Sec1Ex11.

9H	85
9L	30
8H	9987555
8L	443221111100
7H	
7L	44222100
6H	998766
6L	430

Stem: Low and high ten digits
Leaves: one digits

Representative value is 81
There is a gap in 7H
It is kind of symmetric by 8L
Only peak is 8L
It seems no outlying values

14.

1	18	9
0	17	
0	16	
4	15	5300
2	14	63
1	13	8
2	12	73
7	11	9995332
10	10	8865544432
15	9	887666533332210
8	8	84433220
17	7	86655555433221000
25	6	99998776665444332222100000
17	5	98766655441110000
8	4	98865310
10	3	9877654432
2	2	32

Stem: tens and ones digits
Leaves: tenth digits

A.As showed in left side.
B.typical flow rate is 7.5.
C.The display appears to be spread out.
D.Its not much symmetric and positively skewed.
E.By observation, the 18.9 seems an outlier.

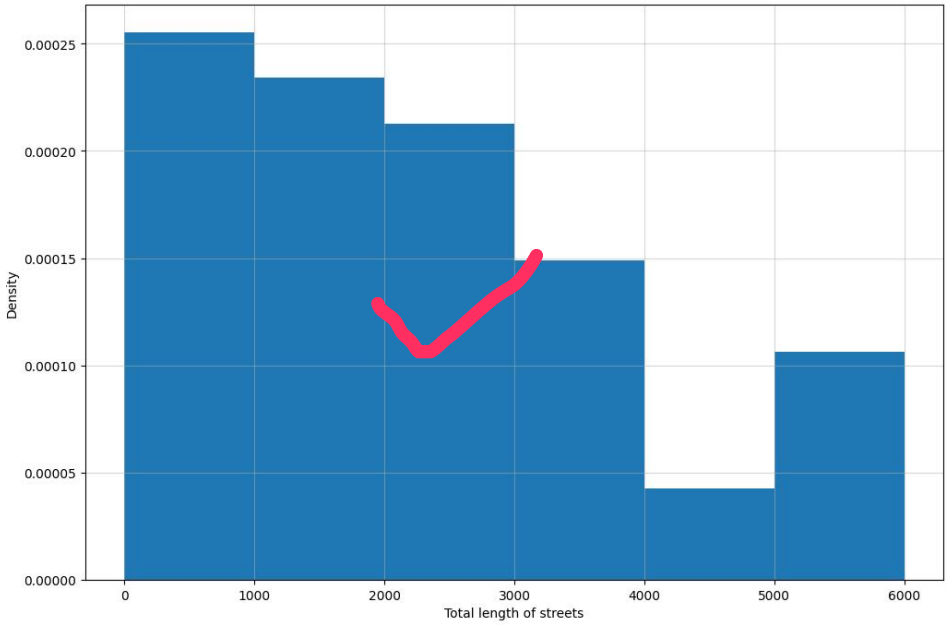
20.a.

Stem: thousands digits
Leaves: hundreds tens and ones digits

5	850 770 700 320 220
4	770 390
3	870 380 350 330 150 150 060
2	730 700 460 400 400 320 250 120 109 100
1	890 850 670 419 320 280 250 240 120 050 000
0	960 960 540 530 510 500 450 396 360 340 240 100

The Stem-and-leaf display shows little symmetry and the peak is the line beneath one thousand. It seems no any outlier.

b.



The proportion of subdivisions having total length less than 2000 is (12+11)/47=0.70.
The shape of the histogram is bimodal with a bigger peak at class 0-1000.s

34.

a. Mean
U:21.5 F:8.6
b. Median
U:17.0 F:8.9
c. One-trimmed Mean
U:17.0 F:8.2

The urban group one-trimmed mean is much closer than former mean to median for an outlier in this group while the farm group doesn't vary much.

40.

sample median:92

25% trimmed sample mean:94.75(trimmed both 1 3 samples from the front and rear)

10% trimmed sample mean:102.23

Sample mean:119.26

Sample mean is highly affected by extreme values different from 25% trimmed one by 25, while 10% trimmed and 25% are not far from sample median. This shows the sample is positive skewed.

44.

A.sample range:25.8

B.Sample mean $\bar{a}$ =31.03

Ordered data

23.5 26.3 28.0 28.2 29.4 29.5 30.6 31.6 33.9 49.3

a1 a2...

Sample variance

$$s^2 = \frac{\sum_{i=1}^{10}(a_i - \bar{a})^2}{9}$$

$$= \frac{56.7+22.37+9.18+8.01+2.66+2.34+0.18+0.32+8.24+333.79}{9}$$

$$= 49.31$$

C.Sample standard deviation: $\sqrt{s^2} = 7.02$

D.

$$s^2 = \frac{\sum_{i=1}^{10} a_i^2 - 10(\bar{a})^2}{9}$$

$$= \frac{552.25+691.69+784+795.24+864.36+870.25+936.36+998.56+1149.21+2430.49-9628.6}{9}$$

$$= 49.31$$

56.

Mean:19.26

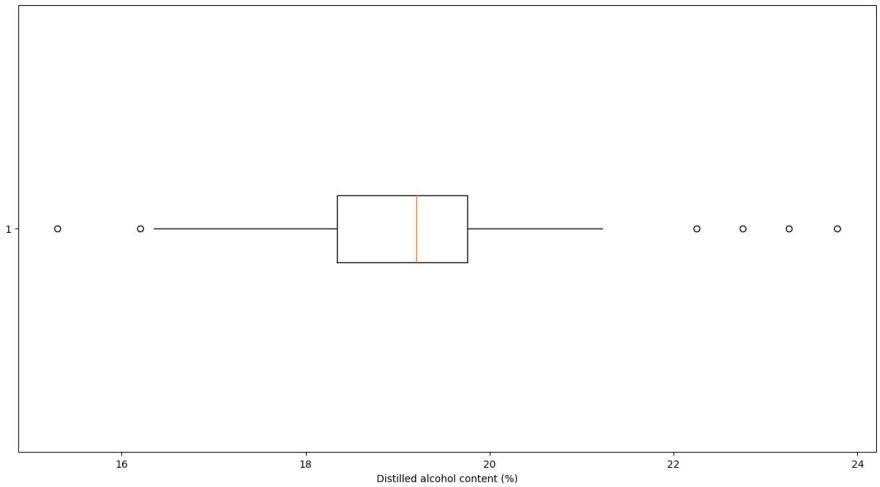
Lower 4th:18.34 median:19.20 upper 4th:19.76 4th spread:=1.42

Lower 4th-4th spread:16.21 upper 4th+4th spread:21.89

15.30 16.20 22.25 22.75 23.25 23.78 are in total 6 outliers

smallest:15.30 largest:23.78 range:8.48

It is almost symmetric but slightly positive skewed.



A+