Measure of Position

Name_____

SHORT ANSWER. Write the word or phrase that best completes each 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 82. Convert Michelle's score to a z-score. 1) _____

2) The mean of a set of data is 3.76 and its standard deviation is 4.97. Find the z score for a value of 13.84. 2) _____

3) The mean of a set of data is 154.02 and its standard deviation is 87.27. Find the z score for a value of 319.42. 3) _____

4) The mean height of a basketball team is 6.3 feet with a standard deviation of 0.2 feet. The team's center is 6.9 feet tall. Find the center's z score. Is his score unusual? 4) _____

Determine which score corresponds to the higher relative position.

5) 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? 5) _____

6) 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? 6) _____

7) Which score has a better relative position, a score of 252 on a test for which $\bar{x} = 240$ and $s = 24$, or a score of 62.4 on a test for which $\bar{x} = 60$ and $s = 6$? 7) _____

8) Which score has a better relative position, a score of 66 on a test for which $\bar{x} = 63$ and $s = 5$, or a score of 319.6 on a test for which $\bar{x} = 289$ and $s = 51$? 8) _____

Find the percentile for the data point.

9) Data set: 54 30 41 66 70 64 49;
data point 54 9) _____

10) Data set: 10 15 35 30 10 25 50 45 55 15 15 50 30 5 50;
data point 35 10) _____

11) Data set: 120 132 124 118 126 128 118 116 123 120 124 134 116 120 122 117;
data point 126 11) _____

Find the indicated measure.

12) Use the given sample data to find Q_3.
49 52 52 52 74 67 55 55 12) _____

13) The weights (in pounds) of 30 newborn babies are listed below. Find Q_1. 13) _____
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 7.2 7.2
7.4 7.5 7.7 7.7 7.8 8.0 8.1 8.1 8.3 8.7

14) The test scores of 32 students are listed below. Find Q_3. 14) _____

32 37 41 44 46 48 53 55
56 57 59 63 65 66 68 69
70 71 74 74 75 77 78 79
80 82 83 86 89 92 95 99

15) The test scores of 40 students are listed below. Find P_{85}. 15) _____

30 35 43 44 47 48 54 55 56 57
59 62 63 65 66 68 69 69 71 72
72 73 74 76 77 77 78 79 80 81
81 82 83 85 89 92 93 94 97 98

16) The test scores of 40 students are listed below. Find P_{56}. 16) _____

30 35 43 44 47 48 54 55 56 57
59 62 63 65 66 68 69 69 71 72
72 73 74 76 77 77 78 79 80 81
81 82 83 85 89 92 93 94 97 98

Answer Key
Testname: MEASURE OF POSITION.TST

1) 1
2) 2.03
3) 1.90
4) 3, yes
5) A score of 92
6) The second 82
7) A score of 252
8) Both scores have the same relative position.
9) 43
10) 60
11) 75
12) 61.0
13) 6.4
14) 79.5
15) 87
16) 74