

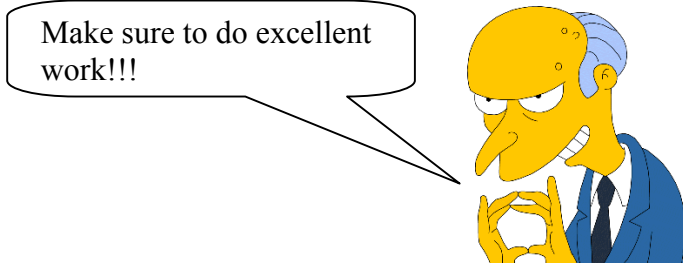
Unit 4 Test

Honors Algebra 1

DUE: December 13, 2011

Mr. Burns

Our Unit 4 test will be a little different than the other tests that we've taken. This test will require you to take a set of data and analyze it. You will have 1 week to complete the test and it is worth **100 points**. **All work must be hand-written and you must show all of your work or you will lose points!**



On the class website you will find the climate data for Grey, Maine for the month of November. **You are to use the daily max temperature and do the following:**

1. Create a frequency table using the data. (10 Points)
Use the following temperature intervals:
30-34
35-40
41-45
46-50
51-55
56-60
61-65
66-70
2. Find the ratios and percent equivalents for those intervals. (20 Points)
Example: Were 20 out of the 30 days recorded between 35-40 degrees?
The ratio would be 20/30 or 2/3 and 66.7%
3. Find the mean, median, mode, range, and average deviation for the monthly max temperature data. (20 points) **Make sure to show your work.**
4. Draw an accurate circle/pie graph for the data. You can use the same intervals as in number 1. Identify the angle measurements and percents inside the slices. Use different colors to represent each element. Include a key. (20 Points)
5. Make a stem-and-leaf and box-and-whisker plot for the data. Do not use intervals. (20 Points)
6. Answer the following questions based on your data. See other sheet. (10 Points)

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All of your work (i.e. graphs, tables, math, questions, etc.) should be stapled together and turned into me no later than December 13, 2011.

Part 6. Answer the following questions based on your data. If you need more room, do on a separate piece of paper and attach it to your test.

1. Assuming this November had typical temperatures, how many November days would you expect the max temperature to be between 30-40 degrees over the next 60 years? Show two ways to solve this problem.

2. What's the probability that on any given November day, the temperature will be between 46 and 60 degrees?

3. Explain how the measures of central tendency (mean, median, mode, range) would be affected if on the last day of November the temperature spiked to 90 degrees?

4. What would the temperature have had to be on the 23rd in order for the 17th and 18th to have the same mean as the 23rd and 24th? Show your work.

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5. If you were a climatologist compiling long-term data on Maine's max November temperatures, in which measure of central tendency would you be the most interested? Explain.