

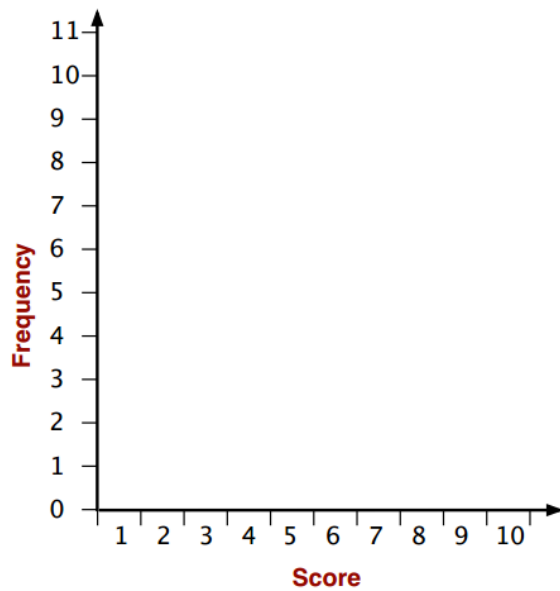
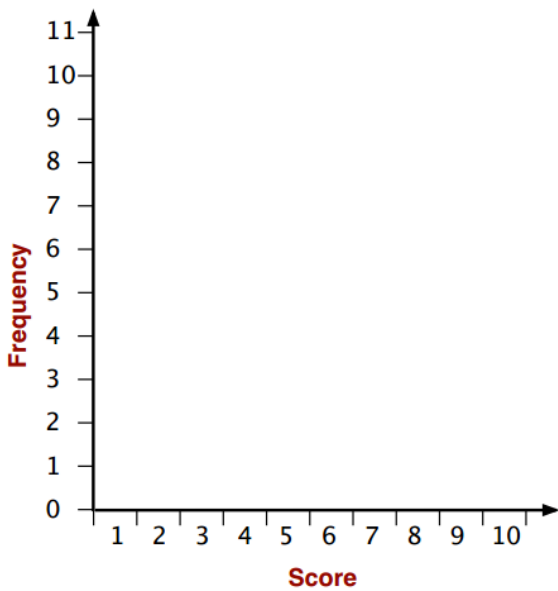
Part 1: Construct frequency graphs

Eleven students take a test. Here are some characteristics of this test.

- The test is out of 10.
- All students scored more than 5.
- At least one student scored each mark between 6 and 10.
- The mode is 9 out of 10.

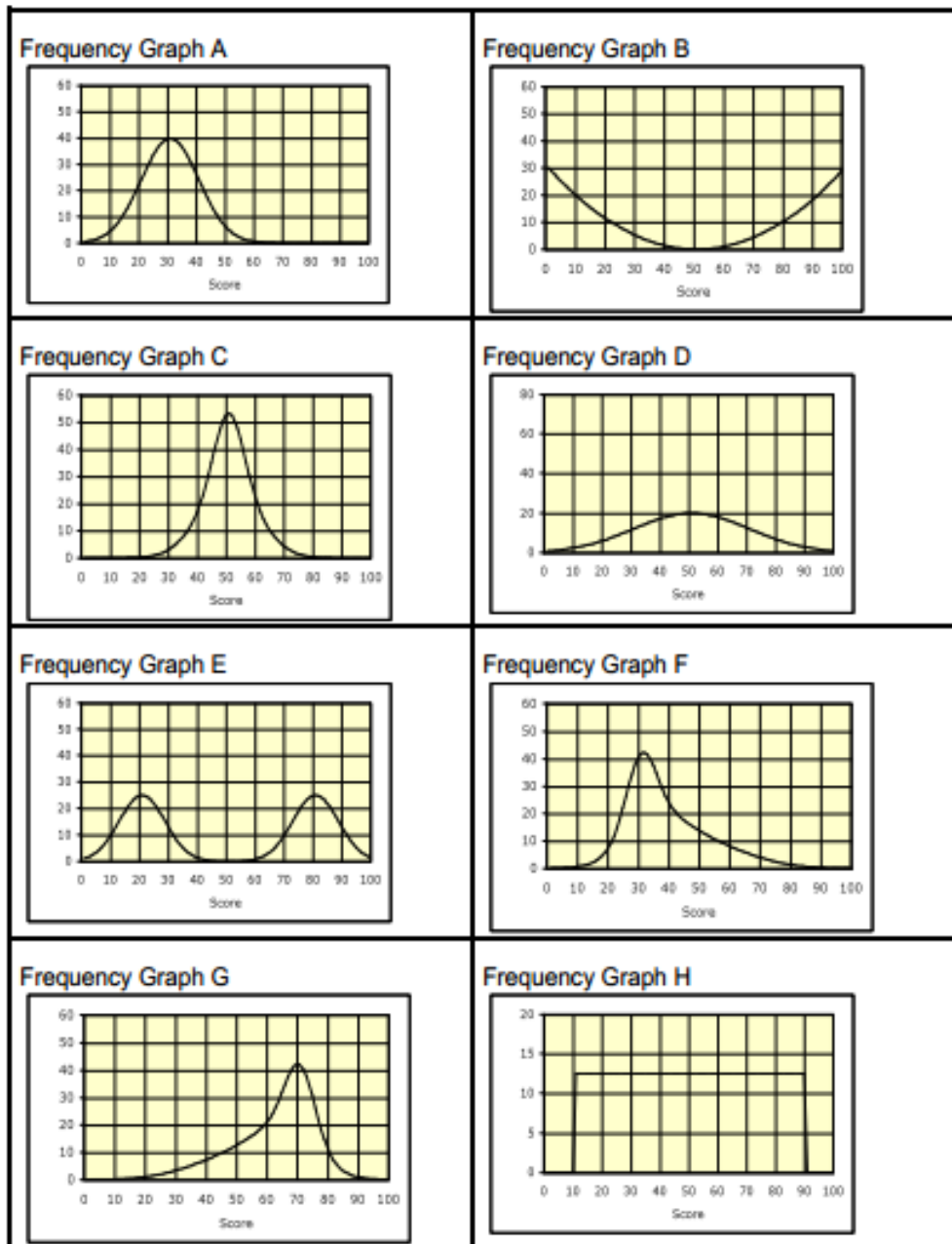
Sketch two bar graphs that could represent the results of the test.

