

Name: _____ Period: _____ Date: _____

Box-and-Whisker Plots Assignment

Solve problems involving box-and-whisker plots.

1. Find the 3rd quartile for the following data: 10, 12, 13, 10, and 8

Solution:

2. Find the 1st quartile for the following data: 6, 2, 3, 5, 9, and 10

Solution:

3. Find the 2nd quartile for the following data: 11, 12, 13, 13, and 8

Solution:

4. Given the set of data from 5 to 30, the first quartile is 10, the median is 17 and the third is 25. Draw a Box and Whisker Plot.

Solution:

The following data are the scores of 9 students in an English quiz; 10, 12, 11, 9, 8, 5, 13, 15 and 7.

5. Find the median

6. Find the 1st quartile.

7. Find the 3rd quartile.

8. What is the difference between the 1st and 2nd quartile?

Name: _____ Period: _____ Date: _____

Box-and-Whisker Plots Assignment

9. What is the difference between the 2nd and 3rd quartile?

10. What is the difference between the lowest score and the 1st quartile?

11. What is the difference between the 3rd quartile and the highest score?

12. Draw a box and whisker plot.

13. What do you observe about the data?

The following are the number of customer visited Cafe X for a week. 21, 23, 25, 30, 32, 33 and 27

Name: _____ Period: _____ Date: _____

Box-and-Whisker Plots Assignment

14. Find the median

15. Find the 1st quartile.

16. Find the 3rd quartile.

17. What is the difference between the 1st and 2nd quartile?

18. What is the difference between the 2nd and 3rd quartile?

19. Draw a box and whisker plot.

20. What do you observe about the data?

Box-and-Whisker Plots Assignment

Answer:

Solve problems involving box-and-whisker plots.

1. Find the 3rd quartile for the following data: 10, 12, 13, 10, and 8

Solution:

$$Q_3 = 3(5)/4 = 3.75 \text{ or } 4 \quad 8, 10, 10, \mathbf{12}, 13$$

Quartile 3 is 12.

2. Find the 1st quartile for the following data: 6, 2, 3, 5, 9, and 10

Solution:

$$Q_1 = (6)/4 = 1.5 \text{ or } 2 \quad 2, \mathbf{3}, 5, 6, 9, 10$$

Quartile 1 is 3.

3. Find the 2nd quartile for the following data: 11, 12, 13, 13, and 8

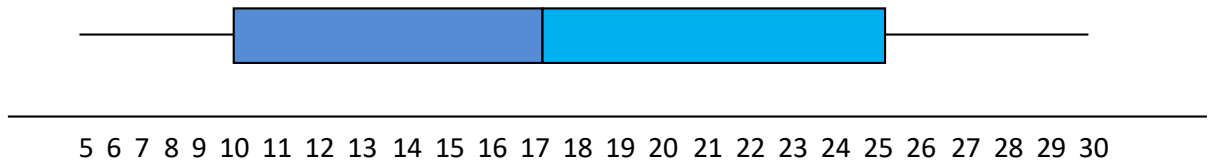
Solution:

$$Q_2 = 2(5)/4 = 2.5 \text{ or } 3 \quad 8, 11, \mathbf{12}, 13, 13$$

Quartile 2 is 12.

4. Given the set of data from 5 to 30, the first quartile is 10, the median is 17 and the third is 25. Draw a Box and Whisker Plot.

Solution:



The following data are the scores of 9 students in an English quiz; 10, 12, 11, 9, 8, 5, 13, 15 and 7.

5. Find the median

Solution:

$$Q_2 = 2(9)/4 = 4.5 \text{ or } 5 \quad 5, 7, 8, 9, \mathbf{10}, 11, 12, 13, 15$$

The median is 10.

6. Find the 1st quartile.

$$Q_1 = 9/4 = 2.25 \text{ or } 2$$

$$5, \mathbf{7}, 8, 9, 10, 11, 12, 13, 15$$

The first quartile is 7.

7. Find the 3rd quartile.

$$Q_3 = 3(9)/4 = 6.75 \text{ or } 7$$

$$5, 7, 8, 9, 10, 11, \mathbf{12}, 13, 15$$

The third quartile is 12.

8. What is the difference between the 1st and 2nd quartile?

$$Q_2 = 10 \text{ and } Q_1 = 7; \mathbf{10 - 7 = 3}$$

9. What is the difference between the 2nd and 3rd quartile?

$$Q_3 = 12 \text{ and } Q_2 = 10; \mathbf{12 - 10 = 2}$$

Box-and-Whisker Plots Assignment

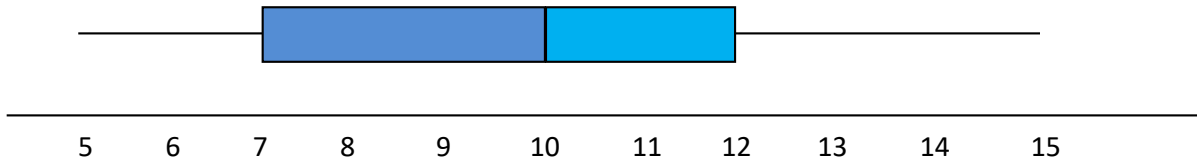
10. What is the difference between the lowest score and the 1st quartile?

The lowest score is 5 and $Q_1 = 7$; $7-5=2$

11. What is the difference between the 3rd quartile and the highest score?

The highest is 15 and $Q_3 = 12$; $15-12 = 3$

12. Draw a box and whisker plot.



13. What do you observe about the data?

The distribution of data is more aligned to the left than the right, it means that the distribution of score below median is more dispersed than above median.

The following are the number of customer visited Cafe X for a week. 21, 23, 25, 30, 32, 33 and 27

14. Find the median

Solution:

$$Q_2 = 2(7)/4 = 3.5 \text{ or } 4 \quad 21, 23, 25, \mathbf{27}, 30, 32, 33$$

The median is 27.

15. Find the 1st quartile.

$$Q_1 = 7/4 = 1.75 \text{ or } 2 \quad 21, \mathbf{23}, 25, 27, 30, 32, 33$$

The first quartile is 23.

16. Find the 3rd quartile.

$$Q_3 = 3(7)/4 = 5.25 \text{ or } 5 \quad 21, 23, 25, 27, \mathbf{30}, 32, 33$$

The third quartile is 30.

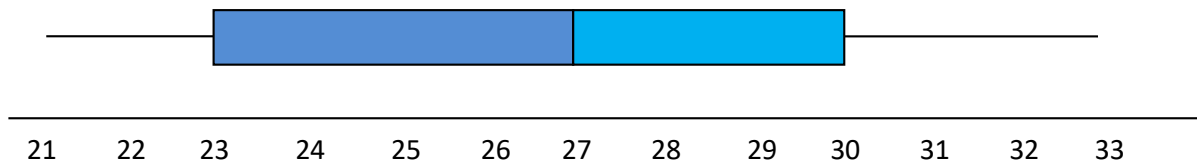
17. What is the difference between the 1st and 2nd quartile?

$$Q_2 = 27 \text{ and } Q_1 = 23; \mathbf{27-23=4}$$

18. What is the difference between the 2nd and 3rd quartile?

$$Q_3 = 30 \text{ and } Q_2 = 27; \mathbf{30 - 27 = 3}$$

19. Draw a box and whisker plot.



20. What do you observe about the data?

The distribution of data is more aligned to the left than the right, it means that there are days with a few number of costumers than usual.