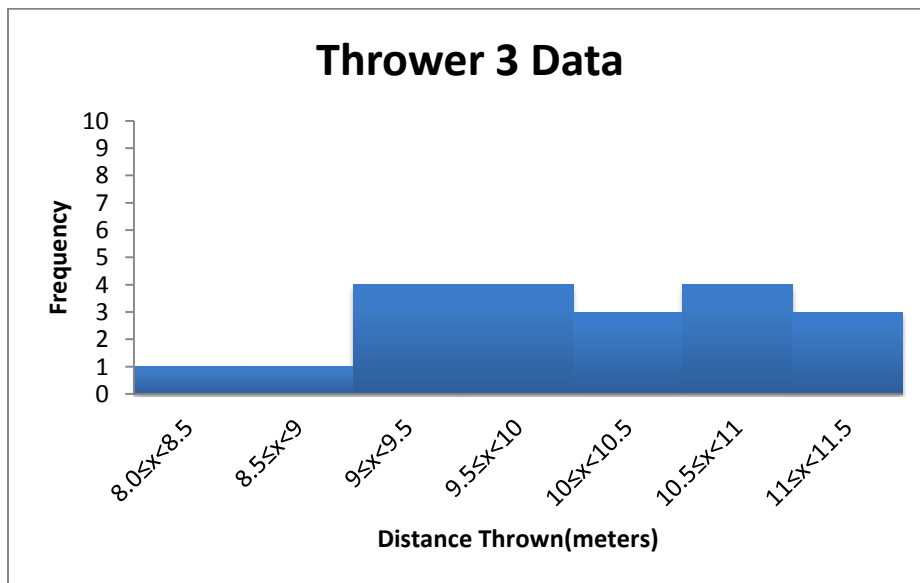
Mode:

Minimum: 8.48

Q1: 9.37

Q3: 10.62

Maximum: 11.45



Who's the Best after the competition?

Before the competition, it is assumed that thrower #3 is the best thrower because he consistently threw farther than the other throwers. After the competition, thrower #2 is the best thrower because he consistently threw farther than the rest of the throwers. The mean and median distances are higher than the other throwers, except for thrower #1 because they both have the same median distance. Although the Q1 and Q3 distance is higher than the rest, the minimum and the maximum distance isn't as high due to the fact that thrower #2's minimum is 8.35 and maximum is 10.85. Even though thrower #3's throwing results were higher than the rest, thrower #2 has consistently thrown far.