1) If a student scored 89 points on a test where the mean score was 80.2 and the standard deviation was 6.7. The student's z score is _____.

   A) 13.28   B) 1.31   C) 11.97   D) 0.20

1) _____

2) If a student scored 77 points on a test where the mean score was 84.5 and the standard deviation was 5.1. The student's z score is _____.

   A) -0.29   B) 16.57   C) 0.29   D) -1.47

2) _____

3) Indicate which student has the higher z score.

3) _____

Art Major $X = 46$ $\overline{X} = 50.5$ $s = 5.2$

Theater Major $X = 70$ $\overline{X} = 75.1$ $s = 7.3$

   A) The theater major has a higher score than the art major.
   B) Neither student received a positive score; therefore, the higher score cannot be determined.
   C) The art major has a higher score than the theater major.
   D) Both students have the same score.

4) For the data set below, find the first quartile.

4) _____

62	65	75	72	68	63	65	67	78	70	74

   A) 62   B) 74   C) 51.5   D) 65

5) The number of incidents in which police were needed for a sample of 9 schools in Allegheny County is 8, 39, 6, 12, 45, 16, 3, 0, 15. Find the first and third quartiles for the data.

5) _____

   A) $Q_1 = 12; Q_3 = 39$ B) $Q_1 = 0; Q_3 = 45$
   C) $Q_1 = 4.5; Q_3 = 27.5$ D) $Q_1 = 6; Q_3 = 16$

6) The average resident of Metro City produces 630 pounds of solid waste each year, and the standard deviation is approximately 70 pounds. Use Chebyshev's theorem to find the weight range that contains at least 75% of all residents' annual garbage weights.

6) _____

   A) Between 560 and 700 pounds   B) Between 490 and 770 pounds
   C) Between 350 and 910 pounds   D) Between 420 and 840 pounds

7) The following population parameters were obtained from a graphing calculator, mean = 77; sigma =8. Assuming the population is bell-shaped, between what two values will approximately 68% of the population be?

7) _____

   A) 53 to 101   B) 77 to 101   C) 61 to 93   D) 69 to 85

1) B
2) D
3) A
4) D
5) C
6) B
7) D