PSYC 5322: Psychometrics

Tarleton State University | Homework 1 | Spring 2020

1. Consider the scores in the following table:

Score	Frequency
45	4
44	10
43	8
42	2

   (a) Calculate the percentile ranks for trait values of 44, 43, and 42.7.

   (b) Calculate the trait values at the 5th, 30th, and 76th percentiles.

2. Consider the scores in the following table:

Score	Frequency
110-119	10
100-109	5
90-99	8
80-89	12
70-79	18

   (a) Calculate the percentile ranks for trait values of 86, 92, and 107.

   (b) Calculate the trait values at the 3rd, 22nd, and 75th percentiles.

3. The raw scores for a test have a mean of 83 and a standard deviation of 12.

   (a) What is the standard score corresponding to a raw score of 89?

   (b) What is the standardized score corresponding to a raw score of 80 if the scores are standardized to have a mean of 500 and standard deviation of 100.

4. Normalize the following scores to have mean 50 and standard deviation 10 (these are often called *T scores* by some test publishers).

Score	Frequency
37	6
36	124
35	58
34	10
33	2