

Section C: Homework

1) An anthropologist takes a random sample of 30 households and finds the following number of people living in each household.

3 4 1 2 5 6 4 4 2 2 4 4 3 5 4 6 5 3 4 4 5 4 3 4 4 3 5 4 3 6

- a) Construct a frequency table. b) Add a relative frequency column to the frequency table you constructed in part (a). (Round to two decimal places.)

c) How many households contain 4 people? _____

d) What percent of the households contain between 2 and 5 people, inclusive? _____

e) Construct a frequency histogram.

f) Describe the shape of the distribution. _____

2) The following data set is a random sample of 42 games with the total number of runs scored in the game over the course of a softball season.

4 5 0 1 3 4 7 2 1 8 4 3 4 6 5 3 3 5 6 4 5
5 6 3 0 2 4 1 3 2 4 3 4 5 3 4 4 3 2 5 4 4

- a) Construct a frequency table. b) Add a relative frequency column to the frequency table you constructed in part (a). (Round to two decimal places.)

c) How many games had 3 total runs scored? _____

d) What percent of the games had a total of 4 runs scored? _____

e) Construct a frequency histogram.

f) Describe the shape of the distribution. _____

3) Lisa Hertscar, civil engineer, needs to determine if a traffic light needs to replace a stop sign at a particular intersection. She keeps track of the number of cars that enter the intersection at randomly chosen times of the day between 8am and 10pm over the course of 60 days. The results are as follows:

60 15 23 16 18 56 32 45 52 27 51 35 47 63 36 38 19 31 46 52 48
20 33 42 57 44 47 43 41 46 38 53 51 45 57 62 60 21 37 55 53 46
37 43 56 43 61 46 49 27 32 55 49 42 68 53 46 57 52 47

a) Construct a frequency table.
(starting with $15 \leq 25$)

b) Add a relative frequency column to the frequency table you constructed in part (a). (Round to two decimal places.)

c) How many days of the week were there more than 30 cars at the intersection? _____

d) Construct a frequency histogram.

e) Describe the shape of the distribution? _____

f) Do you think there needs to be a traffic light at the intersection? _____ Why?

4) The following data shows the number of minutes a random sample of 50 patrons needed to wait to renew their license at the Bakers Basin location.

20.3 13.5 55.2 18.6 65.7 37.3 38.7 41.3 43.5 32.7 20.7 27.4 25.1 27.3 37.2 35.9 27.4
47.3 55.8 40.3 46.2 38.1 53.2 57.2 63.0 51.5 40.7 36.5 19.5 26.4 32.5 23.2 53.2 47.2
43.9 55.6 65.2 31.7 42.6 44.7 53.8 35.2 25.7 31.3 47.3 42.3 32.5 22.7 42.7 37.2

a) Construct a frequency table.
(starting with $10 \leq 20$)

b) Add a relative frequency column to the frequency table you
constructed in part (a). (Round to two decimal places.)

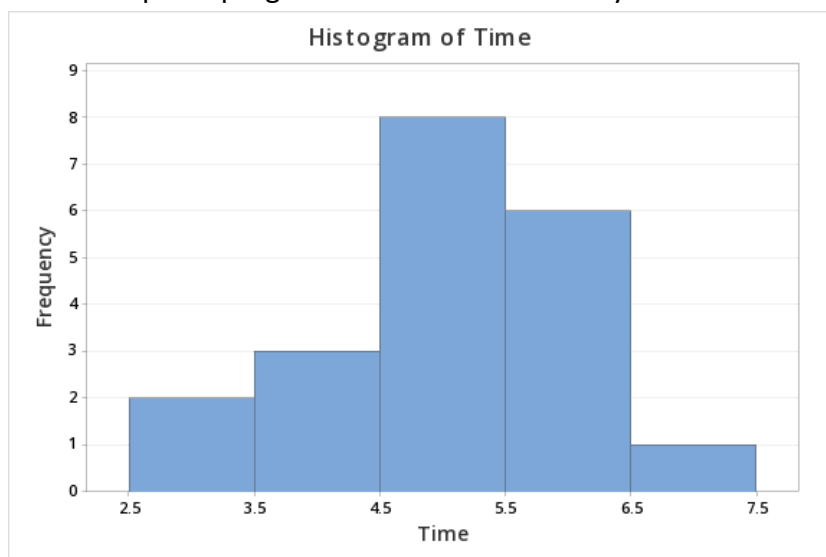
c) How many people waited between 40 and 60 minutes, including 40 but not including 60? _____

d) What percent of the people waited between 10 and 30 minutes, including 10 but not including 30?

e) Construct a frequency histogram.

f) Describe the shape of the distribution? _____

5) The following histogram was the result of a study done by Justin Time to determine the time it took students to write a computer program and run it successfully.



- a) How many students participated in Justin's study? _____
- b) How many students in the study took 5.5 hours or more to write and successfully run their program? _____
- c) What percent of students in the study wrote and successfully ran their programs in less than 4.5 hours? _____
- d) What percent of students took from 3.5 hours up to but not including 6.5 hours to write and successfully run their programs? _____
- e) In which of the five intervals would the median time be? _____