

Lab: Analyzing Multiple Boxplots with StatCrunch

Name: _____

Directions: In order to get full credit for this lab, your lab report should be only four pages long (each page is worth 25% of the lab) and include the following:

1. This page is the lab cover sheet. Print this page and answer the questions on it using your summary statistics and graph.
2. Page 2: This should be a statcrunch graph of all five boxplots on a single graph. ***Your graph must include a title with your name on it, unless you don't want credit for the graph. Your graph must use fences and clearly indicate the location of outliers.***
3. Page 3: This page should be a printout of the summary statistics (***generated from statcrunch***) for each of the five areas of the factory
4. Page 4: This page be a typed, short paragraph explaining your recommendations about which factory areas workers must be provided with protective ear wear. Use NIOSH's recommendation that all worker exposures to noise be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise induced hearing loss.

Lab Questions

1. (5 points) Is the distribution of noise levels in area 2 positively skewed, negatively skewed, symmetric, or not skewed or symmetric? Use Pearson's index of skewness.
1. _____
2. (5 points) Is the distribution of noise levels in area 5 positively skewed, negatively skewed, symmetric, or not skewed or symmetric? Use Pearson's index of skewness.
2. _____
3. (5 points) Explain the purpose of the factory study.
4. (5 points) About 75% of noise level readings in Area 5 are above what amount of decibels?
4. _____
5. (5 points) What percent of noise level readings in Area 3 are above 89 decibels?
5. _____