- On the first graph make sure the median is equal to the mode.
- On the second graph make sure the median is different from the mode.



Part 2: Matching frequency graphs with scenarios and with boxplots

Indicate which frequency graph matches with each scenario and with each boxplot. Write a short explanation of your decision for each match.

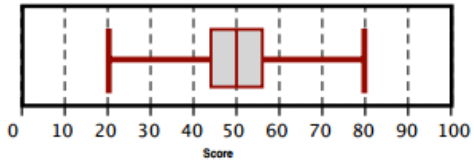


The descriptions of the scenarios are on the next page.

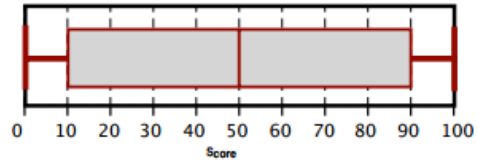
1. This was the sort of test where you could either do everything or you couldn't get started.	2. This test did not sort out the stronger students from the weaker ones. They all got similar scores.
3. Two groups of students took the test. One group had studied the work for two years. The other group had only just begun.	4. This test resulted in a huge range of scores. Everyone could do something but nobody could do it all.
5. In this test, the median score was greater than the mode score.	6. In this test, the median score was smaller than the mode score.
7. In this test, the median and the mode scores were the same. There was a very big range of scores.	8. This test was much too difficult for most people.

The boxplots are on the next page.

