

1.1 Practice Problems

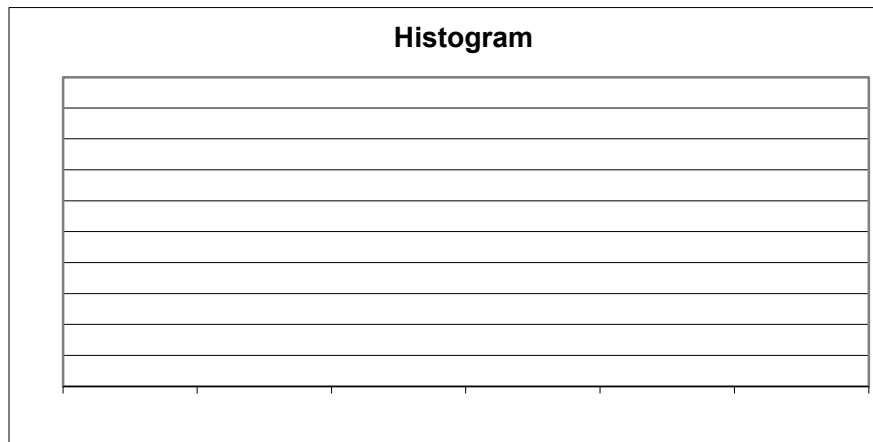


1) To test new equipment for making $\frac{3}{4}$ " plywood, measurements of thickness were obtained.

a) Create a frequency table with five classes:

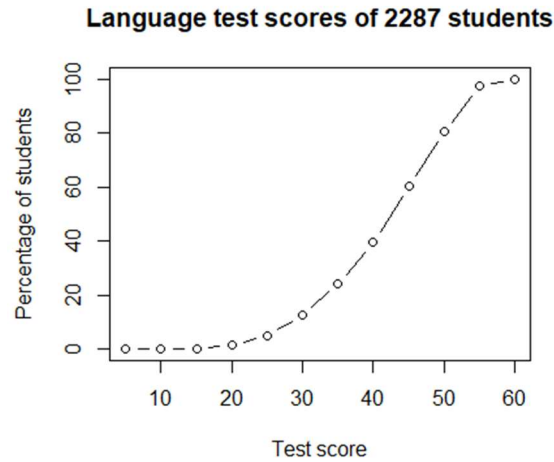
Class Limits	Frequency	Relative Frequency

b) Sketch a histogram (or use R):



Thickness (")
0.754
0.735
0.754
0.748
0.740
0.752
0.747
0.740
0.751
0.741
0.740
0.742
0.748
0.732
0.750
0.747
0.750
0.752

2. The test scores of 2287 Grade 8 students in the Netherlands are represented by the ogive below.



- What proportion of students had scores below 50?
- What proportion of students had scores between 30 and 40?
- What range of scores represents the top 25% of the class?

3. The times between Old Faithful eruptions, in minutes, are given in the stem plot below.

The decimal point is 1 digit(s) to the right of the |

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4 | 3
4 | 55566666777788899999
5 | 0000011111122222333333444444444
5 | 555555666677788889999999
6 | 00000022223334444
6 | 555667899
7 | 00001111123333333444444
7 | 555555566666666677777777778888888888888889999999999
8 | 000000001111111111122222222222333333333333333344444444444
8 | 5555556666667788888999
9 | 00000012334
9 | 6
  
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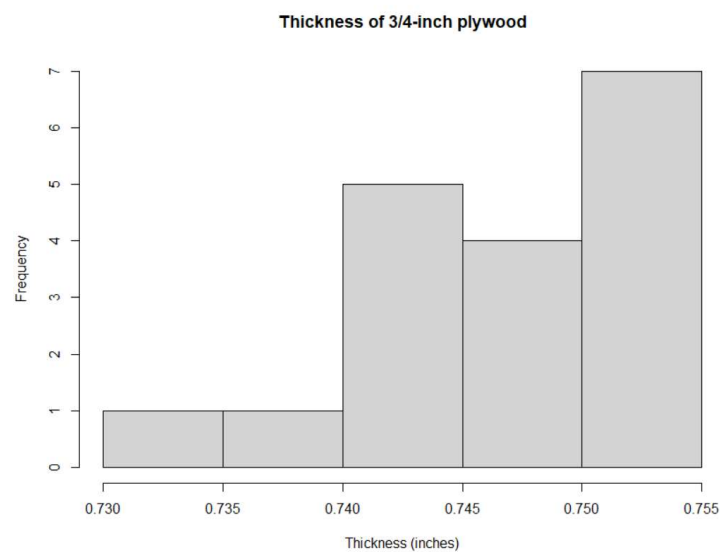
- What is the range of the data?
- Describe the distribution of the data.
- Which 10-minute range contains the largest number of waiting times between eruptions?

Answers

1a

Class Limits	Frequency	Rel. Freq
0.730 - 0.735	1	0.055556
0.735 - 0.740	1	0.055556
0.740 - 0.745	5	0.277778
0.745 - 0.750	4	0.222222
0.750 - 0.755	7	0.388889

1b



2. a) 80%
 b) 25%
 c) 48-60
3. a) 43-96 min
 b) bimodal, with a lot of eruptions between 50 and 55 minutes apart, and a lot between 75 and 80 minutes apart
 c) 75-85 min