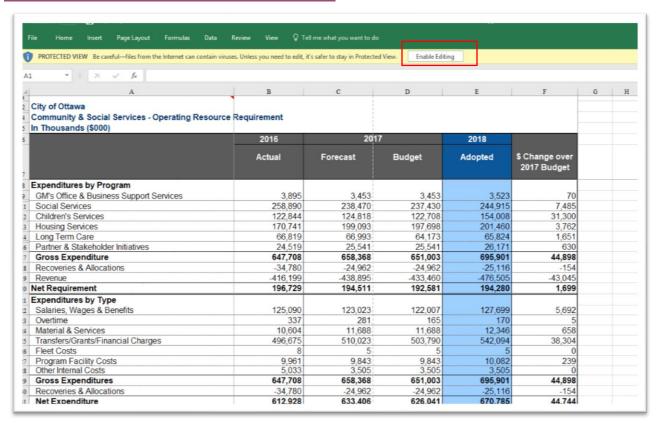
Ottawa budget tutorial

- 1. Log on to the Ottawa budget website.
- 2.To understand the budget process, click the "Learn Moore" link under "Understanding your City budget.
- 3. Click the "Learn Moore" link under "Budget 2018".
- 4. Read the content. Once you reach the bottom of the page, stop at the section "Budget 2018 Alternative Accessible Format".
- 5. There are two key factors to consider before deciding which set of budget numbers you want to use for your assignment: the figures are in the thousands, which means adding three zeros; and each table ONLY contains aggregate or summary figures for each program. So, for instance, the first link "2018 Operating Budget Summaries" contains aggregate figures for corporate expenses such as salaries. However, there's no breakdown of salaries by employees. So, once you've identified an area of interest,

be sure to ask for a detailed breakdown, a point that will be repeated at the end of this tutorial.

6. Let's work with "Community and Social Services Operating Budget Summary".



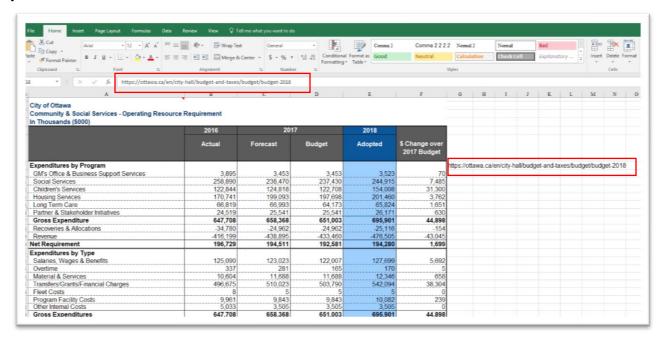
- 7. Click the "Enable Editing" tab in the "PROTECTED VIEW" BAND ABOVE THE TABE.
- 8. Select and copy (using the shortcuts on your keyboard), click the "+" sign to the right of the worksheet (Operating Resource Requirement) at the bottom of the table, and paste the new

table.

| A | В | С | D | E | F |
|---|-----------------|----------|----------|----------|---------------|
| City of Ottawa | | | | | |
| Community & Social Services - Operating Resou | rce Requirement | | | | |
| In Thousands (\$000) | | | | | |
| | 2016 | 2017 | | 2018 | |
| | Actual | Forecast | Budget | Adopted | \$ Change ove |
| | Actual | Forecast | Duuget | Adopted | 2017 Budget |
| | | | | | 2017 Budget |
| Expenditures by Program | | | | | |
| GM's Office & Business Support Services | 3,895 | 3,453 | 3,453 | 3,523 | 7 |
| Social Services | 258,890 | 238,470 | 237,430 | 244,915 | 7,48 |
| Children's Services | 122,844 | 124,818 | 122,708 | 154,008 | 31,30 |
| Housing Services | 170,741 | 199,093 | 197,698 | 201,460 | 3,76 |
| Long Term Care | 66,819 | 66,993 | 64,173 | 65,824 | 1,65 |
| Partner & Stakeholder Initiatives | 24,519 | 25,541 | 25,541 | 26,171 | 63 |
| Gross Expenditure | 647,708 | 658,368 | 651,003 | 695,901 | 44,89 |
| Recoveries & Allocations | -34,780 | -24,962 | -24,962 | -25,116 | -15 |
| Revenue | -416,199 | -438,895 | -433,460 | -476,505 | -43,04 |
| Net Requirement | 196,729 | 194,511 | 192,581 | 194,280 | 1,69 |
| Expenditures by Type | | | | | |
| Salaries, Wages & Benefits | 125,090 | 123,023 | 122,007 | 127,699 | 5,69 |
| Overtime | 337 | 281 | 165 | 170 | |
| Material & Services | 10,604 | 11,688 | 11,688 | 12,346 | 65 |
| Transfers/Grants/Financial Charges | 496,675 | 510,023 | 503,790 | 542,094 | 38,30 |
| Fleet Costs | 8 | 5 | 5 | 5 | |
| Program Facility Costs | 9,961 | 9,843 | 9,843 | 10,082 | 23 |
| Other Internal Costs | 5,033 | 3,505 | 3,505 | 3,505 | |
| Gross Expenditures | 647,708 | 658,368 | 651,003 | 695,901 | 44,89 |
| Recoveries & Allocations | -34,780 | -24,962 | -24,962 | -25,116 | |
| Net Expenditure | 612,928 | 633,406 | 626,041 | 670,785 | 44,74 |
| Revenues By Type | | | | | |
| Federal | -27.582 | -28.023 | -28.023 | -26.723 | 1.30 |
| Provincial | -363.081 | -386.022 | -380.872 | -424.047 | -43.17 |

