

# **BASIC EXCEL**

Marta Charron,  
PhD, CFD

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# EXCEL WELCOME PAGE



## Excel

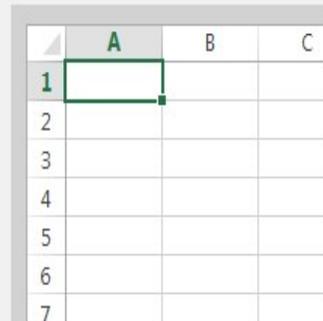
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	A	B	C
1			
2			
3			
4			
5			
6			
7			

Blank workbook



Welcome to Excel 



Cashflow analysis 

# Excel

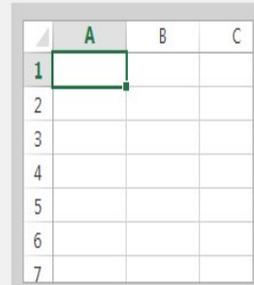
## Recent

You haven't opened any workbooks recently. To browse for a workbook, start by clicking on Open Other Workbooks.

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Blank workbook



Welcome to Excel



Cashflow analysis

Select Blank Workbook or a Template

The screenshot shows a grid of 12 template thumbnails. The 'Blank Workbook' thumbnail is highlighted with a red border and a red label below it. An orange arrow points from the 'Open Other Workbooks' button in the previous image to this grid. Another orange arrow points from the text 'Select Blank Workbook or a Template' to the 'Blank Workbook' thumbnail.

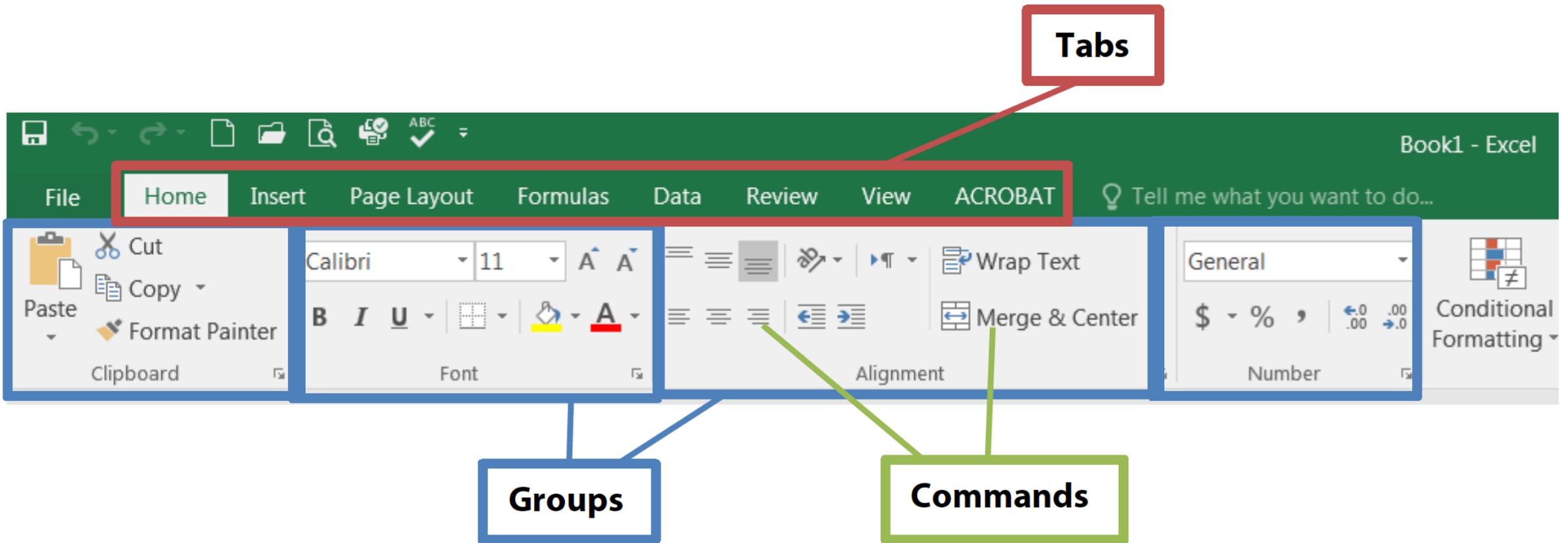
Item	Cost
Item	\$22.00
Item	\$102.00
Item	\$15.00

Category	Value
Total Monthly Income	\$3,750
Total Monthly Expenses	\$2,334
Total Monthly Savings	\$1,416
Cash Balance	\$1,142

