Examples of Questions for Exam 1

1. Sara has a raw score of 58. How well did she perform on her math test among students in her class? The class average was 75, and had a variance of 16.

2. Steve and Terry both obtained the same score on the same test—a test designed to assess academic achievement. Steve is in Mr. Black's class. Terry is in Mrs. Green's class. On the basis of his performance on this test, Steve actually performed higher than Terry in academic achievement. Explain how this can be so.

3. Zach performed at the 92nd percentile on a test. The test had a mean of 110 and a standard deviation of 6. What was Zach's raw score?

4. Kim wants to go to Harvard for her undergraduate education. In order for her to qualify for admission, she has to be in the top 5% of the following performance indices :

Index	Kim's Scores	Test Mean	Test Standard Deviation
SAT Total	2150	1500	300
Math & Science	755	600	100
Academic Achievement	68	50	10

5. Stephanie obtained a score of 23 on the ABS Inventory, 32 on the SCI Battery, and 26 on Basic skills test. Explain her relative performance on each. The ABI is a test of social adjustment (M = 25; SD = 5). The SCI is a test of emotional maturity (M = 25; SD 3); and the Basic Skills Test measures overall academic performance upon graduation from high school (M = 20; SD 5).

6. Greg obtained a score of 198 on a test designed to determine his managerial aptitude. The reliability of the test was r = +.85. The mean and standard deviation of the norming group was 200 and 25, respectively. The company with which he was interviewing has a cutoff at 215. What are the chances he will make a good manager?

7. An instrument has a reliability of r = +.85. It is based on a measure of internal consistency. Is this a high reliability? Why or why not?

8. Alex obtained an IQ of 93 on the WISC. His academic achievement score in reading is T = 52, and in reading it is CEEB = 270. Knowing that IQ tests report using deviation IQ scores, and one must be two standard deviations discrepant between estimated potential to learn and demonstrated achievement, does Alex qualify for special education services in reading and math? Please explain.

9. Please calculate the standard error of measurement for the ABC Test of Kindergarten readiness. The reliability of the instrument is r = +.75. The norming group performance is as follows:

Student Number	Score Value
1	23
2	43
3	65
4	34
5	23
6	13
7	15
8	64
9	44
10	54
11	34
12	24
13	27
14	

10. If the test had higher reliabilities, what would the SEM be with reliabilities of : .80, .85, .90, and .95?