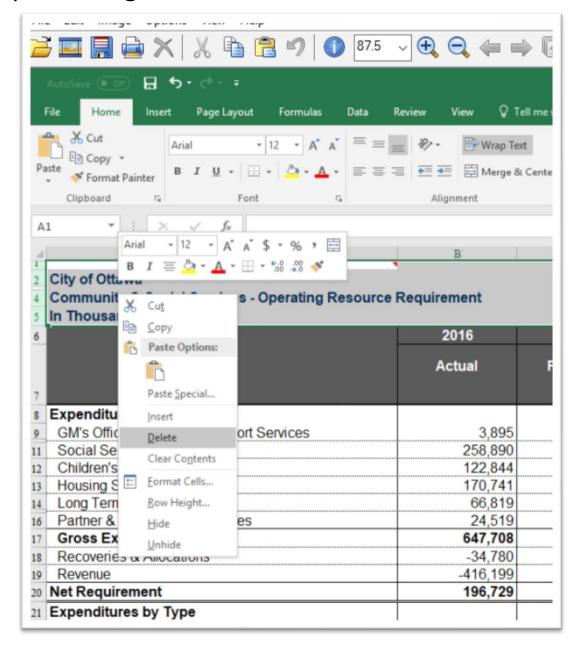
9. Return to the City of Ottawa website that contains the budget tables, copy the URL and

past it into cell G9.



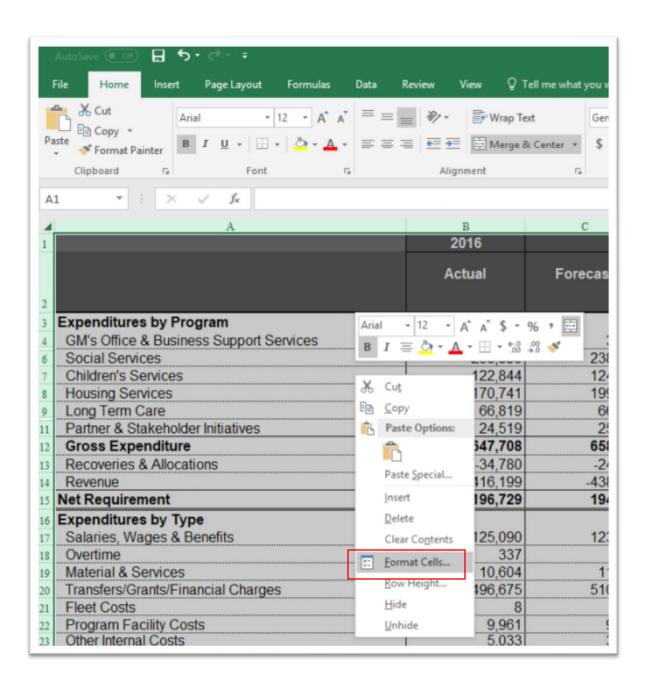
- 10. Clicking on the cell reference with the URL also allows you to see it in Excel's formula bar, also highlighted in the illustration above.
- 11. Before we perform math on the numbers, a little clean-up is in order.
- 12. Highlight the first four rows, and then delete them, using the delete function from your menu, and not your keyboard (doing the latter will ONLU delete the content, while still

