Z scores

Assignment: Heiman, Chapter 6

Terms you should know.

Standard score . . . . . .

* **Z score** . . . . . .

* **Standard normal curve** . . . . . .

Formulas and Symbols You Should Know

z_x . . . . . .

* $\frac{X - \overline{X}}{S_x}$ . . . . . .

$(Z_x \ x \ S_x) + \overline{X}$ . . . . . .

Homework #6: Calculations You Should Master

Name: _____ (This is my work, and my work alone.)

1. A psychology professor gave a test and got the following scores.

A	B	C	D	E	F	G	H	I	J
12	12	7	10	9	12	13	8	9	8

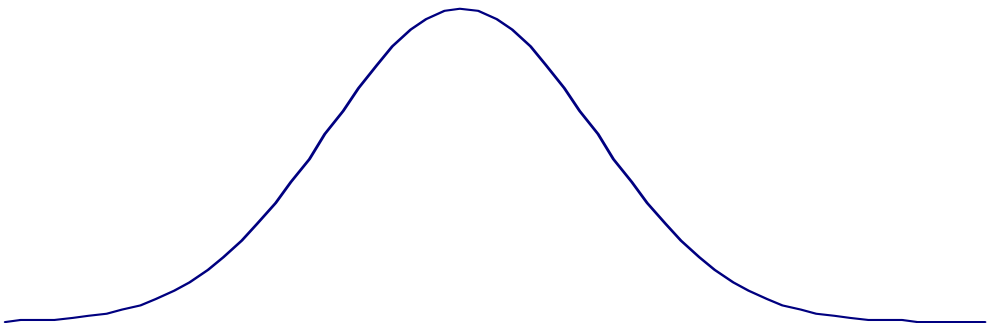
a. What is the mean for this distribution? _____

b. What is the standard deviation for this distribution? _____

c. The z score for person D is? _____. Show where this score is on this normal curve.

d. The z score for person E is? _____ Show where this score is on this normal curve.

e. The z score for person G is? _____Show where this score is on this normal curve.



2. Use the scores for item 1 for the following questions. SHOW YOUR CALCULATIONS!

   a. What is the raw score for a z score of 0.00? _____

   b. What is the raw score for a z score of + 1.58? _____

   c. The raw score for a z score of -1.96 is? _____

3. Given a population with μ = 80.00 and σ of 7.5, answer the following questions.

   a. What percentage of people score less than a z score of -1.00? _____

   b. What percentage of people score 78 or less? _____

   c. What percentage of people score 86 or less? _____

   d. What percentage of people score more than 97.47? _____

   e. What percentage of people score at or above z = +1.96 and at or below z = -1.96._____

   f. What percentile is a raw score of 100? _____

4. Do the following with the following standard normal curve.

   a. Draw vertical lines where

      i. The mean is located

      ii. At +1and -1 z-score

      iii. At +2 and -2 z-scores

      iv. At -+ 3.0 and - 3 z-scores z-scores

   b. Using the table of z-scores in appendix B fill in the following

      i. The percentage of case that fall between the mean and +1 z-score.

      ii. The percentage of cases that fall between - 1 and -2 z-scores.

      iii. The percentage of cases that fall above +3 z-score.