

Box-and-Whisker Plots: Classwork

Class A Test Scores

41, 58, 58, 72, 72, 73, 74, 75, 82, 83, 84, 85, 88, 89, 89, 89, 90, 91, 91, 91, 93, 93, 94, 94, 95, 95, 96, 97, 99, 99

Class B Test Scores

70, 74, 75, 77, 79, 81, 81, 81, 84, 84, 85, 88, 88, 90, 91, 91, 92, 93, 93, 93, 95, 96, 96, 96, 97, 97, 97, 98, 99, 99

Class C Test Scores

59, 64, 68, 69, 76, 79, 83, 83, 84, 87, 88, 88, 89, 90, 90, 91, 91, 91, 92, 93, 93, 94, 94, 95, 96, 96, 97, 97, 98, 98, 99, 99

Class D Test Scores

63, 73, 74, 77, 77, 81, 83, 84, 84, 86, 87, 88, 88, 89, 89, 90, 91, 91, 92, 94, 94, 94, 95, 95, 96, 97, 97, 98, 98, 100

Class E Test Scores

33, 55, 71, 72, 73, 74, 76, 76, 79, 81, 82, 83, 83, 84, 86, 87, 88, 90, 90, 92, 92, 92, 93, 93, 94, 94, 94, 98, 99, 100

1. Find the five-number summary for each class period.

A. Min: LQ: Median: UQ: Max:

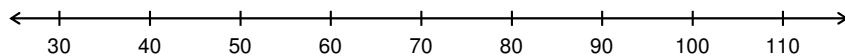
B. Min: LQ: Median: UQ: Max:

C. Min: LQ: Median: UQ: Max:

D. Min: LQ: Median: UQ: Max:

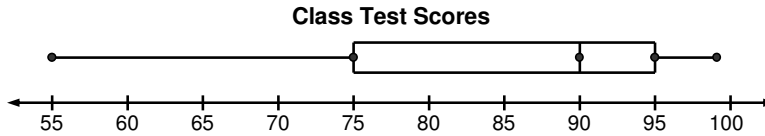
E. Min: LQ: Median: UQ: Max:

- f. Draw a box-and-whisker plot for two of the classes above. Put them both above the number line below. Be sure to include all necessary information!



- g. Make two statements comparing the test scores of the two periods. Use data from your box-and-whisker plot to support your statements.

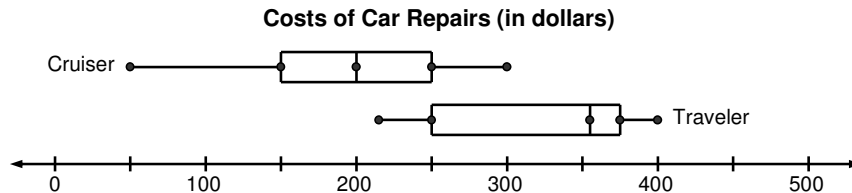
2. Answer the following questions based on the box-and-whisker plot. If it is not possible to answer the question, then explain why.



- What is the range of the test scores?
- What is the mean test score?
- Are there any outliers?
- How many test scores are represented by the box-and-whisker plot?
- The highest possible score for the test was 100. Did anyone score 100?
- What is the interquartile range (IQR) of the test scores?
- About what percent of students scored higher than 75?
- How many students scored higher than 75?
- About what percent of students scored higher than 85?
- Is it possible that this data set was used to create the box-and-whisker plot?

55	60	66	74	76	76	80	90	90	92	92	95	95	95	98	99
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

3. Data below was collected on the cost of repairing two kinds of cars.



- About how much is the median repair cost for a Cruiser? For a Traveler?
- About what percent of all Cruiser repair costs were more than \$250? Explain how you know.
- About what percent of all Traveler repair costs were more than \$250? Explain how you know.
- Notice that the section from \$250 to \$360 on the Traveler is a lot larger than the section from \$360 to \$375. Explain what that tells you about the data.
- A report says that more than half the repairs of a Traveler cost more than any repair done on a Cruiser. Do the box-and-whisker plots support the report? Explain.
- Peggy's car is a Cruiser. The cost of repairing her car is about \$165. She thinks this is pretty expensive for a Cruiser. Is she right? Justify your answer using the box-and-whisker plot.
- Find the interquartile range (IQR) for each set of repair costs.

Box-and-Whisker Plots: Homework

4. Kevin wants to buy the new math game for his Xbox 720. He called around and found that the video game was being sold for the following prices.

Video Game Prices

20	28	33	33	34	35	35	36	38	38	40	40	50
----	----	----	----	----	----	----	----	----	----	----	----	----

- a. Find the five-number summary.

Min:

LQ:

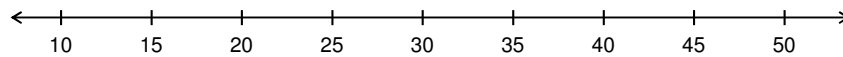
Median:

UQ:

Max:

- b. Give the interquartile range (IQR).

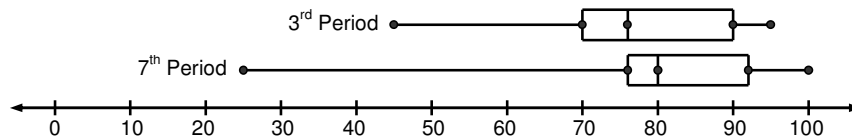
- c. Make a box-and-whisker plot for the prices. Be sure to include all necessary information.



- d. Make a stem-and-leaf plot for the prices.
Be sure to include all necessary information.

5. The data below was collected from two class test scores.

Class Test Scores



- a. What is the range of 7th period's test scores?
- b. About what percent of 3rd period students scored higher than 76?
- c. About what percent of 7th period students scored higher than 76?
- d. Which class period do you think did better on the test?
Justify your choice with data from the graph.