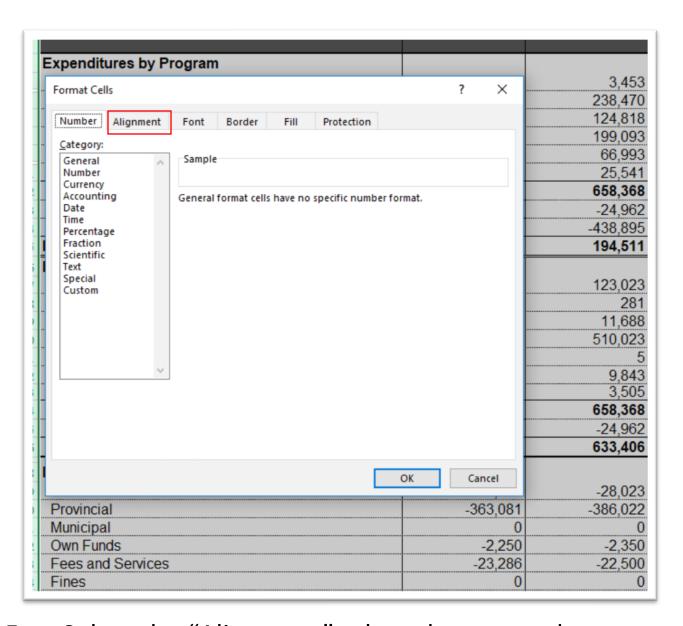
preserving the blank rows.



13. Now, we must get rid of the formatting, which merges cells, wraps the text within cells and use colour, making sorting, filtering and performing calculations too difficult.

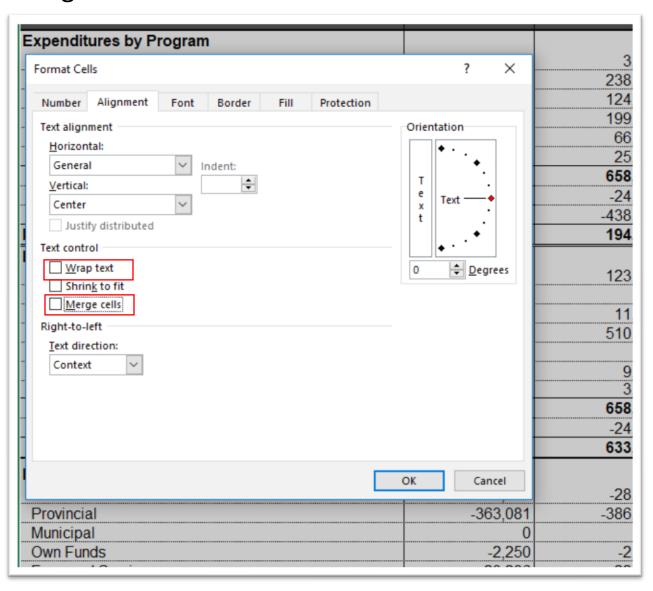
14. Select the entire table, and get the formatting option, either by right-clicking using your mouse to obtain the short-cut menu, or from the similar option from the menu above.



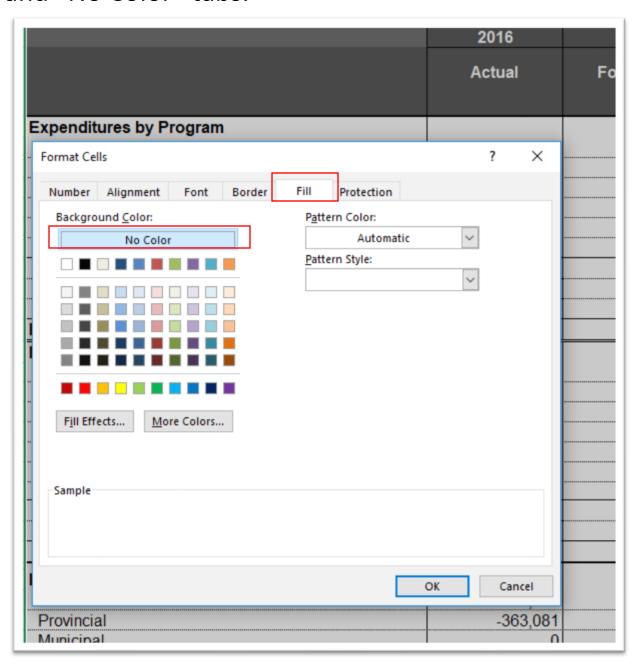


15. Select the "Alignment" tab at the top, and under "Text control" de-select "Wrap text" and

"Merge cells".



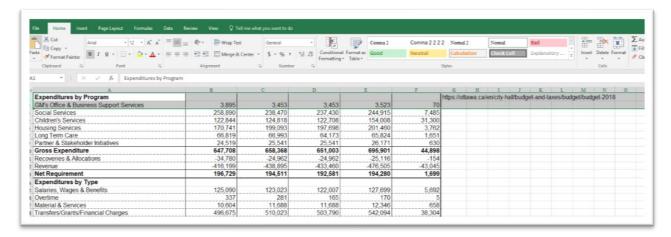
16. To get rid of the colours, select the "Fill" and "No Color" tabs.



