

Math 101 Online - Module 1 Projects

See Project Guidelines and Project Rubric for grading criteria

1. Annual Savings

Research: Make a list of 10 household or grocery items that you buy regularly. Go to the store and find the item price and number and type of units of the brand name and generic version of each item (cite stores in Works Cited). Estimate your annual consumption of each item in number of units (this should be the same for brand name and generic versions). Make a spreadsheet with columns as shown below. **Use spreadsheet formulas** to calculate the unit price of each item, annual cost of each item, and annual savings from buying the cheaper version.

Item name	Price	# of Units	Unit Type	Unit Price	Annual Units Consumed	Annual Cost	Annual Savings
Cheerios	\$7.36	36	oz	\$0.204	504	\$102.82	
Great Value O's	\$5.48	42	oz	\$0.130	504	\$65.52	\$37.30

Only basic operations (+, -, *, /) are necessary for spreadsheet formulas. For example, =B2/B3.

Essay: Write an essay summarizing your findings and how this might affect your shopping habits. This essay should be for a general audience. Introduce the topic and explain your research process (do not copy and paste the topic description above). Explain how unit prices and annual costs are calculated. Why did you choose these items? What is the total amount of money you would save in one year by buying the generic versions of these 10 items instead of the brand name? Which generic items result in the most/least savings? Are there some items you will buy the brand name version of even if it is more expensive? Is there anything you found surprising? What are your current shopping habits? How might you change your shopping habits?

Files: Submit your essay in .docx or .pdf format. Submit your spreadsheet file separately in .xlsx format.

2. Colleges Set Diagram

Research: The UNC system has 17 campuses across the state of North Carolina. You can find a list here: <https://www.northcarolina.edu/content/our-17-campus>. List three characteristics of a college that are important to you. These characteristics should be well defined (for example, if you are looking for a small school your criteria could be that total enrollment is less than 5,000). Research all of the UNC campuses to determine which ones meet your desired characteristics (do not include NC School of Science and Mathematics which is a high school). Use a table or spreadsheet to help you organize your data. Create a set diagram of the results. (This is similar to the diagram on page 108 of the textbook, but your diagram will have 3 overlapping sets instead of 4).

Essay: Write a summary and analysis of your findings. This essay should be for a general audience. Introduce the topic and explain your research process (do not copy and paste the topic description above). Explain your criteria and why you chose them. How many schools meet all of your criteria? How many meet at least two criteria? Did any schools surprise you (i.e. a good fit that you didn't consider when applying to colleges)? How well does WCU fit your criteria? What were other factors that influenced your actual college choice?

Files: Submit your essay in .docx or .pdf format. Submit your table or spreadsheet and set diagram along with your essay (these may be included in the essay or separate files). Separate spreadsheet files should be in .xlsx format.