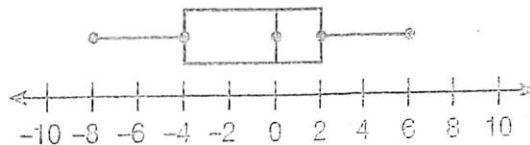


Practice

Use the box plot for questions 1-5.



1. What is the median? _____



The median is the middle value in the set.

2. What is the lower extreme? _____
3. What is the upper extreme? _____
4. What is the first quartile? _____
5. What is the third quartile? _____

Find the median M , the first quartile Q_1 , and the third quartile Q_3 of the data.

6. 1, 2, 3, 5, 7, 9, 10

$M =$ _____

$Q_1 =$ _____

$Q_3 =$ _____

7. 10, 12, 12, 15, 17, 19, 21, 25

$M =$ _____

$Q_1 =$ _____

$Q_3 =$ _____

REMEMBER The median divides the data set into two halves.

8. -2, -1, 2, 3, 4, 6, 7, 7, 9

$M =$ _____

$Q_1 =$ _____

$Q_3 =$ _____

9. 25, 35, 40, 45, 45, 50, 60, 65, 75, 95

$M =$ _____

$Q_1 =$ _____

$Q_3 =$ _____

10. 15, 12, 18, 25, 36, 48, 28, 15

$M =$ _____

$Q_1 =$ _____

$Q_3 =$ _____

11. 1.5, 2.5, 4.5, 8.5, 3.5, 0.5, 0.75, 2.25, 3.25

$M =$ _____

$Q_1 =$ _____

$Q_3 =$ _____

1. *True or false* for each statement. If false, rewrite each statement so it is true.

2. A box plot uses a box and whiskers to show the spread of a set of data.

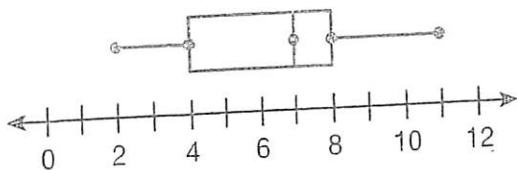
3. In a box plot, the box represents the upper 25% of the data.

4. The quartiles and the median divide a data set into four smaller sets of data.

5. The interquartile range is the difference between the upper extreme and the lower extreme.

6. Calculate the range and the interquartile range of the data.

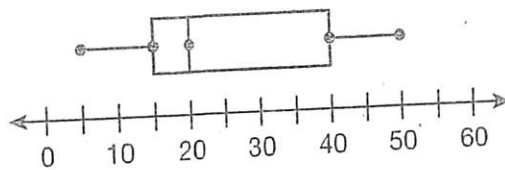
16.



range = _____

IQR = _____

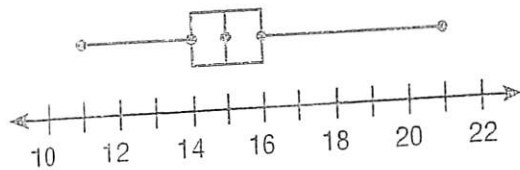
17.



range = _____

IQR = _____

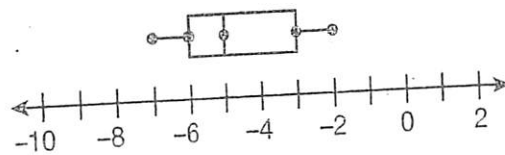
18.



range = _____

IQR = _____

19.

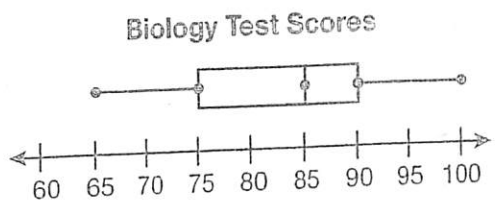


range = _____

IQR = _____

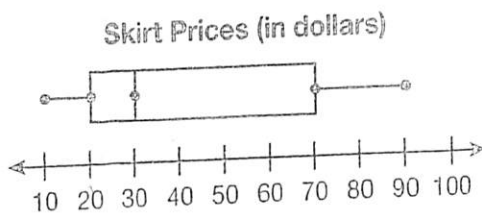
Choose the best answer.

20. The box plot shows the test scores earned by students in a biology class. Which statement about the test scores is **not** true?



- A. The scores ranged from 65 to 100.
- B. The median score earned was an 85.
- C. 25% of students scored less than 75 points on the test.
- D. 50% of students had scores that ranged from 75 to 85 points.

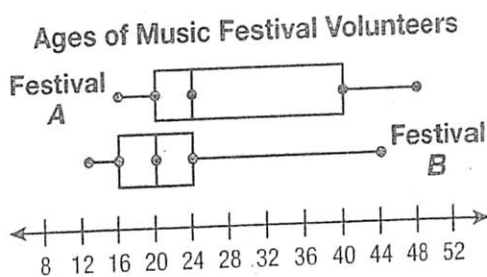
21. The box plot shows the prices of 20 skirts for sale at a boutique. Which statement about the prices is true?



- A. The highest-priced skirt costs \$100.
- B. The median price of a skirt is \$70.
- C. Half the skirts have prices that range from \$20 to \$70.
- D. The prices of the skirts are close to the median and not very variable.

Use the box plots and information below for questions 22–24.

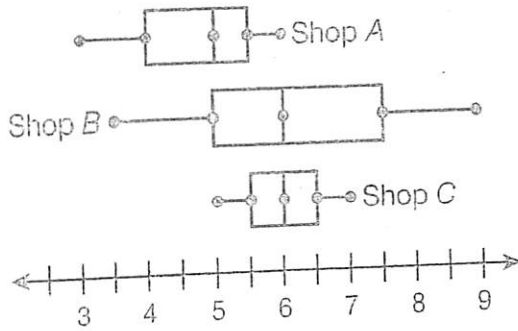
Music festival A and music festival B each had one hundred volunteers. The box plots show the ages of the volunteers at each festival.



22. Compare the median ages of volunteers at each festival.
-
23. Which festival has more variability in the ages of its volunteers? Explain your answer.
-
-
24. Suppose a woman who is 60 years old signs up today to volunteer at festival B. Which measure(s) of variability will be affected: the range or the interquartile range? by how much? Explain your answers.
-
-

Use the box plots for questions 25–28.

Sandwich Prices (in dollars)



25. Identify the median price of a sandwich at each shop.

Shop A: $M =$ _____

Shop B: $M =$ _____

Shop C: $M =$ _____

27. If you wanted to buy a sandwich but not spend much money, which shop would you try first? Why?

26. Calculate the IQR of sandwich prices at each shop.

Shop A: IQR = _____

Shop B: IQR = _____

Shop C: IQR = _____

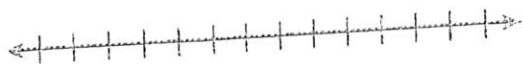
28. Compare the variability of the sandwich prices at the three shops.

Use the information below for questions 29 and 30.

Mrs. Heath visited her aunt in Nome, Alaska, for the first ten days of January 2012. She recorded the daily low temperature, in degrees Fahrenheit ($^{\circ}F$), each day:

$-27, -27, -31, -33, -34, -33, -34, -25, -29, -26$

29. **ORGANIZE** Organize these data by displaying them in a box plot. Use the number line provided below.



30. **JUSTIFY** Mrs. Heath said, "The weather was very, very cold and did not vary much during the trip." Is her statement accurate? Use one or more measures of variability to justify your answer.
