ASSIGNMENT 1: Descriptive Statistics

Problems from textbook (W&W):

2-2 a. In a large American university, a random sample of female professors gave the following annual salaries (in thousands of dollars, reconstructed from Katz, 1973). Without sorting into cells graph the salaries as dots along an X-axis.
9, 12, 8, 10, 16

b. Using the same scale, construct a similar graph for the following sample of 25 male professors’ salaries.
13, 11, 19, 11, 22  22, 13, 11, 17, 13
27, 14, 16, 13, 24  31, 9, 12, 15, 15
21, 18, 11, 9, 13

2-17 Recall that the women’s salaries in Problem 2-2 ranked in orders were
8, 9, 10, 12, 16

   a. Calculate the range and IQR. (Hint: Read them off the box plot in Problem 2-3.)

Additional Problems:

1) The following table shows how workers in one department get to work.

<table>
<thead>
<tr>
<th>Mode of transportation</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive alone</td>
<td>25</td>
</tr>
<tr>
<td>Car pool</td>
<td>3</td>
</tr>
<tr>
<td>Ride bus</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
</tr>
</tbody>
</table>

Construct the relative frequency table, and draw the pie chart and bar chart for these data.

2) A sample of seven compact discs at a music store stated the performance times as lasting the following numbers of minutes for Beethoven’s Ninth Symphony.

   66.9  66.2  71.0  68.6  65.4  68.4  71.9

Calculate the mean, median, variance, standard deviation, IQR, range for this data set.