Problem 1. The following students earned scores on an exam out of 200 points. Make a histogram such that each column has width 50. Label the axes correctly.

<table>
<thead>
<tr>
<th>Student</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marcia</td>
<td>187</td>
</tr>
<tr>
<td>Jan</td>
<td>95</td>
</tr>
<tr>
<td>Cindy</td>
<td>73</td>
</tr>
<tr>
<td>Greg</td>
<td>164</td>
</tr>
<tr>
<td>Peter</td>
<td>112</td>
</tr>
<tr>
<td>Bobby</td>
<td>66</td>
</tr>
</tbody>
</table>

Problem 2. The following ratings were recorded at a dog show:

92, 80, 77, 64, 60, 78, 46, 22, 57, 96, 83, 85, 77, 79, 54, 41, 49, 83, 72, 75

(a) Make a stemplot for these ratings.
(b) Find the median rating.
(c) Find the quartiles, $Q_1$ and $Q_3$.
(d) Make a box plot for these ratings.
(e) If the top 25% of dogs went to the next round, what were their ratings?
(f) Which ratings were outliers?
(g) Make a histogram such that each column has width 20.
(h) Is the histogram symmetric, skewed to the right, or skewed to the left?

Problem 3. Measurements were recorded as follows:

8.4, 5.7, 4.6, 9.4, 2.1, 3.5

(a) Compute the mean.
(b) Compute the variance.
(c) Compute the standard deviation.
Problem 4. Scores on a recent SAT were roughly normal, with mean 1036 points, and standard deviation 219 points.

(a) What was the range of the middle 68% of SAT scores?
(b) What was the range of the middle 50% of SAT scores?
(c) How high must a student score to be in the top 2.5% of SAT scores?
(d) What percent of students scored above 817 points?
(e) What percent of students scored below 379 points?

Problem 5. (a) For a distribution that is skewed to the right, which is correct:

   (1) mean < median, (2) mean = median, (3) mean > median?

(b) For two normal distributions $D_1$ and $D_2$ that have equal means but different standard deviations: $s_1 = 3.4$ and $s_2 = 5.2$, which is correct about their bell curves:

   (1) Peak 1 < Peak 2, (2) Peak 1 = Peak 2, (3) Peak 1 > Peak 2?

(c) and for their box plots, which is correct about the lengths of their top whiskers:

   (1) Length 1 < Length 2, (2) Length 1 = Length 2, (3) Length 1 > Length 2?