Chapter 3 SPSS Activities – Answer Key

Activity 1—Examining Data
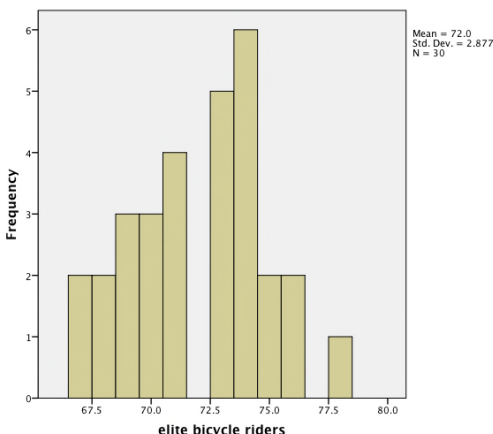
Step P: Answer these questions:

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*
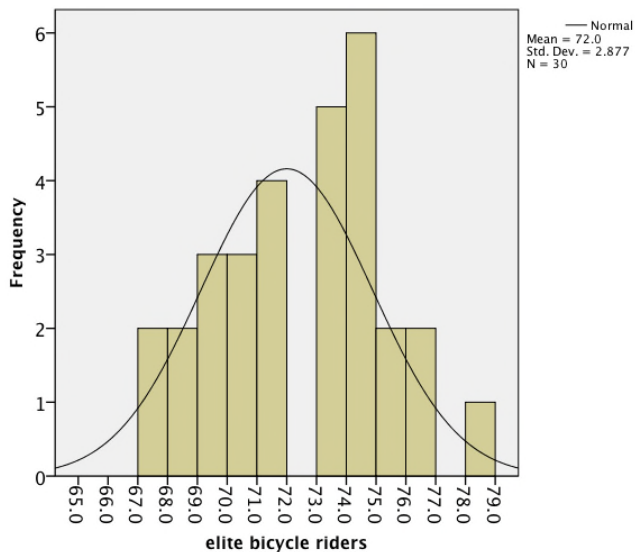
Activity 2—Calculating Descriptive Statistics

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

VO_2max 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).