

# EXCEL

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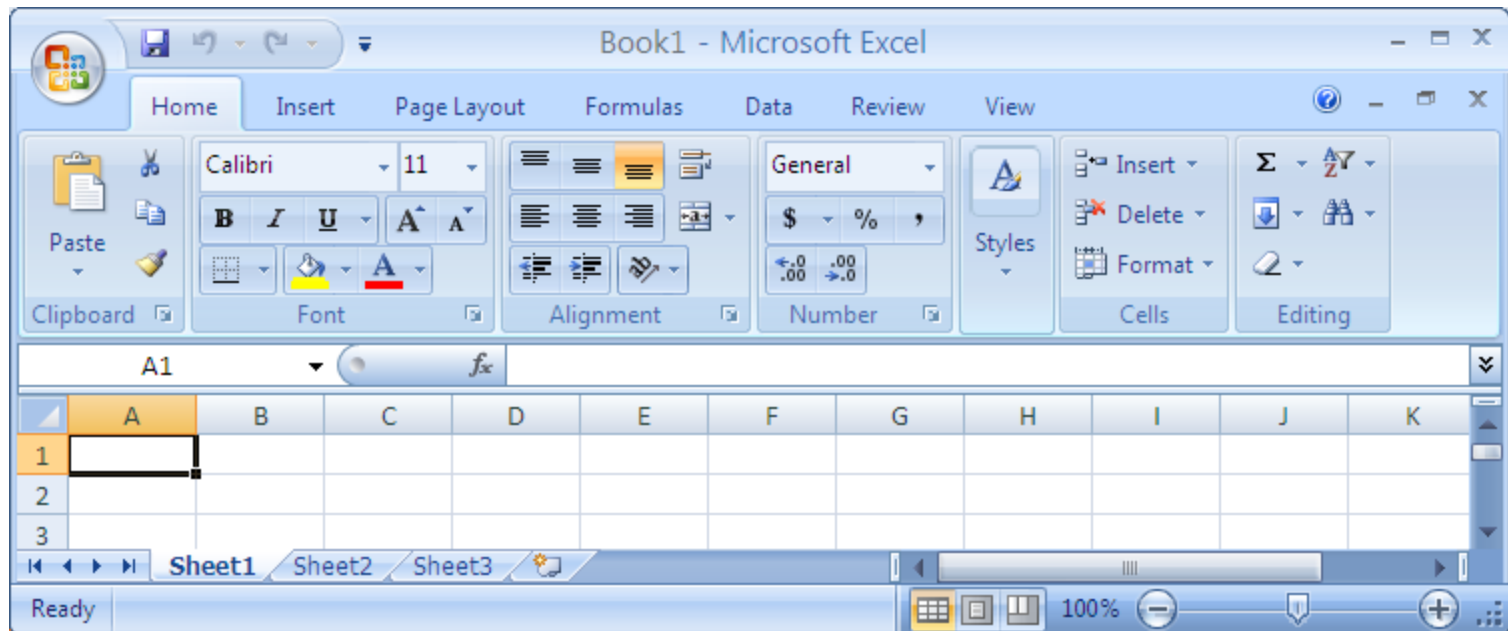
A Short Tutorial

# Spreadsheets

- Worksheets are 2-dimensional arrays of cells.
- Each cell is referred to by its cell reference.
- Cells can contain:
  - Constants
  - Formulas
  - Functions
- Worksheet contents are updated in real time.
- Current Example: Microsoft Excel