17. Select OK to return to the table.

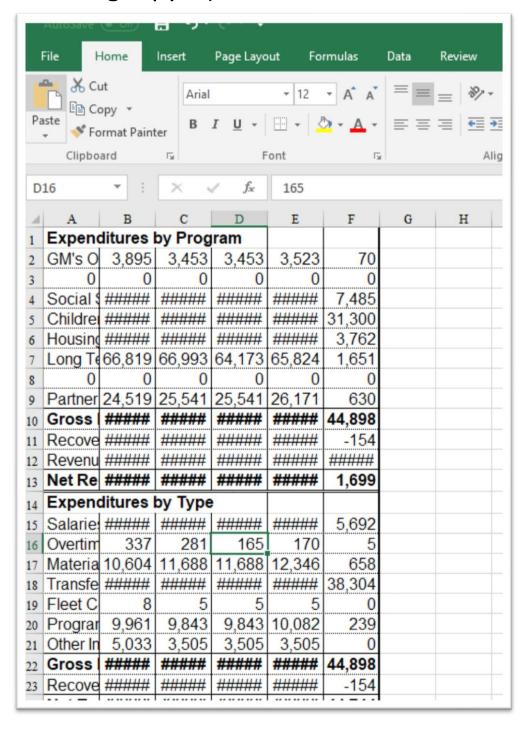
| | | | - | | | |
|---|----------|----------|----------|----------|---------|--|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Expenditures by Program | | | | | | https://ottawa.ca/en/city-hall/budget-and-taxes/budget/budget-2018 |
| GM's Office & Business Support Services | 3.895 | 3,453 | 3,453 | 3.523 | 70 | |
| Social Services | 258,890 | 238,470 | 237,430 | 244,915 | 7,485 | |
| Children's Services | 122.844 | 124,818 | 122,708 | 154,008 | 31,300 | |
| Housing Services | 170,741 | 199,093 | 197,698 | 201,460 | 3,762 | |
| Long Term Care | 66,819 | 66,993 | 64,173 | 65,824 | 1,651 | |
| Partner & Stakeholder Initiatives | 24,519 | 25,541 | 25,541 | 26,171 | 630 | |
| Gross Expenditure | 647,708 | 658,368 | 651,003 | 695,901 | 44,898 | |
| Recoveries & Allocations | -34,780 | -24,962 | -24,962 | -25,116 | -154 | |
| Revenue | -416,199 | -438,895 | -433,460 | -476,505 | -43,045 | |
| Net Requirement | 196,729 | 194,511 | 192,581 | 194,280 | 1,699 | |
| Expenditures by Type | | | | | | |
| Salaries, Wages & Benefits | 125,090 | 123,023 | 122,007 | 127,699 | 5,692 | |
| Overtime | 337 | 281 | 165 | 170 | 5 | |
| Material & Services | 10,604 | 11,688 | 11,688 | 12,346 | 658 | |
| Transfers/Grants/Financial Charges | 496,675 | 510,023 | 503,790 | 542,094 | 38,304 | |
| Fleet Costs | 8 | 5 | 5 | 5 | 0 | |
| Program Facility Costs | 9,961 | 9,843 | 9,843 | 10,082 | 239 | |

18. Not bad. But there's still more clean-up to do. Delete the first two rows.



19. Using the shortcut keys on your keyboard, highlight and copy this table – excluding the URL address in G1 – and paste it into a new worksheet, which we'll call "WorkingCopy2". To do so, double-click on the worksheet tab, and type. (We can call the previous worksheet,

