

For each set of data, find the measures of center, the five number summary and the standard deviation.

1. 23, 35, 19, 27, 33, 24, 18, 26, 38, 29

2. 82, 77, 88, 65, 68, 73, 68, 83, 80

For each set of data, find the type of skew and which measures of center and spread would best describe the data.

3. 13, 28, 14, 30, 18, 22, 29, 24, 26, 12, 20, 16

4. 45, 56, 38, 48, 41, 35, 59, 46, 52, 79, 62

5. The weight of an iPhone is normally distributed with a mean of 4.3oz and a standard deviation of 0.2oz.

Using the empirical rule:

- What is the probability that a random iPhone will weigh more than 4.7oz?
- What is the probability that a random iPhone will weigh between 3.7oz and 4.5oz?
- How much do the bottom 0.15% of iPhones weigh?

6. If 97.5% of the scores were above 90.4 and 84% of the scores were lower than 107.8, using the empirical rule find the mean and the standard deviation.

7. John got a z -score of 2.65 on his test. If the class average was 86 with a standard deviation of 3, what was John's score on his test?

8. The mean on a statewide geography test was 76 with a standard deviation of 2.2.

- What is the z -score for a test score of: i. 71 ii. 83
- What is the probability a student scored: i. lower than 75 ii. higher than 72 iii. between 73 and 80
- If a student scored at the 88th percentile, what was his/her score?

9. Mrs. Brown wanted to know how long it took Skyline students to get to school on a normal day.

- Is the data collected going to be quantitative or categorical?
- What could Mrs. Brown do if she wanted to collect the data using a self-selected sampling? Would this have bias?
- What could Mrs. Brown do if she wanted to collect the data using a stratified sampling technique? Would this have bias?

10. Describe the difference between the control group vs the experimental group.

11. Name and describe the 5 sampling methods.

12. Describe the difference between a parameter and a statistic.

13. If a population has a standard deviation of 32.5 and the sample size is 350, find the margin of error.

14. The College Board reported that the mean score on the ACT test was a 24 with a standard deviation of 4. Skyline believes that its seniors scored significantly higher than the national average. A random sampling of 150 seniors showed their average was a 27 on the ACT, is Skyline correct in their belief?