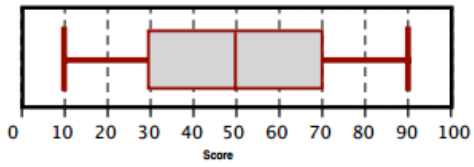
Box Plot 1



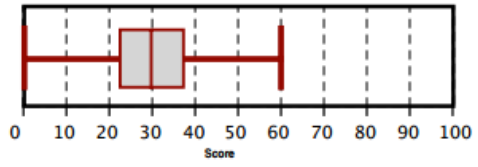
Box Plot 2



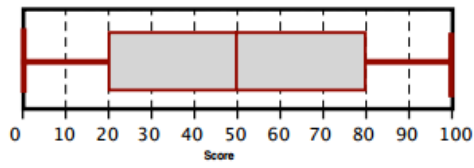
Box Plot 3



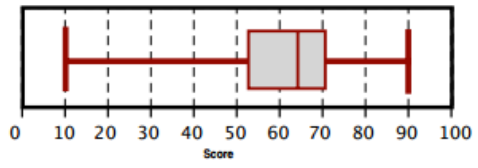
Box Plot 4



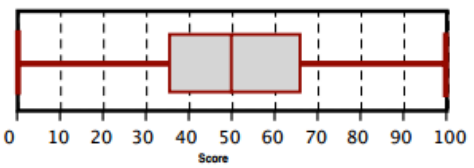
Box Plot 5



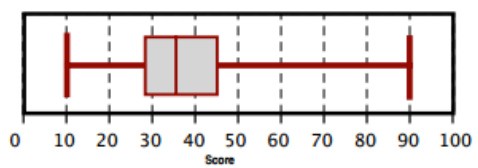
Box Plot 6



Box Plot 7



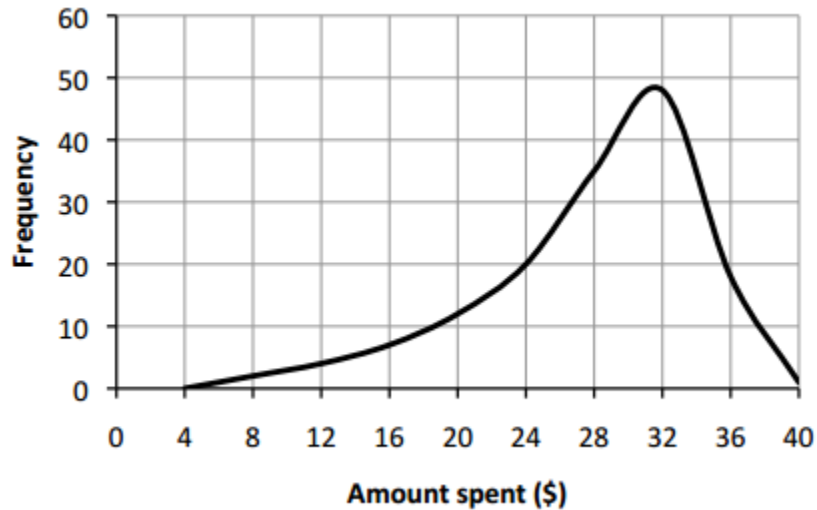
Box Plot 8



Part 3: Cell Phones

Cell Phones 1:

Here is a frequency graph that shows the monthly spending of a group of students on their cell phones:



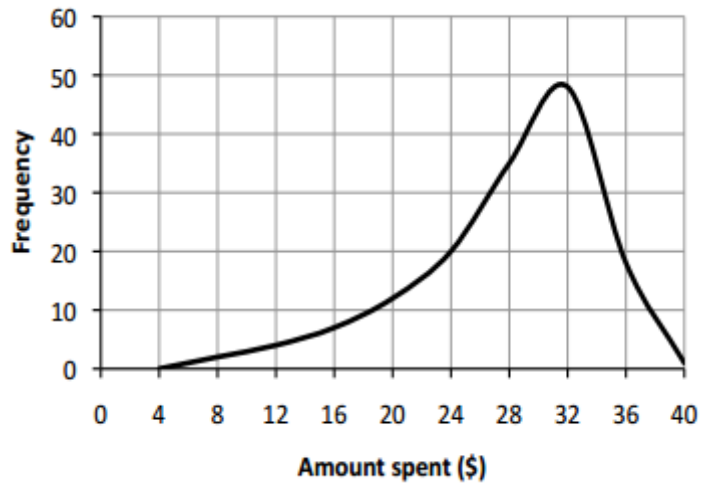
1. What is the approximate range of the data? Explain how you figured this out from the graph.
2. What is the approximate mode of the data? Explain how you figured this out from the graph.
3. What is the approximate median of the data? Explain how you figured this out from the graph.

Cell Phones 2

The box plot shows the monthly spending of a group of 120 students on their cell phones:

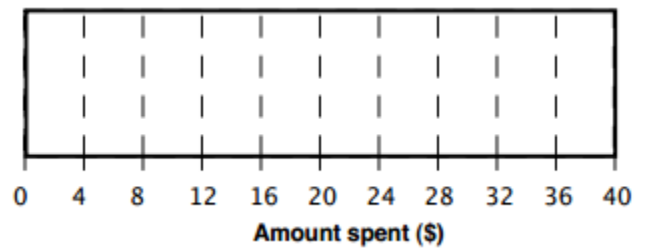
1. What does the box plot tell you about the students' monthly spending?
2. What quartile shows the biggest spread in spending? Explain how you figured this out from the graph.
3. For the 60 students who spent the least, the spread of data is **greater / less (circle)** than the spread of data for the 60 students who spent the most each month. Explain how you figured this out from the graph.
4. How many students spend more than \$20? Explain how you figured this out from the graph.

Here is a frequency graph of the monthly spending of a group of students on their cell phones:



5. Draw a possible box plot for this graph.

Describe your box plot, by adding explanations to the graph or box plot



6. Sketch another possible frequency graph for your box plot.