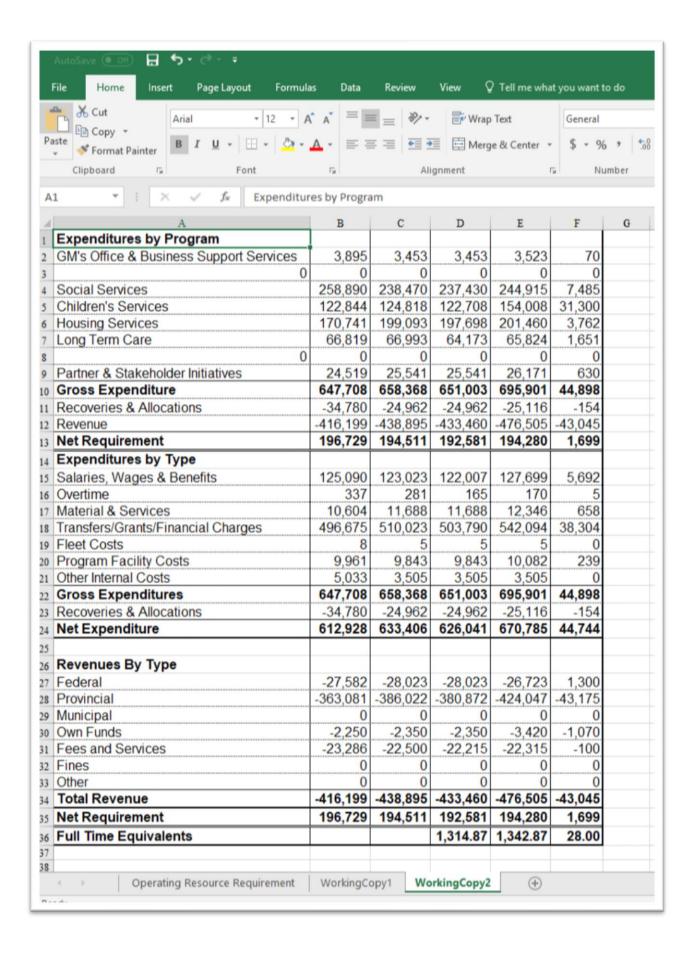
"WorkingCopy1")



- 20. The hashtag marks are Excel's way of telling you that there is insufficient space for the numbers.
- 21. To readjust the column width, place your cursor on the vertical line separating the two

columns or manually increase the width by dragging the mouse and

letting go at the desired spot.

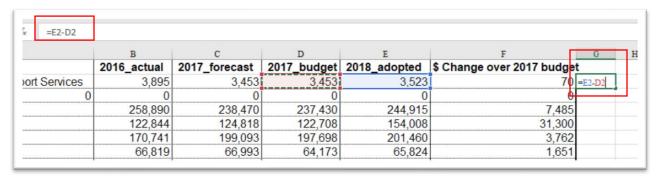


- Now, it's time to spend a bit of time 22. understanding the numbers. Each section of the table is separated by subheadings: "Expenditures by Program"; "Expenditures by Type"; "Gross Expenditure"; "Expenditures by Type" and "Revenues By Type": At the end of each section is a total figure: "Gross Expenditure"; "Net Requirement"; "Gross Expenditures"; "Net Expenditure" and "Total Revenue". Revenues, or money that the city generates, are negative numbers because they are subtracted from the expenditures, which produces a "Net", or the amount of money that came out of the city's coffers. Think of it as the cost of tuition, minus a grant you've received. The cost of the tuition to your pocket book is the tuition amount minus the grant.
- 23. Using the first worksheet as a reference, let's give columns B to F the titles you see

below.

