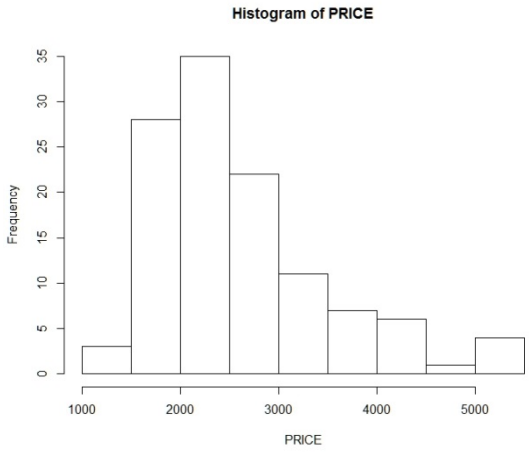
NORTHWESTERN UNIVERSITY | SCHOOL OF PROFESSIONAL STUDIES

R Lesson 2 - Solutions
MSPA 401 – Introduction to Statistical Analysis

Exercises:

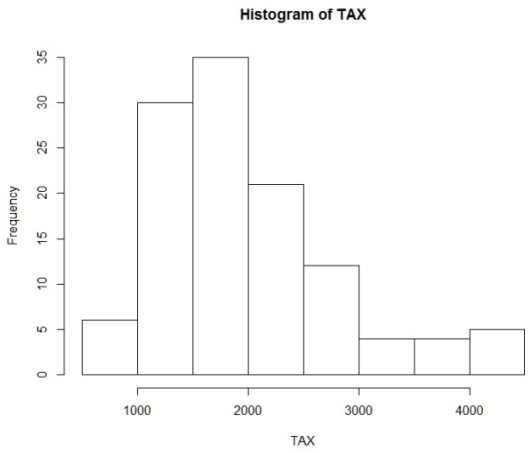
1) For the following exercises use hist(), plot(), boxplot() and par() functions supplied by R.
   a) Construct a histogram for PRICE. Describe the distribution shape.

The distribution is skewed right.



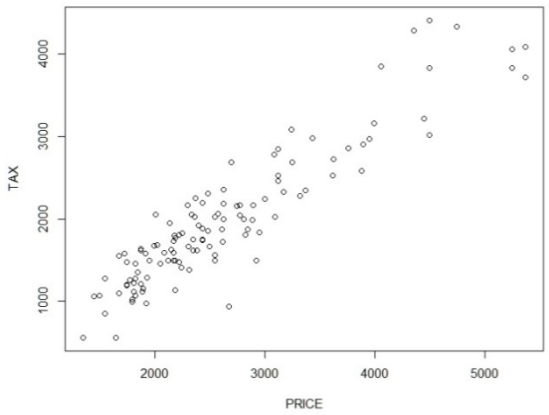
   b) Construct a histogram for TAX. Describe the distribution shape.

The distribution is skewed right.



   c) Construct a scatterplot displaying TAX versus PRICE. Is there a relationship?

The plot suggests a positive linear relationship between TAX and PRICE.



d) Construct a stem-and-leaf plot for X using stem().

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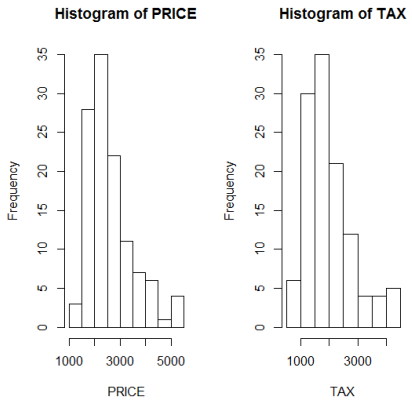
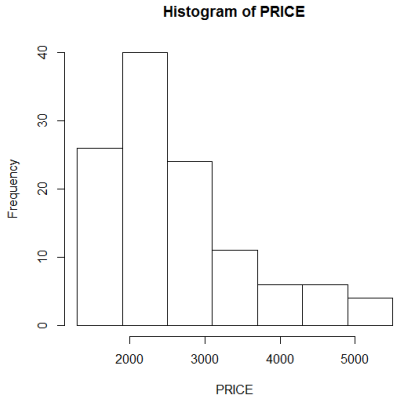
The decimal point is at the |

 4 | 66
 6 |
 8 | 6489
10 | 3778022459
12 | 022688858
14 | 26688900000678899
16 | 222347788244557
18 | 011336888259
20 | 00223455666779
22 | 05581256
24 | 6229
26 | 9928
28 | 56078
30 | 286
32 | 2
34 |
36 | 2
38 | 345
40 | 69
42 | 93
44 | 1
```

e) Use the par() and mfrow() or mfcol() functions to construct a window with two columns and one row showing the histograms for PRICE and TAX.



2) For the following exercises use hist() and, within hist(), breaks().
   a) Construct a histogram for PRICE starting the first class at 1300 ($hundreds) with a class width of 600 ($hundreds).



   b) Construct a histogram for TAX starting the first class at $500 with a class with of $500.