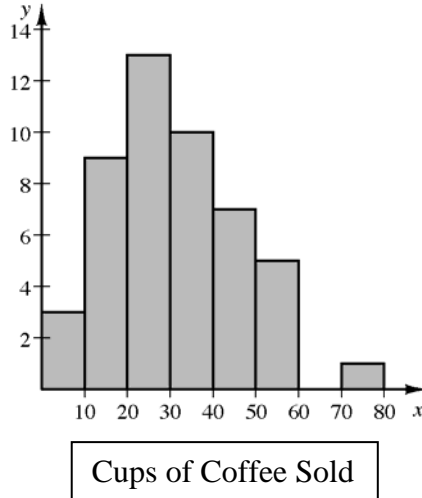




### ORGANIZING DATA WORKSHEET #2

1. Katelyn owns a 24-hour coffee shop in front of a downtown office building. She recorded the number of cups of coffee sold each hour during a 48-hour time period.

Katelyn sorted the data and made the following histogram:



1	22	37
5	22	38
7	23	38
12	24	40
12	25	41
12	26	41
12	26	42
12	29	47
14	29	47
16	30	49
17	30	51
19	31	52
20	32	55
21	33	55
21	35	59
22	36	76

- a. Using the sorted data from the table and the histogram, find the five number summary (minimum, first quartile, median, third quartile, maximum) without using your calculator.
  
- b. Describe the distribution of coffee sales per hour.
  
- c. What is your guess as to the mean of the distribution? Explain your reasoning.
  
- d. Is 76 cups an outlier of the data set? Show your work.

2. Charity Race Times

The 40 women in the sample recorded their race times in various charity 5K races in the table below.

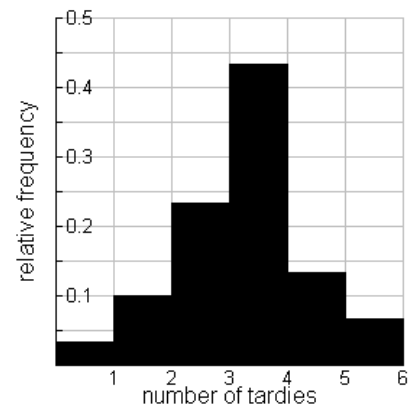
Head circumference (cm)							
55.5	53.7	53.7	53.4	53.1	55.2	53.9	53.8
53.1	52.2	54.8	54.5	53.2	52.3	55.3	53.2
51.9	53.1	53.1	52.2	51.2	55.4	53.3	51.4
52.6	53.7	52.7	52.8	51.9	54.3	55.4	53.7
53.0	52.7	53.0	54.6	52.5	52.9	53.1	51.9

- Find the mean and standard deviation of the race times.
- Create a relative frequency histogram with your calculator, and sketch it below. Use an interval from 19 to 27 with a bin width of 1. Label the top of each bar with its relative frequency.
- Use the relative frequencies on your histogram to calculate the percentage of racers in this sample that had a time faster than 22 minutes. Remember, smaller times are faster.
- What percentage of racers in this sample completed a race between 22 and 25 minutes? What is the relationship between the area of the bars and the percentage of the population?

3. Some students at North City High are abusing the privilege of being allowed to leave campus for lunch. The number of students tardy to Mrs. Greene's period after lunch is too high. In the last 30 school days, she recorded the number of tardy students shown in the relative frequency histogram below.

a. Describe the distribution of tardy students.

b. How many days were 3 or more students tardy?



c. What percent of the days were no students tardy?