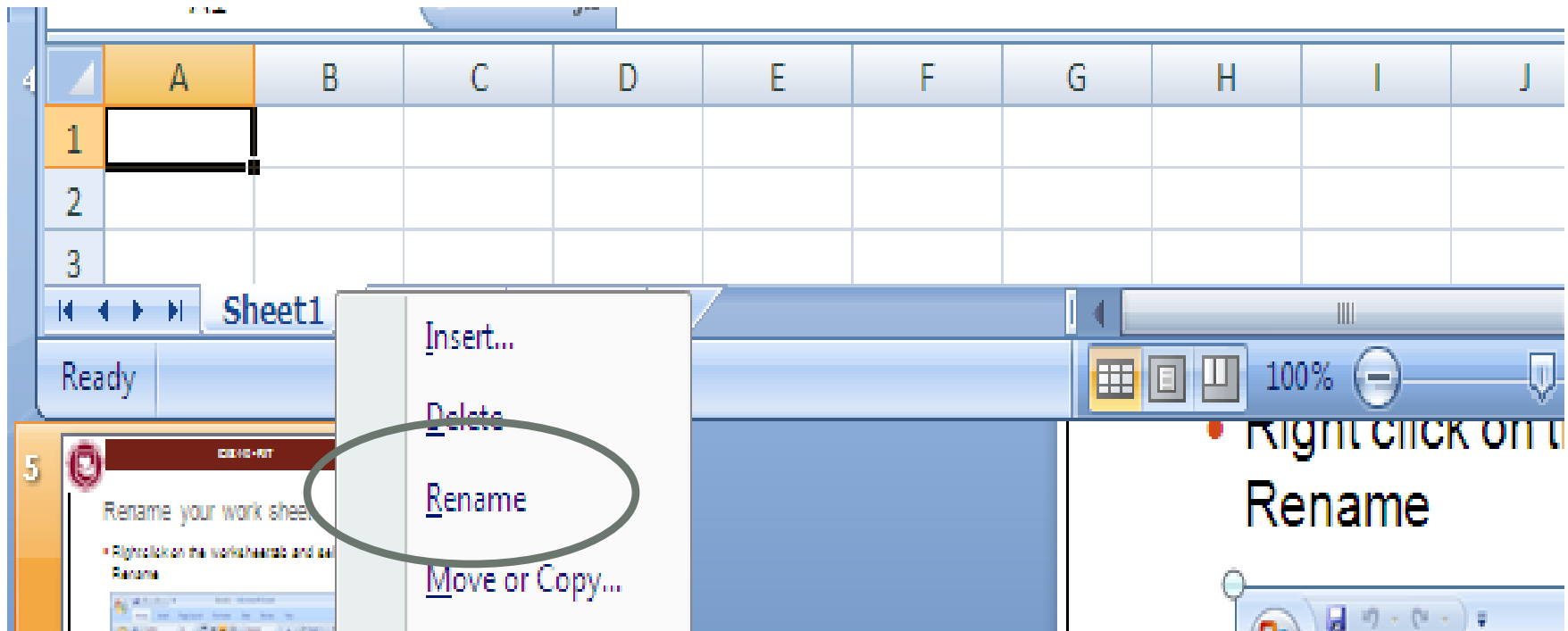
# Let's Make a Simple Budget

- Start Excel
- Notice, it immediately has documents available. These are called worksheets. They are saved together in a single file called a workbook.



# Rename your work sheet

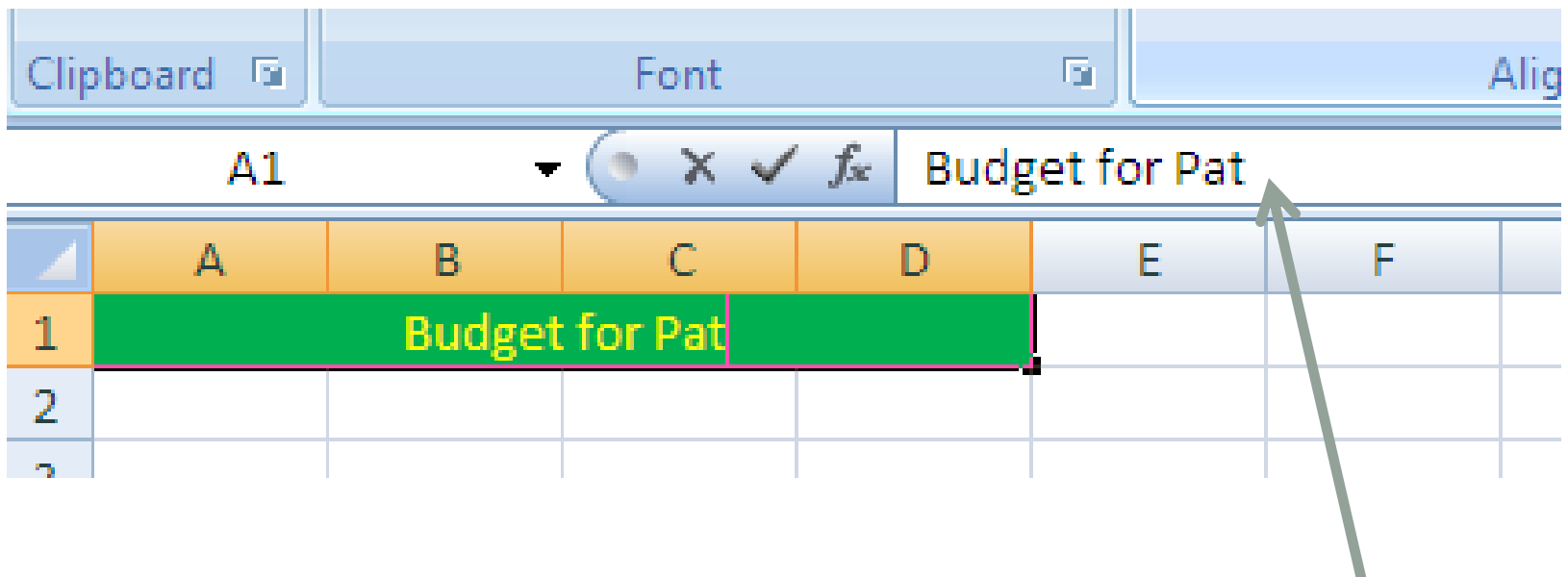
- Right click on the worksheet tab and select Rename. Then key in the new name “Budget”