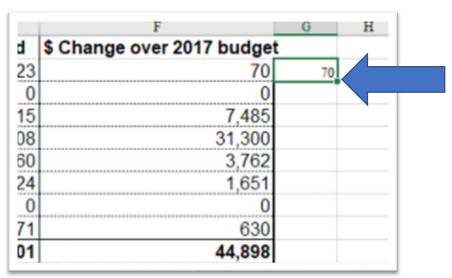
| Office & Business Support Services al Services Iren's Services ing Services Term Care 0 ner & Stakeholder Initiatives is Expenditure overies & Allocations | 3,895 0 258,890 122,844 170,741 66,819 0 24,519 647,708 | 3,453 0 238,470 124,818 199,093 66,993 0 25,541 | 3,453 0 237,430 122,708 197,698 64,173 0 25,541 | 3,523 0 244,915 154,008 201,460 65,824 0 | \$ Change over 2017 budget 70 0 7,485 31,300 3,762 1,651 0 |
|--|--|---|--|---|--|
| al Services Iren's Services ing Services Term Care 0 Iner & Stakeholder Initiatives Is Expenditure Inveries & Allocations | 258,890 122,844 170,741 66,819 0 24,519 647,708 | 124,818 199,093 66,993 0 25,541 | 0 237,430 122,708 197,698 64,173 | 154,008 201,460 65,824 0 | 31,300 3,762 1,651 0 |
| ren's Services ing Services Term Care 0 er & Stakeholder Initiatives is Expenditure everies & Allocations | 122,844 170,741 66,819 0 24,519 647,708 | 124,818 199,093 66,993 0 25,541 | 122,708 197,698 64,173 0 | 154,008 201,460 65,824 0 | 31,300 3,762 1,651 0 |
| ing Services Term Care 0 ner & Stakeholder Initiatives se Expenditure overies & Allocations | 170,741 66,819 0 24,519 647,708 | 199,093 66,993 0 25,541 | 197,698 64,173 0 | 201,460 65,824 0 | 3,762 1,651 0 |
| Term Care 0 ner & Stakeholder Initiatives s Expenditure overies & Allocations | 66,819 0 24,519 647,708 | 66,993 0 25,541 | 64,173 0 | 65,824 0 | 1,651 0 |
| oner & Stakeholder Initiatives SE Expenditure Inveries & Allocations | 24,519 647,708 | 0 25,541 | 0 | 0 | 0 |
| ner & Stakeholder Initiatives se Expenditure everies & Allocations | 24,519 647,708 | | | 26 171 | 0 |
| s Expenditure overies & Allocations | 647,708 | | 25,541 | 26 171 | 000 |
| veries & Allocations | - | | | 20,171 | 630 |
| | | 658,368 | 651,003 | 695,901 | 44,898 |
| | -34,780 | -24,962 | -24,962 | -25,116 | -154 |
| nue | -416,199 | -438,895 | -433,460 | -476,505 | -43,045 |
| Requirement | 196,729 | 194,511 | 192,581 | 194,280 | 1,699 |
| enditures by Type | | | | | |
| ries. Wages & Benefits | 125.090 | 123.023 | 122.007 | 127,699 | 5.692 |
| time | 337 | 281 | 165 | 170 | 5 |
| rial & Services | 10,604 | 11,688 | 11,688 | 12,346 | 658 |
| sfers/Grants/Financial Charges | 496,675 | 510,023 | 503,790 | 542,094 | 38,304 |
| Costs | 8 | 5 | 5 | 5 | 0 |
| ram Facility Costs | 9,961 | 9,843 | 9,843 | 10,082 | 239 |
| r Internal Costs | 5,033 | 3,505 | 3,505 | 3,505 | 0 |
| s Expenditures | 647,708 | 658,368 | 651,003 | 695,901 | 44,898 |
| veries & Allocations | -34,780 | -24,962 | -24,962 | -25,116 | -154 |
| Expenditure | 612,928 | 633,406 | 626,041 | 670,785 | 44,744 |
| | ries, Wages & Benefits time rial & Services sfers/Grants/Financial Charges Costs ram Facility Costs r Internal Costs s Expenditures veries & Allocations | ries, Wages & Benefits 125,090 time 337 rial & Services 10,604 sfers/Grants/Financial Charges 496,675 Costs 8 ram Facility Costs 9,961 r Internal Costs 5,033 s Expenditures 647,708 veries & Allocations -34,780 | ries, Wages & Benefits 125,090 123,023 rime 337 281 rial & Services 10,604 11,688 sfers/Grants/Financial Charges 496,675 510,023 Costs 8 5 ram Facility Costs 9,961 9,843 r Internal Costs 5,033 3,505 s Expenditures 647,708 658,368 veries & Allocations -34,780 -24,962 | ries, Wages & Benefits 125,090 123,023 122,007 rime 337 281 165 rial & Services 10,604 11,688 11,688 sfers/Grants/Financial Charges 496,675 510,023 503,790 Costs 8 5 5 ram Facility Costs 9,961 9,843 9,843 r Internal Costs 5,033 3,505 3,505 s Expenditures 647,708 658,368 651,003 veries & Allocations -34,780 -24,962 -24,962 | ries, Wages & Benefits 125,090 123,023 122,007 127,699 time 337 281 165 170 rial & Services 10,604 11,688 11,688 12,346 fers/Grants/Financial Charges 496,675 510,023 503,790 542,094 Costs 8 5 5 5 5 ram Facility Costs 9,961 9,843 9,843 10,082 r Internal Costs 5,033 3,505 3,505 3,505 s Expenditures 647,708 658,368 651,003 695,901 veries & Allocations -34,780 -24,962 -24,962 -25,116 |

- 24. To ensure the math in column F is correct, let's do a quick check in column where we will substract the values in column E from the numbers in column D.
- 25. Begin your calculations in G1.



26. Hit the "enter" key and return the cursor to cell G2. The value should already be formatted

as a number. If not, then use the steps described earlier in this tutorial to format the value as a "number". If it's properly formatted, copy the formula to the bottom of the table, by highlighting G2.



