1. The empirical rule says that approximately what percentage of the values would be within 2 standard deviations of the mean in a bell shaped set of data?
2. 95.5%
3. 68.3%
4. 86.7%
5. 99.7%
6. A statistics student made the following grades on 5 tests: 84, 78, 88, 78, and 72. What is the mean, median, and mode grade?
7. 78 - 80 - 78
8. 80 - 78 - 78
9. 72 - 88 - 84
10. 84 - 82 - 72
11. A commuter travels many miles to work each morning. She has timed this trip 5 times during the last month. The time (in minutes) required to make this trip was 44, 39, 41, 35, and 41. What is the standard deviation for this sample data?
12. 3.32
13. 2.97
14. 1.73
15. 11
16. The average starting salary for graduates at a university is $5,000 with a standard deviation of $500. If a histogram of the data shows that it takes on a mound shape, the empirical rule says that approximately 95.5% of the graduates would have a starting salary between \_\_\_\_\_\_\_.
17. $4,500 and $5,500
18. $5,000 and $5,500
19. $4,000 and $6,000
20. $3,500 and $6,500
21. Jessica Salas, president of Salas Products, is reviewing the warranty policy for her company's new model of automobile batteries. Life tests performed on a sample of 100 batteries indicated: (1) an average life of 75 months, (2) a standard deviation of 5 months, months, and (3) a bell shaped battery life distribution. What percentage of the batteries will fail within the first 65 months of use?
22. 0.5%
23. 1%
24. 2.5%
25. 5%