

Commute Time for Century Teachers



Mr. Chen

Period #

California Standards

- 6.0 Students know the definitions of the mean, median and mode of a distribution of data and can compute each in particular situations.
- 7.0 Students compute the variance and the standard deviation of a distribution of data.
- 8.0 Students organize and describe distributions of data by using a number of different methods, including frequency tables and histograms.



Data Collection

- Example: We conduct the survey during both lunches and we ask teachers about their commute time. We ask every other teacher at the lunch tables.
- Our sample technique is stratified by lunch periods, and using systematic sampling on individual teachers.

Data

- Length of commute (in minutes)
- 35, 10, 40, 18, 45, 45, 35, 12, 30, 14, 22, 28, 20, 18, 10, 30, 18, 12, 30, 12, 21, 20, 60, 15, 20, 23, 35, 17, 23, 20, 7, 25, 17, 10, 30, 25, 45, 11, 12, 30, 25, 5, 18, 17, 60, 25, 150, 20, 40, 14, 30



Data Analysis

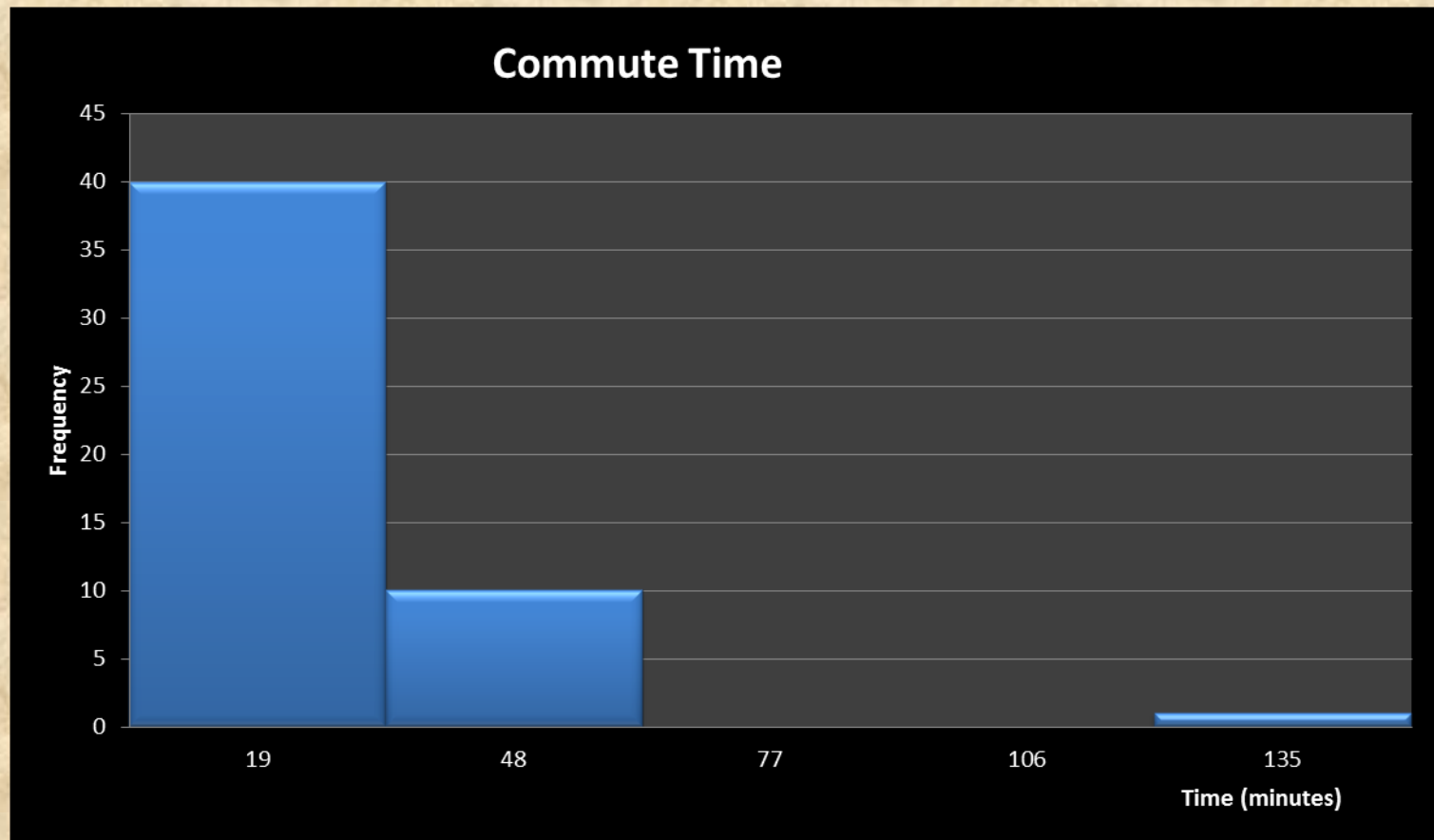
- Our population is all the teachers at Century High School, and our sample is the 51 teachers we interviewed.
- Our data is a sample statistics, it contains quantitative data with the ratio level of measurement.
- Our possible bias are teachers who were absent on the day of our survey and teachers who did not eat lunch at the lunch tables.

