The Function of a Budget

Personal budgets are used to keep the checkbook balanced or to plan for unforeseen circumstances such as job loss. They can also be used to plan for a significant future event such as a wedding, vacation, or home purchase. This class involves using Excel skills (inserting text, basic functions, AutoSum, AutoFill, and more) to create a basic budget spreadsheet.

Getting Started

To create a budget spreadsheet, first enter the basic content into your Excel document.

1. Open Excel from the Start menu
2. An Excel start screen opens; click on blank workbook
3. In cell A1, type Personal Budget and press enter three times
4. Type the following content into the designated cell addresses
   - A4: Income
   - A5: Wages
   - A6: Misc
   - A7: Income Total
   ***SKIP A ROW***
   - A9: Expenses
   - A10: Essential Expenses
   - A11: Mortgage/Rent
   - A12: Groceries
   - A13: Utilities
   - A14: Phone
   - A15: Transportation Costs
   - A16: Clothing
   - A17: Essential Expenses Total
   ***SKIP A ROW***
   - A19: Non-Essential Expenses
   - A20: Entertainment
   - A21: Eating Out
   - A22: Non-Essential Expenses Total
   ***SKIP A ROW***
   - A24: Charity and Savings
   - A25: Savings
   - A26: Debt
   - A27: Charity
   - A28: Charity and Savings Total
   ***SKIP A ROW***
   - A30: Expenses Total
   - A31: Over/Short
Changing Column Width

The text in several cells is wider than the column width. If text is added to the next column, the text in the previous column will not be fully visible.

For example:

1. Click in cell B15 and type 200
2. Press Enter

The content in the A15 cell is no longer fully visible.

To correct this problem the A column width must be adjusted.

1. Place the cursor over the column line in the column header so the white cross becomes a double arrow
2. Double-click the mouse; the column widens to fit the longest information in the column

Using Auto Fill

One of Excel’s nicest features is Auto Fill, which reduces the amount of typing needed when entering series into a spreadsheet. Excel has been programmed to understand cycles, like after January comes February or after 1 comes 2.

<table>
<thead>
<tr>
<th>Practice Exercise: Auto Fill - Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In cell B3, type Jan</td>
</tr>
<tr>
<td>2. Place the cursor in the bottom right corner of the cell until the cursor turns into a small dark plus sign</td>
</tr>
<tr>
<td>3. Click and drag the fill handle to the right until you see the prompt for December (cell M3). Excel automatically fills the cells</td>
</tr>
</tbody>
</table>
Creating a Budget

A 5-Step Approach to Creating a Personal Budget

This budget is for Person X, who has no one to support but himself and has credit card debt to pay off.

Step 1: Calculate Your Income

First, he calculates exactly how much money he earns on a yearly basis—about $24,000 (after taxes), from his day job. He also drives for Lyft and earns about $3,000 yearly from that side job. Dividing by 12, his monthly net salary is $2,250.

He decides to put aside money every month for all expenses, even if a payment isn’t due every month. He calculates the monthly expenses by taking each yearly expense and dividing by 12.

Input Budgeted Income

1. First we’ll fill in the Income section. In cell B5, type 2000 and press the Enter key on the keyboard

2. In cell B6, type 250 and press the Enter key on the keyboard

3. Select cells B5 and B6 (make sure to release the left mouse button once you select cells!)

4. Place the cursor in the bottom right corner of the B6 cell until the cursor turns into a small dark plus sign

5. Left click and drag the fill handle right to the M column
Use the AutoSum Function to Total Income

The AutoSum function provides a quick way to add columns or rows of numbers in a spreadsheet. We will use AutoSum to determine our total monthly income.

1. Click on the B7 cell to make it the active cell
2. Go to the Home tab → Editing group → AutoSum command
3. Excel places “marching ants” around the numbers it assumes should be included in the sum function. If it’s correct, press Enter on the keyboard and Excel automatically totals the selected numbers.

NOTE: Excel first looks above the selected cell for a group of numbers to add; if none are found, it looks to the left of the selected cell. If the marching ants are not around the correct cells, click and drag over the correct cells and hit Enter on the keyboard. To cancel the marching ants, hit the Esc key.

4. Click back in cell B7 and use autofill to copy the AutoSum function across to cell M7

Step 2: Determine which Expenses are Necessary

Person X decides to make a list of monthly expenses for things he absolutely needs to survive. In doing so, he comes up with the following categories:

1. Mortgage/rent
2. Groceries
3. Clothing
4. Utilities such as gas and electricity
5. Transportation costs (gas/fuel)
6. Phone

Step 3: Input Essential Expenses

Some expenses, like rent, are fixed and will be the same each month. Many expenses will fluctuate each month.

1. In the Essential Expenses section of Expenses, enter:
   - 850 in Mortgage/Rent - cell B11
   - 200 in Groceries - cell B12
   - 75 in Utilities - cell B13
   - 25 in Phone - cell B14
   - 50 in Clothing - cell B16
2. Click in cell B17 and use the AutoSum function to total essential expenses

3. Select the cell range B11-B17 and autofill across to column M

The total essential expenses for the month are $1400. Now Person X knows that he must set aside $1400 for basic expenses every month.

