STEP BY STEP PROCESS FOR MINI PROJECT 2 ANALYSIS: **8** STEPS TOTAL

1. I downloaded data from Opportunity Atlas for teenage birth rate, household income, and employment rate in Baltimore City, MD.
2. To consolidate all of the data into one workbook, I created another spreadsheet called “Akhila Mini Proj 2 Analysis” and copied and pasted the data in the household income workbook to serve as the starting point (I could’ve used data from any of the workbooks, I just chose that one.) Now I had each tract, the name of the tract, and household income.
3. I then used the VLOOKUP tool to transfer the teenage birth rate and employment rate data into the main workbook. I matched up the data by tract; since the tracts were the same among the sheets in Baltimore, I was able to use VLOOKUP to place the correct data by tract. An example formula is: =VLOOKUP(A2,the array from the worksheet for the different variables,3,FALSE). A2 represented the tract that I wanted it to match, and the 3 meant that the variable was in the third column of the workbook I wanted to transfer data from. Then by double clicking the bottom right of the cell, I got the data for all of the tracts.
4. I first conducted a simple linear regression model to assess the correlation between teenage birth rate and employment rate. I used the slope, intercept, r-squared, and standard error built-in Excel functions to find values that summarize the data.
5. I created a scatterplot from the data to make a visualization. I added the trendline and the equation, as well as labels for the chart title and axes titles.
6. I calculated the average teenage birth rate to get a sense of what the average employment rate would be. Using the average function, I got the value, and I plugged that value into the trendline equation to see the predicted employment rate.
7. Then I conducted a multiple linear regression to assess how all three variables are related. I used the Data Analysis Excel add-in to create the summary output.
8. I interpreted all of the data, analyzed why the data may have brought the results that it did, and made recommendations for public health interventions and future research.