1. For a sample with a mean of M=45, a score of X=59 corresponds to z=2.00. What is the sample standard deviation?
2. In a population of exam scores, a score of X=48 corresponds to z=+1.00 and a score of X=36 corresponds to z=-0.50. Find the mean and standard deviation for the population.
3. For each of the following populations, would a score of X=50 be considered a central score(near the middle of the distribution) or an extreme score (far out in the tail of the distribution)?
4. µ=45 and σ=10
5. µ=45 and σ=2
6. µ=90 and σ=20
7. µ=60 and σ=20
8. For each of the following identify the exam score that should lead to the better grade. In each case explain your answer.
9. A score of X=56, on an exam with µ=50 and σ=4, or a score of X=60 on an exam with µ=50 and σ=20.
10. A score of X=40, on an exam with µ=45 and σ=2, or a score of X=60 on an exam with µ=70 and σ=20.
11. A score of X=62, on an exam with µ=50 and σ=8, or a score of X=23 on an exam with µ=20 and σ=2.
12. A distribution with a mean of µ=56 and a standard deviation of σ=20 is being transformed into a standardized distribution with µ=50 and σ=10. Find the new. Standardized score for each of the following values from the original population.
13. X=46
14. X=76
15. X=40
16. X=80
17. A sample consists of the following n=6 scores: 2,7,4,6,4, and 7.
18. Compute the mean and standard deviation for the sample
19. Find the z-score for each score in the sample
20. Transform the original sample into a new sample with a mean of M=50 and x=10.