## Some more formatting....

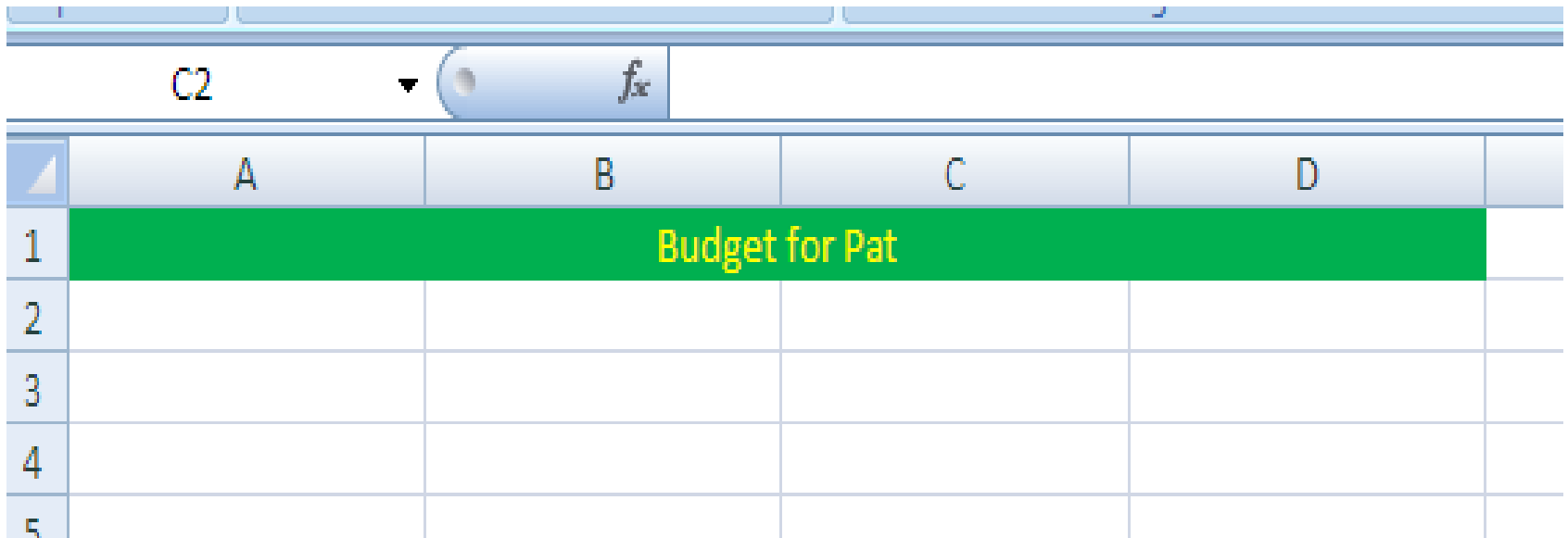
- With the new “single” cell, key in the header. Type in “Budget for Pat” (use your name instead of Pat) Use the standard MS Office tools for background colors.



\*Note: as you type, the “value” for the cell shows in the edit bar, too.

# Stretch out the width

- Move your mouse to the position between column A and B until it turns into a double arrow. Press your left mouse button and drag it to the right to widen column A. Do this for the remaining three columns



	A	B	C	D
1	Budget for Pat			
2				
3				
4				
5				

# More setup

You know enough to add more. Modify the spreadsheet to look similar to the following (don't forget to use the merge and center tool when needed)

	A	B	C	D	E
1	Budget for Pat				
2	Income		Expenses		
3	Paycheck	500	Rent	300	BONUS RATE
4	Magazine article	100	Food	150	0.05
5	Allowance	10	Movies	20	
6	Bonus				
7					
8					
9	Totals				
10					
11	Monthly Surplus				

# Formatting

- We want to make sure that the numbers look appropriate. We want dollar signs and percent signs. So, click on the top of column B.
- Once it is highlighted, click on the \$ symbol in the menu ribbon.

Cut  
Copy  
Format Painter  
Clipboard

Calibri 11 A A

**B** *I* U [Grid] [Color] [Text Color] [Align] [List] [Merge & Center]

Font

Currency \$ %

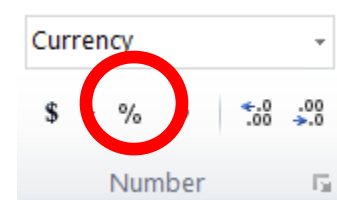
Formatting, gives you this result.