Frequency Distribution Table

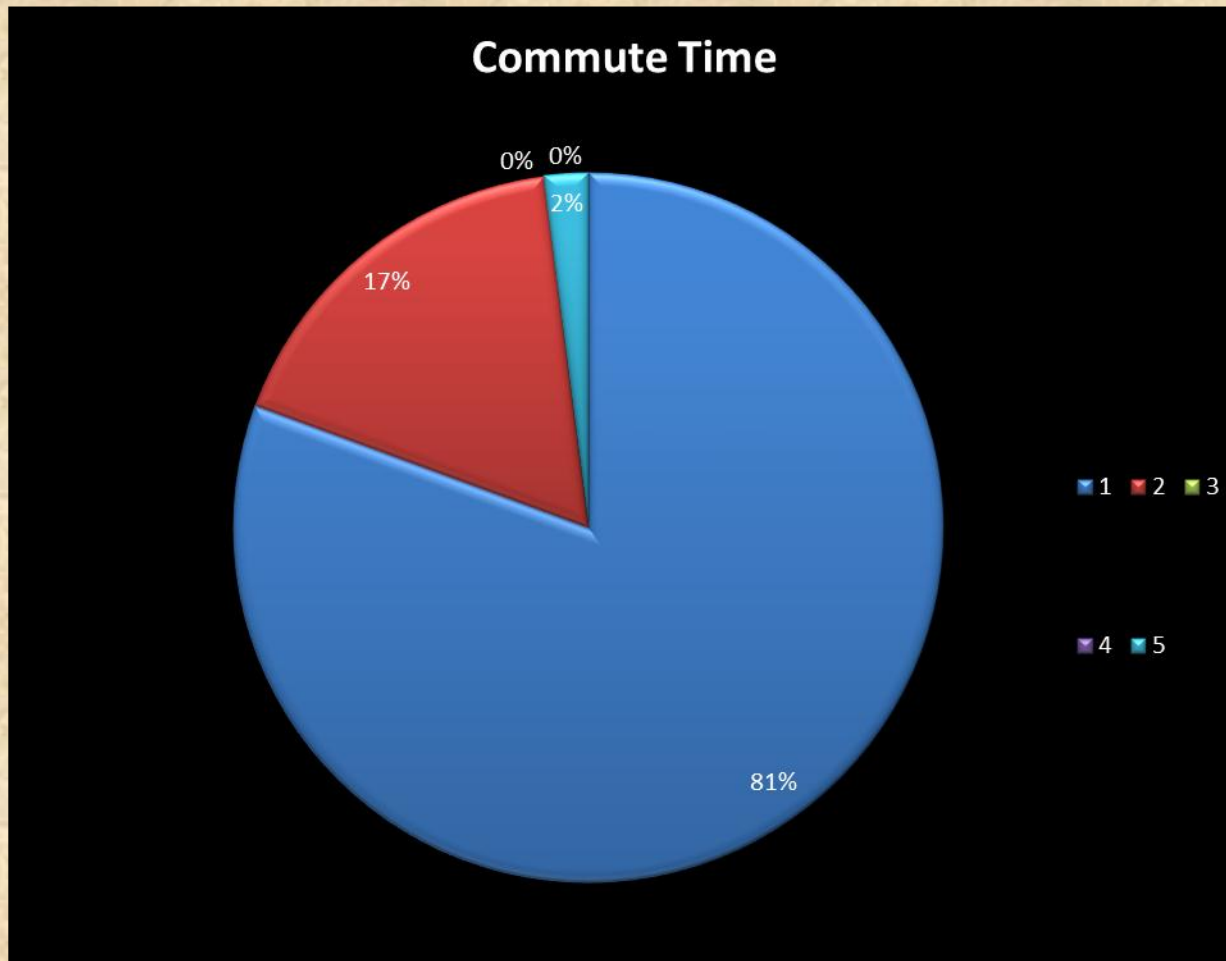
Class	Frequency	Mid-Point	Relative Frequency	Cumulative Frequency
5-33	40	19	0.7843	40
34-62	10	48	0.1961	50
63-91	0	77	0	50
92-120	0	106	0	50
121-150	1	125	0.0196	51

Histogram

- (At least 5 classes)

