Chapter 3 SPSS Activities – Answer Key

Activity 1—Examining Data

Step P: Answer these questions:

1. What percentage of the subjects scored exactly 50 on the questionnaire? *7.7%*

2. What percentage of the subjects scored 42 on the questionnaire? *1.5%*

3. What questionnaire scores correspond to the 10th, 25th, 50th, 75th, and 90th percentiles, respectively? *40.6, 45, 48, 49.5, 52*

Step Q: Answer the following questions:

4. What are the values for the standard deviation, variance, and standard error of the mean? *4.22, 17.81, .523*

5. Describe the data in terms of skewness and kurtosis. *negative skew (–831); Leptokurtic (.876)*

6. What is the value of the mean? *46.97*

7. What is the value of the median? *48*

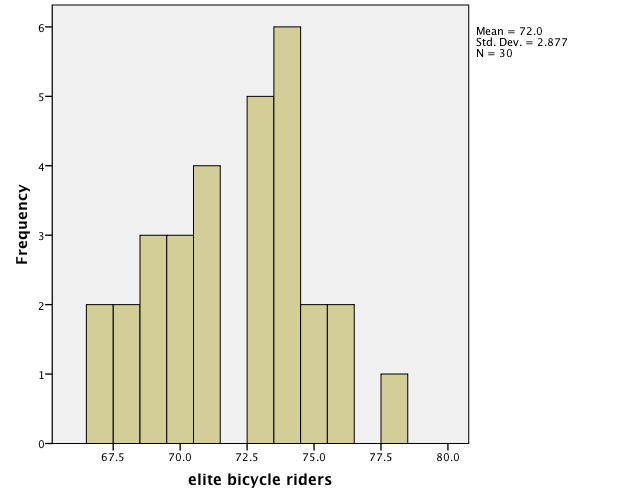
8. Do your answers to questions 6 and 7 agree or disagree with your observation about the skewness from above? Why or why not? *Agree, because the mean is smaller than the median.*

9. What score does SPSS equate with a percentile rank of 100? *55*

10. What score does SPSS equate with a percentile rank of 0? *No score*

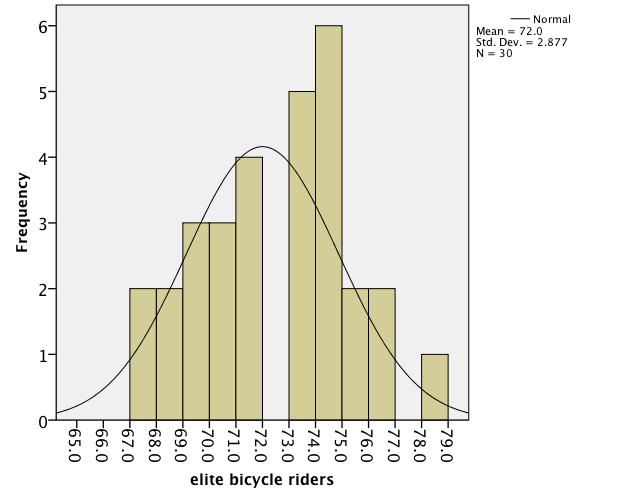
Activity 2—Calculating Descriptive Statistics

Step B: (Histogram of elite values)



Step F: (Graph with appropriate changes specified in C thru F; provide an appropriate name.)

*VO2max Scores for Thirty Elite Bicycle Riders*



Step G:

**Elite Sedentary Combined**

11. 78 43 78

12. 67 24 24

13. 11 19 54

14. 72.0 34.07 53.03

15. 2.88 5.40 19.60

16. 2160 1022 3182

17. 8.28 29.17 384.23

18. –.056 .194 –0.078

19. –.781 –1.165 –1.88

Step I:

20. If you graphed these data, what word would best describe the shape of the curve? *Bimodal*

21. Describe in words the main differences between the two distributions (elite vs. sedentary), basing your comparison on appropriate descriptive statistics.

*Look for various descriptive statistics (e.g., range, mean, variance, standard deviation, skewness, kurtosis, and so forth).*