

1. What is a measure of center? a number that describes the middle of data
 Give 2 examples of a measure of center: mean, median, mode
 What is a measure of spread? a number that describes variation of data
 Give 2 examples of a measure of spread: range, IQR, MAD

2. What information does a box plot provide? minimum, lower quartile, median, upper quartile, maximum; it shows the distribution of a set of data

3-6. Big Bob scored the following points at eight basketball games: 21, 24, 9, 11, 16, 7, 24. Calculate the following:

MEAN	16
MEDIAN	16
MODE	24
RANGE	17

$112 \div 7$
 7, 9, 11, 16, 21, 24, 24

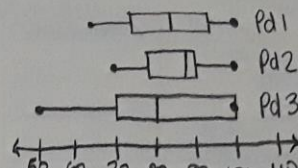
7. Which set of intervals CAN be used to create a histogram for data that ranges from 5 to 99?

- A. 0-20, 20-40, 40-60, 60-80, 80-100, 100-120 overlaps
 B. 3-6, 11-50, 52-82, 85-120 unequal
 C. 1-20, 21-40, 41-60, 61-80, 81-100 unequal
 D. 1-20, 21-80, 81-82, 83-89, 90-100 unequal

8. Give one example of a statistical question. What makes it statistical?

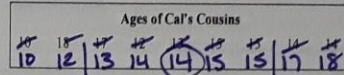
answers vary

7. Data from unit test grades from 3 different classes are displayed in the box plots below. Compare and contrast the data.

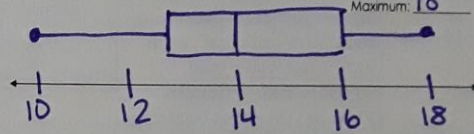


Pd 2 scored best overall, although 25% of Pd 3 scored 100. Pd 3 has a large range. Pd 1 is symmetrical. Answers vary...

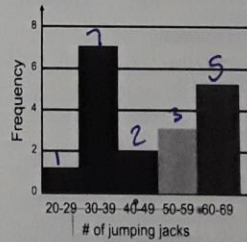
10-15. Use the following data to create a box plot:



Identify:
 Minimum: 10
 Lower Quartile: $12\frac{1}{2}$
 Median: 14
 Upper Quartile: 16
 Maximum: 18



Number of Jumping Jacks in 1 Minute



16. According to the histogram on the left, how many students can do more than 49 jumping jacks in 1 minute? 8

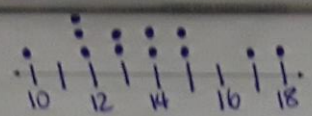
17. How many students participated in the survey? 18

18. Which interval is the mode of the histogram? 30-39

19. How many people did EXACTLY 45 jumping jacks? not enough info

During a Fitness Test

13	13	10	14	13	12
17	12	18	14	13	12

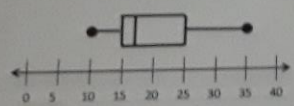


21. Circle the set of intervals CAN be used for the data given in problem # 4. Explain why the others cannot be used.
 A. 0, 2, 3, 6, 8, 7, 11, 12, 14 Skip (error)
 B. 0, 1, 2, 5, 6, 7, 8, 13
 C. 1, 2, 3, 4, 3, 6, 7, 8, 9, 10
 D. 0, 3, 3, 6, 6, 7, 10, 12

22. Bodot's test scores are 72, 68, 76. What does he need to score on the next test for his test average to be a 75?
 $75 \cdot 4 = 300$
 $72 + 68 + 76 = 216$
 $300 - 216 = 84$

23. Which measure is MOST affected by an outlier?
 A. Mean
 B. Median
 C. IQR
 D. Mode

24. Identify the interquartile range from the box plot below. 10



25. Look at the box plot in # 24. What do you know about the data?
 min = 10, LQ = 15, median = 17, UQ = 25
 max = 35
 skewed right
 IQR is 10
 Cluster 15-17

Determine the following

- a. the mean = 25.9
 b. the median = 22.5
 c. the mode = 19, 28
 d. the range = 48
 e. the IQR = 28 - 19 = 9
 f. the MAD = 9.28
 g. outlier(s) = 59
 h. minimum = 11
 i. maximum = 59

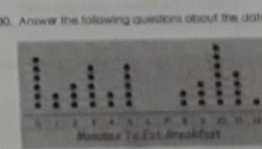
11, 15, 19, 19, 22, 23, 28, 28, 35, 59

27. According to the problem above, the "typical" acetonitrile concentration during 2018. Explain your answer.
about 23
 the median is a better measure because the outlier brought up the mean

28. Determine a set of data that has a mean of 12, a range of 10, and a median of 14.
6, 9, 14, 15, 16
 I decided to use 5 numbers so the middle is 14. Then, I chose a max and min that have a range of 10. Then, $12 \cdot 5 = 60$, so I chose 6 more values that would make the avg 12.

29. Elizabeth's test scores are 72, 90, 94, 83, and 85. If she needs to maintain an 85 test average, what is the minimum score she needs on her next test?
 $85 \cdot 6 = 510$
 $72 + 90 + 94 + 83 + 85 = 424$
 $510 - 424 = 86$

30. Answer the following questions about the data in the dot plot.
 a. mean = 40
 b. median = 5
 c. range = 12
 d. mode = 10



e. Describe at least 3 attributes about the SHAPE of the data.
 no outlier
 gap at 6-7
 not skewed (symmetrical)