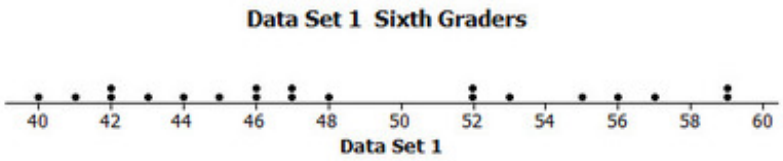
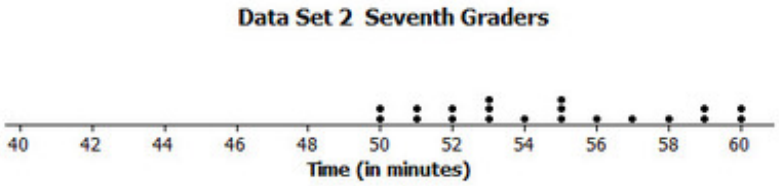
Describing Distributions

Task

Data Set 1 consists of data on the time to complete an assignment (in minutes) for 25 sixth graders. Data Set 2 consists of data on the time to complete an assignment for 25 seventh graders. Dot plots of the two data sets are shown below.





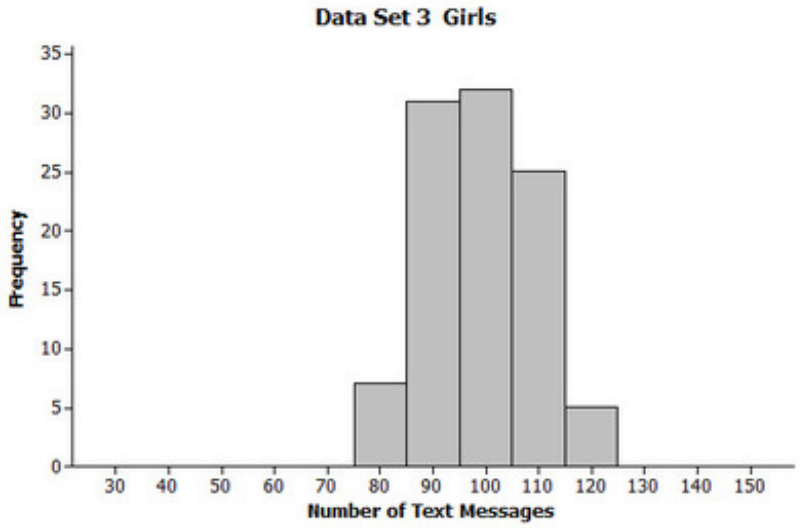
1. Describe the data distribution of times for seventh graders (Data Set 2). Be sure to comment on center, spread and overall shape.

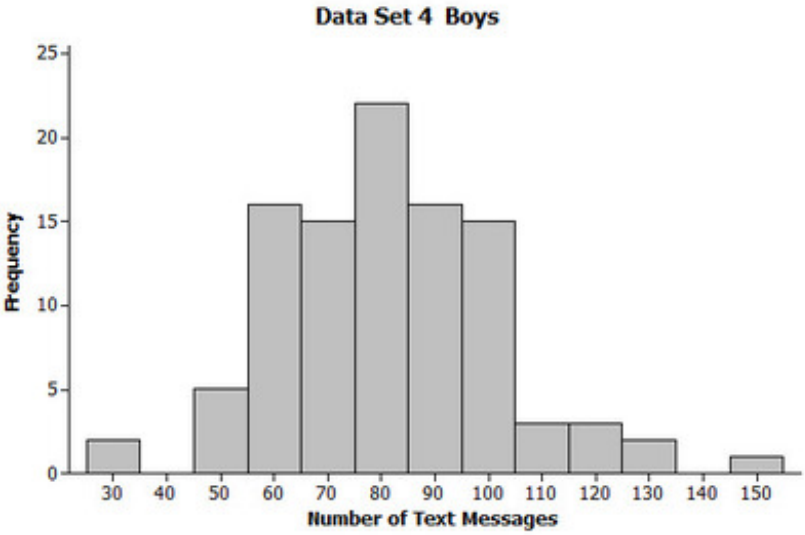
2. Are Data Set 1 and Data Set 2 centered in about the same place? If not, which one has the greater center?

3. Which of Data Set 1 and Data Set 2 has greater spread?

4. Were sixth graders (Data Set 1) or seventh graders (Data Set 2) more consistent in their times to complete the task?

Data Set 3 consists of data on the number of text messages sent in one month for 100 teenage girls who have a cell phone. Data Set 4 consists of data on the number of text messages sent in one month for 100 teenage boys who have a cell phone. Histograms of the two data sets are shown below.





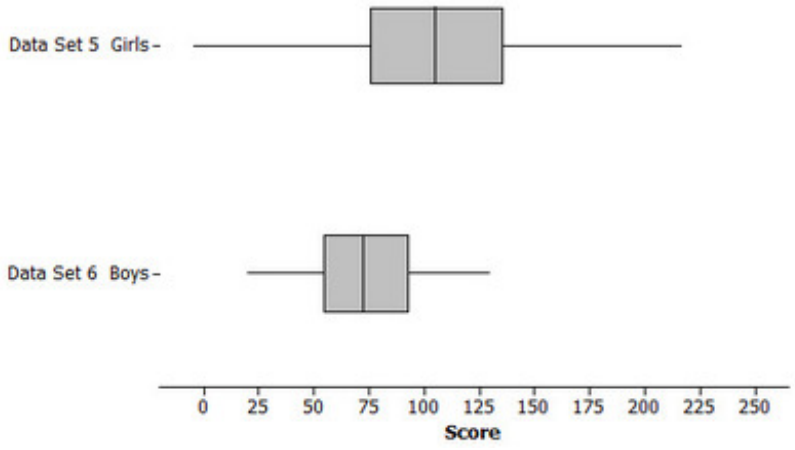
5. Describe the data distribution of number of text messages for the girls (Data Set 3). Be sure to comment on center, spread and overall shape.

6. Are Data Set 3 and Data Set 4 centered in about the same place? If not, which one has the greater center?

7. Which of Data Set 3 and Data Set 4 has greater spread?

8. On average, did the girls (Data Set 3) or the boys (Data Set 4) send more text messages?

Data Set 5 consists of data on the scores on a video game for 100 teenage girls. Data Set 6 consists of the scores on a video game for 100 teenage boys. Box plots of the two data sets are shown below.



9. Describe the data distribution of Data Set 5. Be sure to comment on center, spread and overall shape.

10. Are Data Set 5 and Data Set 6 centered in about the same place? If not, which one has the greater center?

11. Which of Data Set 5 and Data Set 6 has greater spread?

12. On average, did the girls (Data Set 5) or the boys (Data Set 6) tend to have higher scores?