

You have received a data set about GPA and IQ levels, separated both by individual, and by the period they took Foundations 11 in last year. Choose either GPA or IQ and compare the results of this analysis according to the period they were in. The data provided is raw data. You will need to do the following:

1. Sort the data

The data has been presented to you where the classes are mixed together, and the GPA/IQ values are in no order. The data will need to be entered into excel, then sorted twice: once to split the classes, and again to sort GPA/IQ values.

Excel

2. Perform statistical analysis

Excel can calculate the mean and the standard deviation, and the median, mode and range are seen when you sort the data from highest to lowest.

3. Create graphics based on the analysis




You are going to use the statistics you calculated to create a histogram (histogram(data set, bin width)) and a normal distribution curve (normaldist(mean, standard deviation)). This will require more data entry but can be copied and pasted from the excel file. On top of the curve draw in vertical lines that represent the mean, $\pm\sigma$, $\pm2\sigma$, and $\pm3\sigma$.

Desmos

4. Draw conclusions based on your analysis.

Which class performed better? What does better mean to you? How do you compare to the groups being studied? Find your z-score and find what percentage of the class falls below you. What percentage falls above you? Find this for both classes.

You have 3 days booked with laptops to work on this. All other work must be done outside of class. This, along with your Chapter 5 test, will be your final assessment for this chapter.

Criteria	Missing 	Emerging	Developing 	Proficient	Extending 
Analysis:					
a. Numbers (Excel) <ul style="list-style-type: none"> • Mean • Median • Mode • Range • Standard Deviation 					
b. Frequency Graphics (Desmos) <ul style="list-style-type: none"> • Frequency Table • Histogram with Normal Distribution curve 					
c. Distribution Graphics (Desmos) <ul style="list-style-type: none"> • $\pm\sigma, \pm2\sigma, \pm3\sigma$ labeled and values found • \bar{x} labeled and value found 					
d. Interesting <ul style="list-style-type: none"> • One 'lower than' z-score with meaning • One 'higher than' z-score with meaning 					
e. Conclusions					