

Name _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Solve the problem. Round results to the nearest hundredth.

- 1) Scores on a test have a mean of 70 and a standard deviation of 12. Michelle has a score of 94. Convert Michelle's score to a z-score.

A) 24 B) -2 C) 2 D) -24

- 2) The mean of a set of data is 4.01 and its standard deviation is 3.88. Find the z score for a value of 9.60.

A) 1.30 B) 1.74 C) 1.58 D) 1.44

Find the z-score corresponding to the given value and use the z-score to determine whether the value is unusual. Consider a score to be unusual if its z-score is less than -2.00 or greater than 2.00. Round the z-score to the nearest tenth if necessary.

- 3) A test score of 46.0 on a test having a mean of 65 and a standard deviation of 10.

A) -1.9; unusual B) 1.9; not unusual C) -19; unusual D) -1.9; not unusual

- 4) A body temperature of 99.8° F given that human body temperatures have a mean of 98.20° F and a standard deviation of 0.62°.

A) 2.5; unusual B) 1.6; not unusual C) -2.5; unusual D) 2.5; not unusual

Determine which score corresponds to the higher relative position.

- 5) Which is better: a score of 82 on a test with a mean of 70 and a standard deviation of 8, or a score of 82 on a test with a mean of 75 and a standard deviation of 4?

A) The second 82
B) Both scores have the same relative position.
C) The first 82

6) Which is better, a score of 92 on a test with a mean of 71 and a standard deviation of 15, or a score of 688 on a test with a mean of 493 and a standard deviation of 150?

A) Both scores have the same relative position.

B) A score of 92

C) A score of 688

Find the indicated percentile, decile, or quartile.

7) Use the given sample data to find Q_3 .

49 52 52 52 74 67 55 55

A) 6.0

B) 55.0

C) 67.0

D) 61.0

8) The weights (in pounds) of 30 newborn babies are listed below. Find P_{16} .

5.5 5.7 5.8 5.9 6.1 6.1 6.4 6.4 6.5 6.6

6.7 6.7 6.7 6.9 7.0 7.0 7.0 7.1 7.2 7.2

7.4 7.5 7.7 7.7 7.8 8.0 8.1 8.1 8.3 8.7

A) 5.9

B) 4.8

C) 6.1

D) 6.0

9) The weights (in pounds) of 30 newborn babies are listed below. Find D_6 .

5.5 5.7 5.8 6.0 6.1 6.1 6.3 6.4 6.5 6.6

6.7 6.7 6.7 6.9 7.0 7.0 7.0 7.1 7.3 7.4

7.4 7.5 7.7 7.7 7.8 8.0 8.1 8.1 8.3 8.7

A) 7.3

B) 7.1

C) 7.2

D) 18

Solve the problem.

10) For data which are heavily skewed to the right, P_{10} is likely to be closer to the median than P_{90} . True or false?

A) False

B) True

- 11) Human body temperatures have a mean of 98.20°F and a standard deviation of 0.62° . Sally's temperature can be described by $z = 2.3$. What is her temperature? Round your answer to the nearest hundredth.
- A) 99.63°F B) 101.90°F C) 100.50°F D) 96.77°F

Construct a boxplot for the given data. Include values of the 5-number summary in all boxplots.

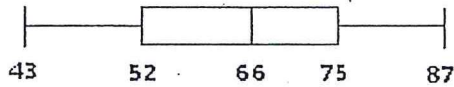
- 12) Construct a boxplot for the data given in the stem-and-leaf plot.

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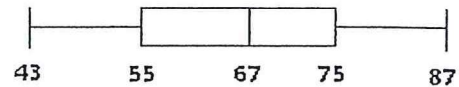
4 | 3 6 9
5 | 1 2 2 5 8
6 | 5 6 6 6 7 7 7 9
7 | 1 3 5 7 9
8 | 3 5 6 7

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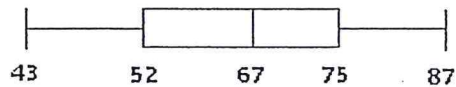
A)



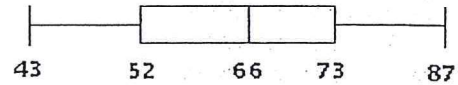
B)



C)



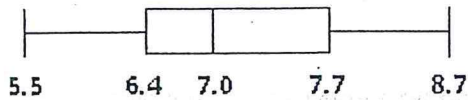
D)



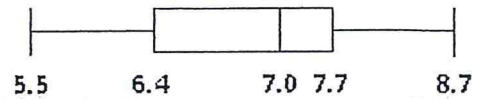
- 13) The weights (in pounds) of 30 newborn babies are listed below. Construct a boxplot for the data set.

5.5 5.7 5.8 5.9 6.1 6.1 6.3 6.4 6.5 6.6
6.7 6.7 6.9 7.0 7.0 7.0 7.1 7.2 7.2
7.4 7.5 7.7 7.7 7.8 8.0 8.1 8.1 8.3 8.7

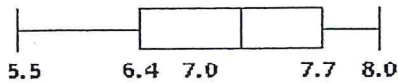
A)



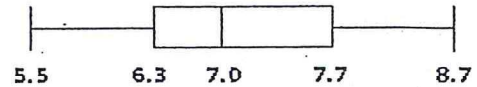
B)



C)



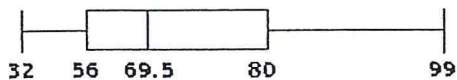
D)



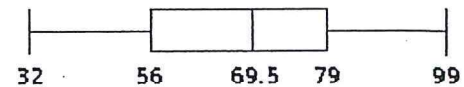
- 14) The test scores of 32 students are listed below. Construct a boxplot for the data set.

32 37 41 44 46 48 53 55
57 57 59 63 65 66 68 69
70 71 74 74 75 77 78 79
81 82 83 86 89 92 95 99

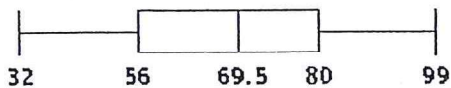
A)



B)



C)



D)