B3 fx 500

Budget For Pat				
	Income		Expenses	
check	\$500.00	Rent	\$	300.00
Magazine Article	\$100.00	Food	\$	150.00
Advance	\$10.00	Movies	\$	20.00

# More formatting

- Do the same thing for column D.
- Then, right click on cell with the Bonus rate (it has .05 in it), and select Percent sign in the menu ribbon.



	A	B	C	D	E
	Budget for Pat				
	Income		Expenses		
	Paycheck	\$500.00	Rent	\$300.00	<b>BONUS RATE</b>
	Magazine article	\$100.00	Food	\$150.00	5.00%
	Allowance	\$10.00	Movies	\$20.00	
	Bonus				
	Totals				
	Monthly Surplus				

# Create totals

- Click on the cell next to "Totals". In the upper far right hand corner, you will see a Sigma sign. Click on that, and you will see that cell filled in with a formula.

The screenshot shows the Microsoft Excel interface. The ribbon is visible at the top, with the 'Cells' group containing the 'AutoSum' button (Sigma sign) circled in green. A line points from the Sigma sign to the 'Totals' cell in the spreadsheet. The spreadsheet shows a budget for Pat with columns for Income and Expenses. The 'Totals' cell contains the formula =SUM(B3:B8). A tooltip for the SUM function is visible at the bottom.

Budget for Pat												
Income		Expenses										
check	\$500.00	Rent	\$300.00	BONUS RATE								
magazine article	\$100.00	Food	\$150.00	5.00%								
allowance	\$10.00	Movies	\$20.00									
Totals	=SUM(B3:B8)											

SUM(number1, [number2], ...)

# Try it yourself

- Hit the enter key. You should see a total appear.
- Now do the same thing for the Expenses column.

	A	B	C	D	E
1	Budget for Pat				
2	Income		Expenses		
3	Paycheck	\$500.00	Rent	\$300.00	<b>BONUS RATE</b>
4	Magazine article	\$100.00	Food	\$150.00	5.00%
5	Allowance	\$10.00	Movies	\$20.00	
6	Bonus				
7					
8					
9	Totals	\$610.00		=SUM(D3:D8)	
10					
11	Monthly Surplus				
12					

# Set the bonus

- Enter the following in the cell next to Bonus:  
`=B3 * $E$4`
- You will see this is the Paycheck times the percentage bonus.
- The dollar signs ensure that we always refer to just cell E4.
- See the next slide for the example.

A	B	C	D	E
Budget For Pat				
Income		Expenses		
Paycheck	\$500.00	Rent	\$ 300.00	Bonus Rate
Magazine Article	\$100.00	Food	\$ 150.00	5%
Allowance	\$10.00	Movies	\$ 20.00	
Bonus	=B3 * \$E\$4			

After hitting enter, you should see....  
and notice the Totals for Income!

	A	B	C	D	E
1	Budget for Pat				
2	Income		Expenses		
3	Paycheck	\$500.00	Rent	\$300.00	<b>BONUS RATE</b>
4	Magazine article	\$100.00	Food	\$150.00	5.00%
5	Allowance	\$10.00	Movies	\$20.00	
6	Bonus	\$25.00			
7					
8					
9	Totals	\$635.00		\$470.00	
10					

# Now set up the bottom line

- Click on the cell next to Monthly Surplus and enter the following:  
`=B9-D9` (or whatever is appropriate for the totals for income and expenses)

	A	B	C	D	E
1	Budget for Pat				
2	Income		Expenses		
3	Paycheck	\$500.00	Rent	\$300.00	BONUS RATE
4	Magazine article	\$100.00	Food	\$150.00	5.00%
5	Allowance	\$10.00	Movies	\$20.00	
6	Bonus	\$25.00			
7					
8					
9	Totals	\$635.00		\$470.00	
10					
11	Monthly Surplus	=B9-D9			
12					

# After you hit enter....

	A	B	C	D	E
1	Budget for Pat				
2	Income		Expenses		
3	Paycheck	\$500.00	Rent	\$300.00	<b>BONUS RATE</b>
4	Magazine article	\$100.00	Food	\$150.00	5.00%
5	Allowance	\$10.00	Movies	\$20.00	
6	Bonus	\$25.00			
7					
8					
9	Totals	\$635.00		\$470.00	
10					
11	Monthly Surplus	\$165.00			
12					
13					

# Relative/Absolute Addressing

- When cells are copied:
  - *relative addresses* are modified automatically
  - *absolute addresses* are not
- Syntax:
  - Relative address:           **A1**
  - Absolute address:           **\$A\$1**
- Range:
  - A contiguous set of cells   A1:D4