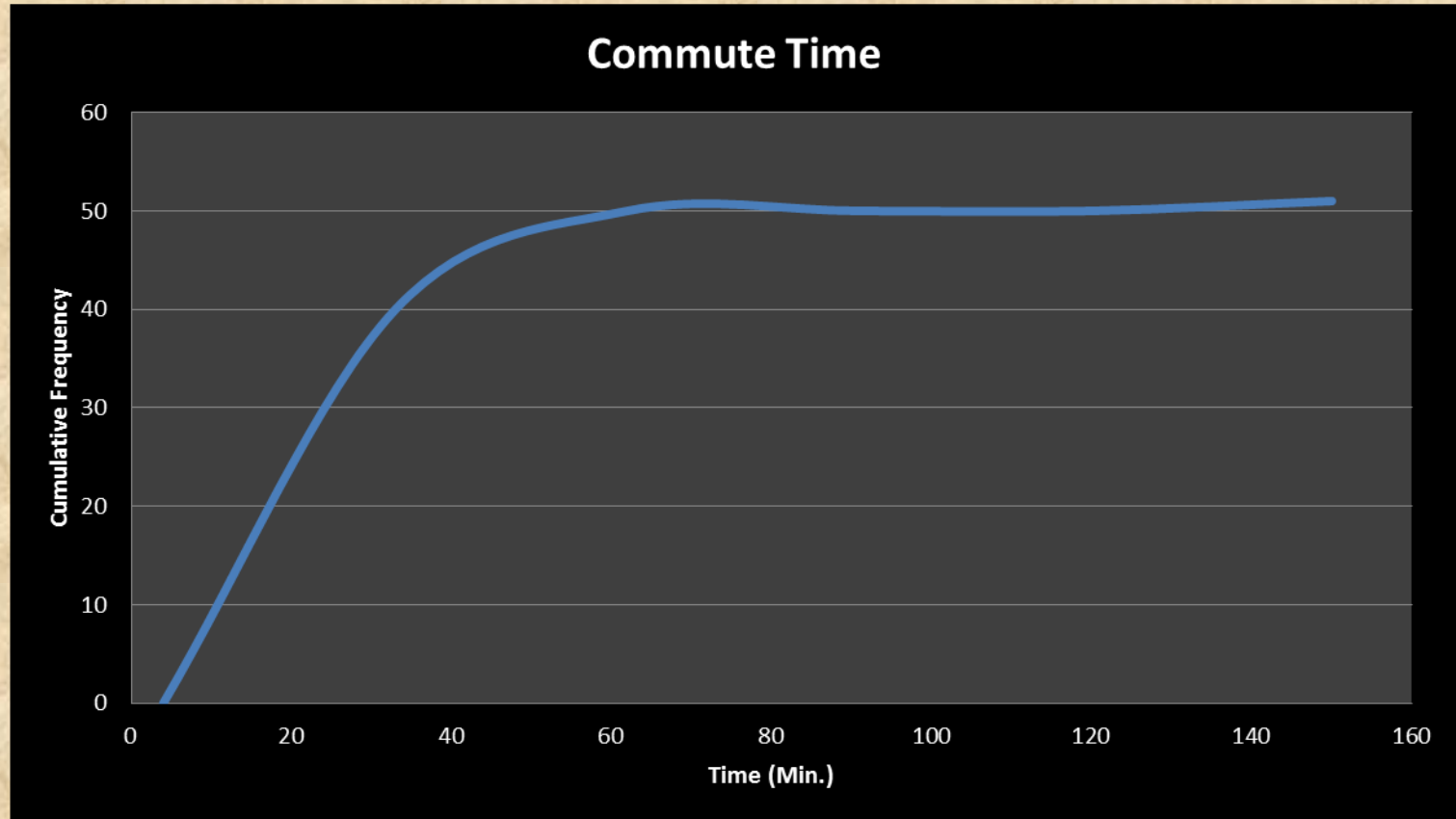


Pie Chart



1. 5-33 min
2. 34-62 min
3. 63-91 min
4. 92-120 min
5. 121-150 min

Ogive



Statistics

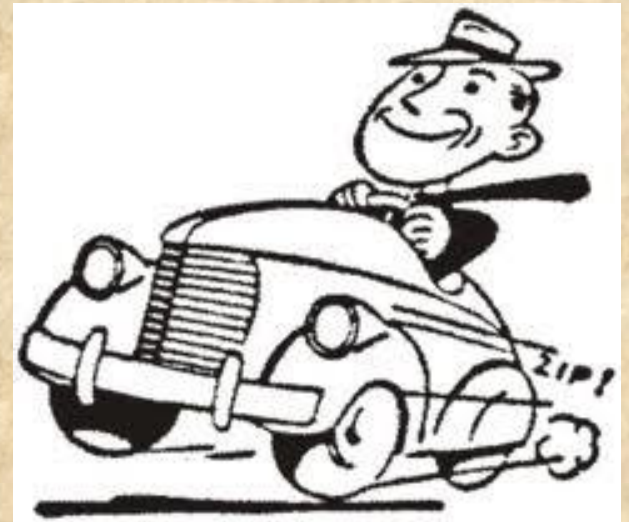
(Central Tendency)

- From our survey, teacher's sample commute mean time is 26.6 minutes, median is 21 minutes and the mode is 30 minutes.



Statistics (Variation)

- The range of our data is 145 minutes, with sample variance of 464.4 minutes and the sample standard deviation is 21.6 minutes



Conclusion

- In our survey of 51 teachers, we find the sample commute mean time is 26.6 minutes with a standard deviation of 21.6 minutes.
- Most of the teachers commute less than 33 minutes
- We have one teacher who is an outlier, his commute time 150 min.