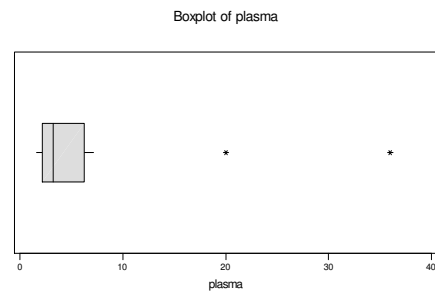
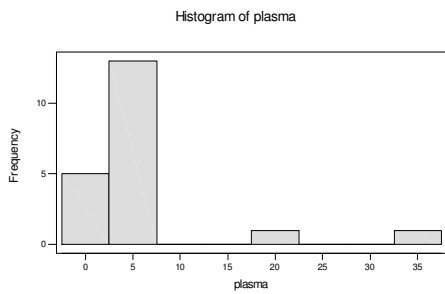


Quiz 10 solution

1. From the graphs we see that this data is unimodal and skewed right. Notice that the mean larger than the median confirms the right skewness. The 2 largest observations, 20 and 36, are outliers – evident in all plots but marked by * in the boxplot.

a. Mean = 6.03
S = 8.13

b. 5 number summary:
Min = 1.60
Q1 = 2.20
Median = 3.20
Q3 = 6.28
Max = 36.00



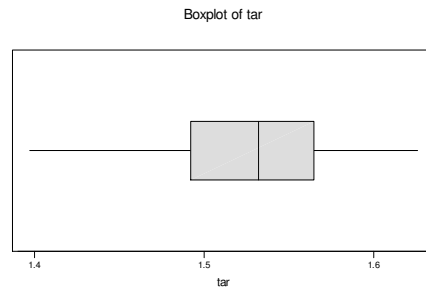
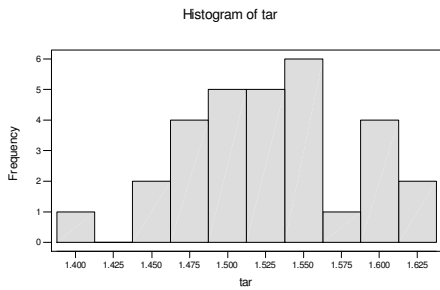
Stem-and-leaf of plasma N = 20
Leaf Unit = 1.0

```
(15)  0 111222233333444
      5  0 667
      2  1
      2  1
      2  2 0
      1  2
      1  3
      1  3 6
```

2. From the histogram, stem-and-leaf plot, and boxplot this data looks unimodal and symmetric, except for the dip at 1.575. The mean is close in value to the median, which also suggests a symmetric distribution. Even though the boxplot doesn't indicate any outliers, the smallest observation, 1.2970, appears to be one. This is the only data of these four examples which even slightly resembles a normal distribution.

a. Mean = 1.5290
S = 0.0566

b. Min = 1.2970
Q1 = 1.4923
Median = 1.5320
Q3 = 1.5648
Max = 1.6260



Stem-and-leaf of tar
Leaf Unit = 0.010

N = 30

```

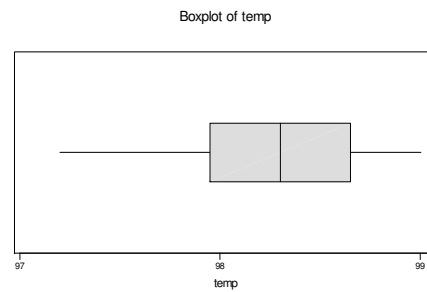
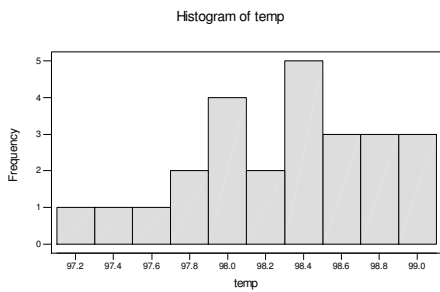
1  13 9
1  14
1  14
3  14 45
6  14 667
10 14 8999
12 15 01
(5) 15 22333
13 15 444445
7  15
7  15 89
5  16 001
2  16 22

```

3. The graphs suggest that the data is left skewed and, except for the dip at 98.2, unimodal. From the stem-and-leaf plot it is clear that the data is unimodal. The mean is slightly less than the median, which confirms left skeweness, but they are fairly close in value. There are no outliers.

a. Mean = 98.264
S = 0.482

b. Min = 97.200
Q1 = 97.950
Median = 98.300
Q3 = 98.650
Max = 99.000



Stem-and-leaf of temp
Leaf Unit = 0.10

N = 25

```

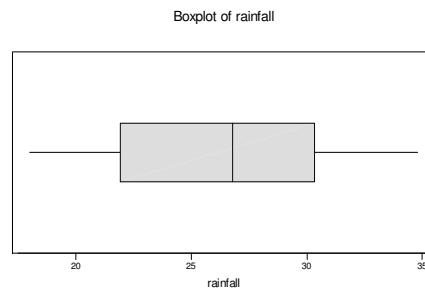
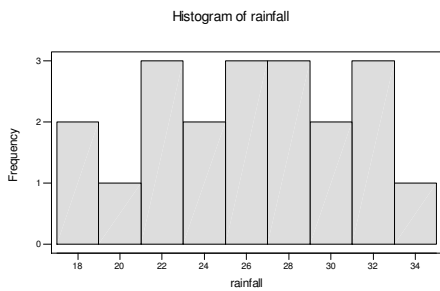
1  97 2
2  97 4
3  97 6
6  97 889
10 98 0001
(3) 98 233
12 98 4445
8  98 667
5  98 8899
1  99 0

```

4. This data is almost uniformly distributed – except for the few dips. The largest observation is possibly being an outlier.

a. Mean = 26.04
S = 4.78

b. Min = 8.00
Q1 = 21.93
Median = 26.80
Q3 = 30.33
Max = 34.80



Stem-and-leaf of rainfall N = 20
Leaf Unit = 1.0

```

3      1 889
5      2 11
7      2 23
9      2 45
(5)   2 66777
6      2 9
5      3 0111
1      3
1      3 4

```