

## MAT 154 Project -- Home Budgets & Career

You have just graduated and are searching for a new job. As part of your new professional life you will need to find a job and develop a home budget for yourself so that you can live within the salary you'll be earning. Sometimes the same degree program can result in different professional outcomes, so you will want to plan your budget based on your individual career choices.

Instructions for creating your Budget:

1. You will first need to select a career or occupational goal. Visit the website <http://www.careeronestop.org/toolkit/wages/find-salary.aspx> and search for your occupation and the select the state you expect to be living in. This is not a permanent selection; it's just for this exercise.
2. Open up a new Excel file. In cell A1 type a label for Yearly Salary, and in cell B1, type the median income for your occupation obtained from the website.
3. In cell A2 type a label for Monthly Salary. Use Excel to calculate your monthly salary in cell B2.
4. Depending on your salary range and various deductions, a percentage of your income will be deducted for taxes. Let us assume for now that approximately  $\frac{1}{4}$  of your salary will be deducted for such taxes of all types.
5. In cell A3 type a label for Take-Home Pay. Use Excel to calculate in cell B3 how much you will have in your paycheck each month. (You can do this in two steps: Calculate the deductions and then subtract from Monthly Gross Pay; or in one step: If you pay  $\frac{1}{4}$  in taxes, then you keep  $\frac{3}{4}$  in take-home pay; use this to calculate the value directly.)
6. According to the website <http://visualeconomics.creditloan.com/how-the-average-us-consumer-spends-their-paycheck/>, the typical American spends their paycheck in the following proportions shown in the table below. Complete the table. Find the percentage, fraction, decimal and scientific notation form of each category. (You should complete this portion of the project by-hand.)

### Typical Distribution of Paycheck

Category	Percentage	Fraction	Decimal	Scientific Notation	Your Percentage of Paycheck
Housing	34.1%				
Food			0.124		
Insurance/Pension	10.8%				
Healthcare			0.057		
Transportation				$1.76 \times 10^{-1}$	
Entertainment	5.4%				
Cash Contributions	3.7%				
Reading		$\frac{1}{500}$			
Education				$1.9 \times 10^{-2}$	
Apparel/Services	3.8%				
Personal Care		$\frac{3}{250}$			
Tobacco	0.7%				
Alcoholic Beverages			0.009		
Miscellaneous		$\frac{2}{125}$			
Total	100%	1	1	1	100%

7. Copy this table (you need only the first, second and final columns) into Excel below the salary figures. You may adjust the percentages you intend to spend in each category in the final column. For instance, if you hope to get out of school without education debt, and you don't intend to continue attending school, you may reallocate education expenses to another category. Similarly, if you don't drink or smoke. However, if you are uncertain about how much housing or other large expenses will run, do not adjust these downward. Only make changes where you have a fair degree of confidence. Use a SUM formula to ensure that your new percentages add up to 100%.
8. Using the percentages for your budget you came up with, calculate the amount of your take-home pay will go to each expense using multiplication and the fixed cell reference for B3. Use a SUM formula to ensure that the total spent adds up to your take-home pay.
9. Do you think the values budgeted for each expense is reasonable? What kind of adjustments might you need to make either in your lifestyle or in your spending habits to make the budget work?
10. Create a pie chart of your monthly budget.
11. Using the figures that you found, answer the following questions:
  - a. What percentage of your **gross** pay is spent on Transportation?
  - b. What percentage of your **gross** pay is spent on Housing and Insurance?
  - c. Do you spend more on taxes and other deductions than you do on Housing? Why or why not?
  - d. Order the categories by what you spent the most money on to what you spent the least amount of money on. Use Excel to create a Pareto/bar graph of the categories in that order.
12. Open a new Word file and insert your budget graph. Write a paragraph about your career choice. And what you learned from creating the budget.
13. Save your Excel file as **budget.xlsx**.
14. Save your Word file as **career\_budget.docx**.