27. Place your cursor over the thick, box to the right and below the "zero" in "70" until your cursor turns into a black cross. Once it does, double-click to repeat the formula for the remaining cells in the column. If that doesn't work, then press your index finger on the

mouse and drag it to the bottom of the table.

| | В | С | D | E | F | G |
|---|---------------------|---------------------|---------------------|---------------------|----------------------------|---------|
| | | 2017_forecast | | | \$ Change over 2017 budget | |
| Services | 3.895 | 3,453 | 3,453 | 3.523 | 70 | 70 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 258,890 | 238,470 | 237,430 | 244,915 | 7,485 | 7,485 |
| | 122,844 | 124,818 | 122,708 | 154,008 | 31,300 | 31,300 |
| | 170,741 | 199,093 | 197,698 | 201,460 | 3,762 | 3,762 |
| | 66,819 | 66,993 | 64,173 | 65,824 | 1,651 | 1,651 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *************************************** | 24,519 | 25,541 | 25,541 | 26,171 | 630 | 630 |
| | 647,708 | 658,368 | 651,003 | 695,901 | 44,898 | 44,898 |
| | -34,780 | -24,962 | -24,962 | -25,116 | -154 | -154 |
| *************************************** | -416,199 | -438,895 | -433,460 | -476,505 | -43,045 | -43,045 |
| | 196,729 | 194,511 | 192,581 | 194,280 | 1,699 | 1,699 |
| | | | | | | 0 |
| | 125,090 | 123,023 | 122,007 | 127,699 | 5.692 | 5,692 |
| | 337 | 281 | 165 | 170 | 5 | 5 |
| | 10,604 | 11,688 | 11,688 | 12,346 | 658 | 658 |
| es | 496,675 | 510,023 | 503,790 | 542,094 | 38,304 | 38,304 |
| f | 8 | 5 | 5 | 5 | 0 | 0 |
| | 9,961 | 9,843 | 9,843 | 10,082 | 239 | 239 |
| | 5,033 | 3,505 | 3,505 | 3,505 | 0 | 0 |
| | 647,708 | 658,368 | 651,003 | 695,901 | 44,898 | 44,898 |
| | -34,780 | -24,962 | -24,962 | -25,116 | -154 | -154 |
| | 612,928 | 633,406 | 626,041 | 670,785 | 44,744 | 44,744 |
| | 27.502 | 20,022 | 20.022 | 20.722 | 4 200 | |
| | -27,582 -363,081 | -28,023 -386,022 | -28,023 -380,872 | -26,723 -424,047 | 1,300 -43,175 | |
| | -363,081 | -386,022 | -380,872 | -424,047 0 | -43,175 0 | |
| | -2,250 | -2,350 | -2,350 | -3,420 | | |
| | -2,250 | -2,350 | -2,350 | -3,420 | -1,070 -100 | |
| | -23,260 | -22,500 | -22,213 | -22,313 | -100 | |
| | 0 | 0 | 0 | 0 | 0 | |
| | -416,199 | -438,895 | -433,460 | -476,505 | -43,045 | |
| | 196,729 | 194,511 | 192,581 | 194,280 | 1,699 | |
| | 190,129 | 194,511 | 1,314.87 | 1,342.87 | 28.00 | |

28. You'll notice that everything stopped at black row. Blanks in spreadsheets are like firewalls. They stop repetition dead. To continue copying, select cell G25, but instead of double-clicking, we will drag the cursor to the

bottom of the table at row 36.

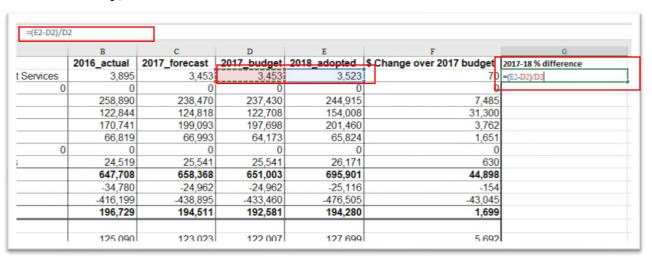
| 44,744 | 44,744 |
|---------|---------|
| | 0 |
| | 0 |
| 1,300 | 1,300 |
| -43,175 | -43,175 |
| 0 | 0 |
| -1,070 | -1,070 |
| -100 | -100 |
| 0 | 0 |
| 0 | 0 |
| -43,045 | -43,045 |
| 1,699 | 1,699 |
| 28.00 | 28 |

- 29. Compare the numbers in columns F and G.
- 30. They check out, so you can delete column G, which we will use for another calculation, the percent difference between the 2017 budget in column D and the adopted budget in column E. In other words, we want to calculate the rate at which the budget either increased or decreased, which is a more meaningful number than the simple difference because it allows for more meaningful comparisons.

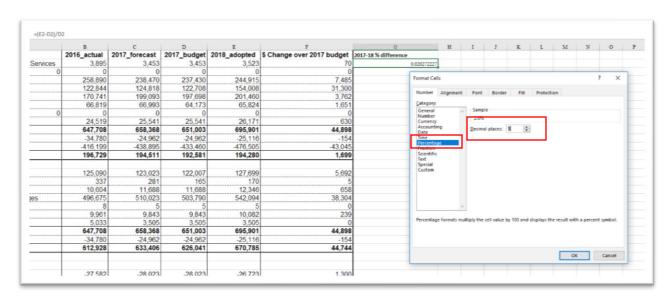
31. Let's call column G "2017-18 % difference".

