**Chapter 5 Review**

Chapter 5 Test Percentages for Mr. Lawsons’s class—Fall 2012

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 82.4 | 68.9 | 50 | 64.9 | 60.8 | 63.5 | 81.1 | 64.9 | 94.6 | 79.9 |
| 81.1 | 68.9 | 79.7 | 85.1 | 70.3 | 97.3 | 100 | 86.5 | 73 | 70.3 |

1. Use the set of data above to determine:

a) The Range of test scores: b) The Median Score:

c) The Mean Score: d) The Standard Deviation:

Chapter 2 Test Percentages for Mrs. Lawson’s class—Fall 2011

(*Note: There are 4 more test scores than Chapter 5 due to illnesses and/or students no longer enrolled in the class*)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 77.5 | 17.5 | 52.5 | 61.3 | 62.5 | 62.5 | 81.3 | 71.3 |
| 68.8 | 67.5 | 66.3 | 52.5 | 56.3 | 100 | 87.3 | 53.8 |
| 70.7 | 41.3 | 81.3 | 82.5 | 61.3 | 57.5 | 67 | 75 |

2. Use the set of data above to determine:

a) The Range of test scores: b) The Median Score:

c) The Mean Score: d) The Standard Deviation:

3. Which test has more consistent scores? Why?

4. If Karys scored $μ+σ$ on the Chapter 2 test, what was her score?

5. If Oscar scored $μ-2σ$ on the Chapter 5 test, what was his score?

6. Justin and Selena both wrote a provincial exam in mathematics.

 Justin wrote in January, and Selena wrote in June. Their results are given below.

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Mark (*x*) | Provincial Mean $(μ)$ | Provincial Standard Deviation $(σ)$ |
| Justin | 84% | 71% | 5.3% |
| Selena | 82% | 66% | 6.2% |

a) Determine which student’s result is better.

b) If the results of each exam are normally distributed, what percent of people who wrote the exam in January scored better than Justin?

7. The flight between Vancouver and Winnipeg has a mean time of 156 min, with a standard deviation of 3.5 min. Assuming that the flight times for this trip are normally distributed, determine approximately what percent of the time you could expect the flight time to be

a) less than 156 min

b) between 149 min and 156 min

c) between 152.5 min and 163 min

d) over 163 min

8. A study of 500 Calgarian taxpayers revealed that 24.1% of these taxpayers make charitable contributions. The study was considered accurate plus or minus 5%, 9 times out of 10. In a particular year, there were 827 120 taxpayers in Calgary.

a) Determine: Margin of Error: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Confidence Level: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Confidence Interval: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) Determine the projected range of the number of Calgary taxpayers who would make a charitable donation that year.