**Step 4: Determine and Calculate Non-Essential Expenses**

Person X lists the things on which he spends money that are not vital. Person X budgets these amounts:

1. In the Non-Essential Expenses section, enter:
   - 50 in Entertainment - cell B20
   - 100 in Eating Out - cell B21

2. Click in cell B22 and use the AutoSum function to total non-essential expenses

3. Select the cell range B20-B22 and autofill across to column M

The total non-essential expenses for the month are $150. Now Person X knows that he must set aside $150 for non-essential expenses every month.

**Formulas in non-contiguous cells**

So far we have only put together formulas in contiguous (connected) cells. Now we will learn how to create formulas using non-contiguous cells.

To create a formula to calculate total expenses:

1. Click in cell B30
2. Type in =
3. Click on cell B17
4. In cell B30, type +
5. Click on cell B22
6. In cell B30, type +
7. Click on cell B28
8. Press Enter
Now that we have calculated total expenses, we can create a formula to show if we are over or short for our monthly expenses.

1. Click on cell **B31**
2. Type in the subtraction formula **=B7-B30**
3. Press **Enter**
4. Select cells **B30-B31** and autofill the formulas across to **column M**

The spreadsheet shows a **$700 surplus** of cash for the month.

**NOTE:** A negative number in the over/short section indicates that you are over budget for the month.

**Step 5: Establish Categories for Debt Elimination, Charity, and Savings**

Since Person X has a surplus in his budget and is serious about giving to charity, eliminating his debt, and creating a savings cushion, he decides that these categories must be included as well. He chooses to budget the following amounts:

**Input Charity & Savings Expenses**

1. In the **Charity and Savings** section, enter:
   - 150 in **Savings** - cell **B25**
   - 400 in **Debt** - cell **B26**
   - 150 in **Charity** - cell **B27**

4. Click in cell **B28** and use the AutoSum function to total charity and savings expenses

5. Select cells **B25-B28** and use autofill to copy the numbers and formulas across to **column M**

The total charity and savings expenses for the month are **$700**. Person X can now see in the Over/Short section that he has budgeted all of his income for the month.

**Formatting**

Now that the spreadsheet has been created with values entered and formulas inserted, the final task is to format your spreadsheet

**Changing Number Format**

Right now, even though we are looking at a budget, it isn’t obvious that we are talking about money. Dollar signs and decimal points usually show us we are talking about money! To change the number format on the spreadsheet:

1. Select the cell range **B5-M31**
2. Go to the **Home** tab → **Number** group → **Number Format** drop down menu
3. Click on **Currency**
Changing Cell Appearance

Personal Budget Header:
1. Select the cell range A1-M1
2. Go to the Home tab → Font group
3. Change the font to Arial Black
4. Change the font size to 28
5. Change the cell color to dark green
6. Change the font color to white

Income Header:
1. Select the cell range A4-M4
2. Go to the Home tab → Font group
3. Change the font to Arial Black
4. Change the font size to 24
5. Change the cell color to a light shade of green
6. Change the font color to white

Essential Expenses Sub-Header:
1. Select the cell range A10-M10
2. Go to the Home tab → Font group
3. Change the font to Arial Black
4. Change the font size to 11
5. Change the cell color to a light shade of gray

Use the format painter to quick change other headers

Expenses Header:
1. Select the cell range A4-M4
2. Go to the Home tab → Clipboard group → Format Painter
3. Click on cell A9

Non-Essential Expenses Header:
Double click the format painter button to apply the same formatting to multiple places in a document
1. Select the cell range A10-M10
2. Go to the Home tab → Clipboard group → Double click Format Painter
3. Click on cell A19
4. Click on cell A24
5. Click on cell A30
6. Click on cell A31
7. Click once on Format Painter to turn it off
##### Error Message

The ###### error, sometimes referred to as “railroad tracks”, is an Excel error message caused by several conditions:

- A number in a cell is too wide for the cell to display it.
- The formula in a cell produces a result that is too wide for the cell.
- There is a negative number in the cell that has been formatted for dates or times. Dates and times in Excel must be positive values.

To fix the ###### error, place the cursor over the line between the two columns at the top of the worksheet. When the cursor changes to a two-headed arrow with a line in between, double-click the mouse.

For example, in this worksheet:

1. Place your cursor between the B and C columns at the top of the worksheet.
2. When the cursor changes to a two-headed arrow with a line between, double-click the mouse.

6. Repeat the steps above to widen the any other columns on the spreadsheet displaying the ######.

**NOTE:** Repeat these steps any time a cell fills with ######.

To adjust the width of all the columns at once:

1. To highlight the entire document (Ctrl+A) or Click the **Select All** button
2. Go to the **Home** tab → **Cells** group → **Format** command → **AutoFit Column Width**

**Some Things to Remember**

Revisit your budget each month to see if you’ve stayed on track or if you need to make further adjustments. If your financial picture changes significantly—for example, you get a pay raise or are laid off—update your budget to reflect your new circumstances.

Numbers are flexible. Experiment with finding cheaper options for things, even essentials.

- Don't spend money unless you actually have it in order to avoid paying interest
- Write down every expenditure
- Keep receipts of all purchases
- Estimate using averages
- Plan for emergencies
- Plan for extras