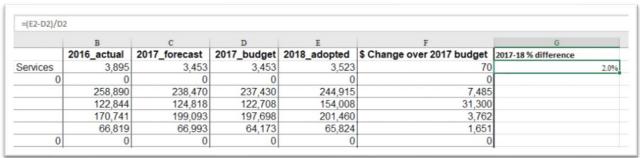
| D | E | F | G | |
|-------------|--------------|----------------------------|----------------------|--|
| 2017_budget | 2018_adopted | \$ Change over 2017 budget | 2017-18 & difference | |
| 3,453 | 3,523 | 70 | | |
| 0 | 0 | 0 | | |
| 237,430 | 244,915 | 7,485 | | |
| 122,708 | 154,008 | 31,300 | | |
| 197,698 | 201,460 | 3,762 | | |
| 64,173 | 65,824 | 1,651 | | |
| 0 | 0 | 0 | | |
| 25,541 | 26,171 | 630 | | |

32. Using the formula for calculating percent differences <<=(NEW NUMBER – OLD NUMBER>> let's do the math.



Format the number as a percent with one decimal place.





34. Copy the formula to the bottom of the table, using the same techniques we employed in the first set of calculations.

| H | G | F | E | D |
|----------|----------------|----------------------------------|--------------|-------------|
| | 8 % difference | \$ Change over 2017 budget 201 | 2018_adopted | 2017_budget |
| | 2.0% | 70 | 3,523 | 3,453 |
| | #DIV/0! | 0 | 0 | 0 |
| | 3.2% | 7,485 | 244,915 | 237,430 |
| | 25.5% | 31,300 | 154,008 | 122,708 |
| | 1.9% | 3,762 | 201,460 | 197,698 |
| | 2.6% | 1,651 | 65,824 | 64,173 |
| | #DIV/0! | 0 | 0 | 0 |
| | 2.5% | 630 | 26,171 | 25,541 |
| | 6.9% | 44,898 | 695,901 | 651,003 |
| | 0.6% | -154 | -25,116 | -24,962 |
| | 9.9% | -43,045 | -476,505 | -433,460 |
| | 0.9% | 1,699 | 194,280 | 192,581 |
| | #DIV/0! | | | |
| | 4.7% | 5,692 | 127,699 | 122,007 |
| | 3.0% | 5 | 170 | 165 |
| | 5.6% | 658 | 12,346 | 11,688 |
| | 7.6% | 38,304 | 542,094 | 503,790 |
| | 0.0% | 0 | 5 | 5 |
| | 2.4% | 239 | 10,082 | 9,843 |
| | 0.0% | 0 | 3,505 | 3,505 |
| | 6.9% | 44,898 | 695,901 | 651,003 |
| | 0.6% | -154 | -25,116 | -24,962 |
| | 7.1% | 44,744 | 670,785 | 626,041 |
| = | | | | |
| | | 1,300 | -26,723 | -28,023 |
| | | -43,175 | -424,047 | -380,872 |

| 7.1 | 44,744 | 670,785 | 626,041 | 633,406 |
|---------|---------|----------|----------|----------|
| #DIV/0! | | | | |
| #DIV/0! | | | | |
| -4.6 | 1,300 | -26,723 | -28,023 | -28,023 |
| 11.39 | -43,175 | -424,047 | -380,872 | -386,022 |
| #DIV/0! | 0 | 0 | 0 | 0 |
| 45.59 | -1,070 | -3,420 | -2,350 | -2,350 |
| 0.59 | -100 | -22,315 | -22,215 | -22,500 |
| #DIV/0! | 0 | 0 | 0 | 0 |
| #DIV/0! | 0 | 0 | 0 | 0 |
| 9.9 | -43,045 | -476,505 | -433,460 | -438,895 |
| 0.9 | 1,699 | 194,280 | 192,581 | 194,511 |
| 2.1 | 28.00 | 1,342.87 | 1,314.87 | |
| 2.19 | 28.00 | 1,342.87 | ,314.87 | 1 |

- 35. Now we can see the rate at which programs increased or decreased, allowing for more meaningful comparisons.
- 36. We'll learn how to more about sorting and filtering within this table, but for now you should have enough information to choose which program(s) requires more details that could lead to stories. For instance, "Children's Services" experienced the fastest growth at 25.5% compared to the previous year. However, there are many programs that comprise children's services, and it could be that within those programs there are winners and losers worth writing about. This means asking the city for a more detailed breakdown.