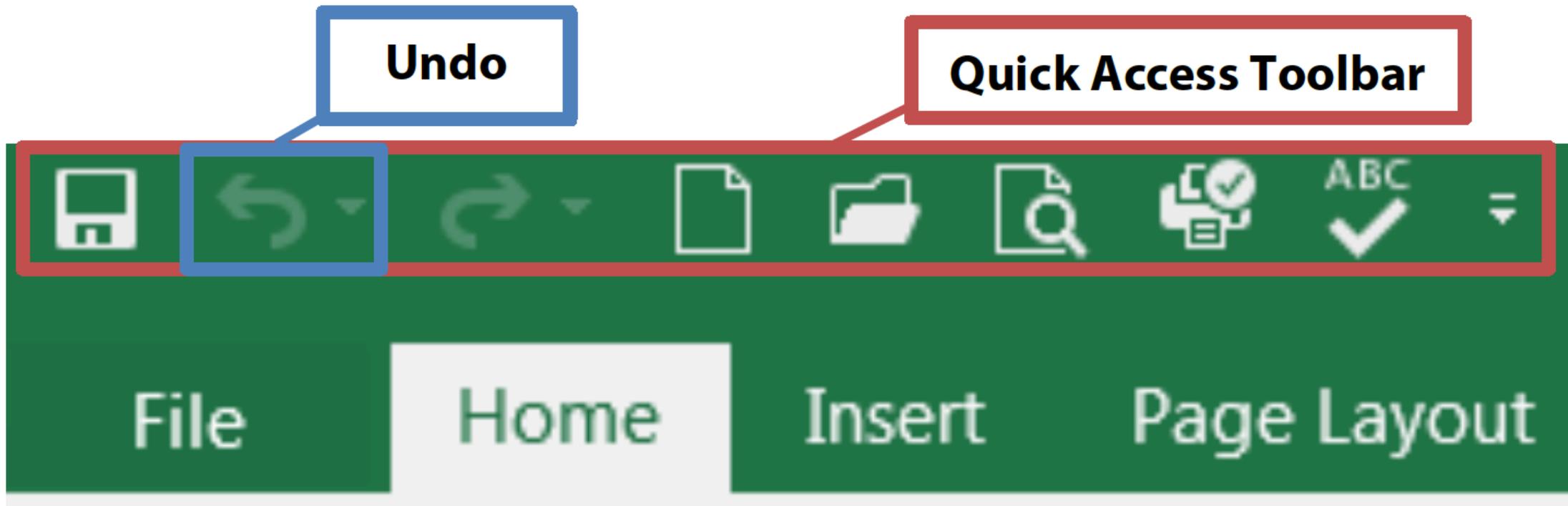
Category	Value
Total Monthly Income	\$3,750
Total Monthly Expenses	\$2,334
Total Monthly Savings	\$1,416
Cash Balance	\$1,142

# Blank Workbook

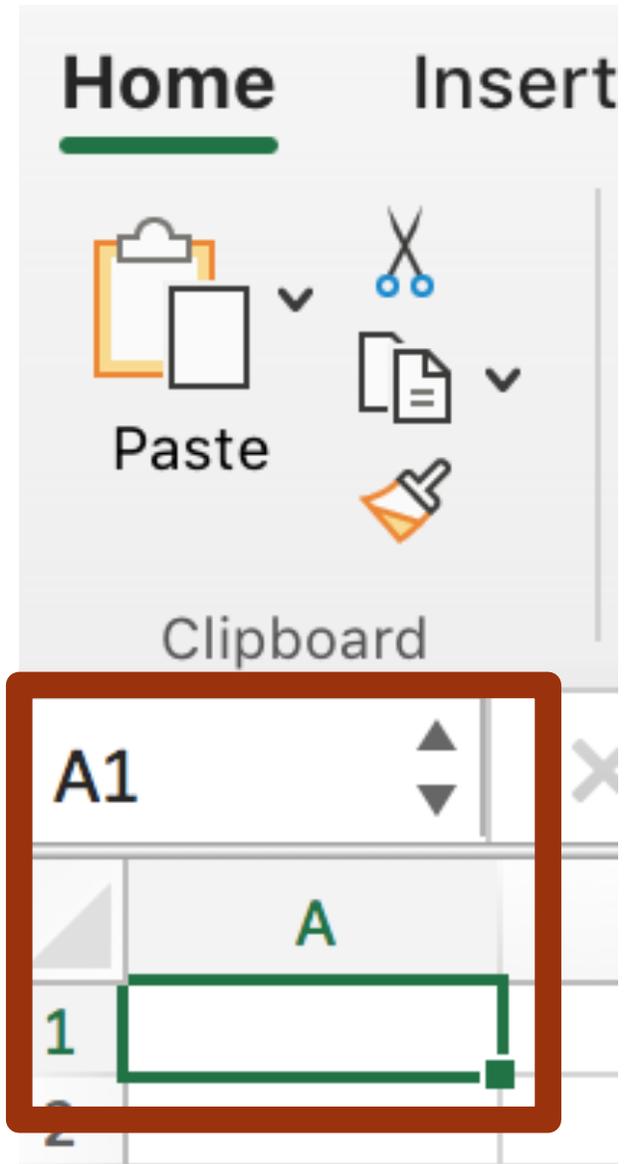
The image shows a screenshot of a blank Microsoft Excel workbook. The title bar at the top indicates the file name is "Book1". The ribbon is set to the "Home" tab, which is divided into several groups: Clipboard (with Paste and Undo icons), Font (showing Calibri (Body) font and size 12), Paragraph (with Bold, Italic, Underline, and text color options), Alignment (with text alignment and orientation options), and Number (with currency, percentage, and decimal options). The worksheet grid is visible below the ribbon, with columns labeled A through J and rows labeled 1 through 28. Cell A1 is currently selected, indicated by a green border and the "A1" label in the top-left corner of the grid.



# RIBBON



# TOOL BARS



# CELL BASICS

- Cells have references based on their location:
  - Letter for columns
  - Numbers for rows
  - Example **A1** --> Column A row 1
- Cell references can be:
  - Relative - cell references **move** when you copy them.
  - Absolute - cell references **do not move** when you copy them. They are noted by dollar sign \$ in front of cell reference. Example: **\$A\$1**

# CELLS & THEIR FORMATS

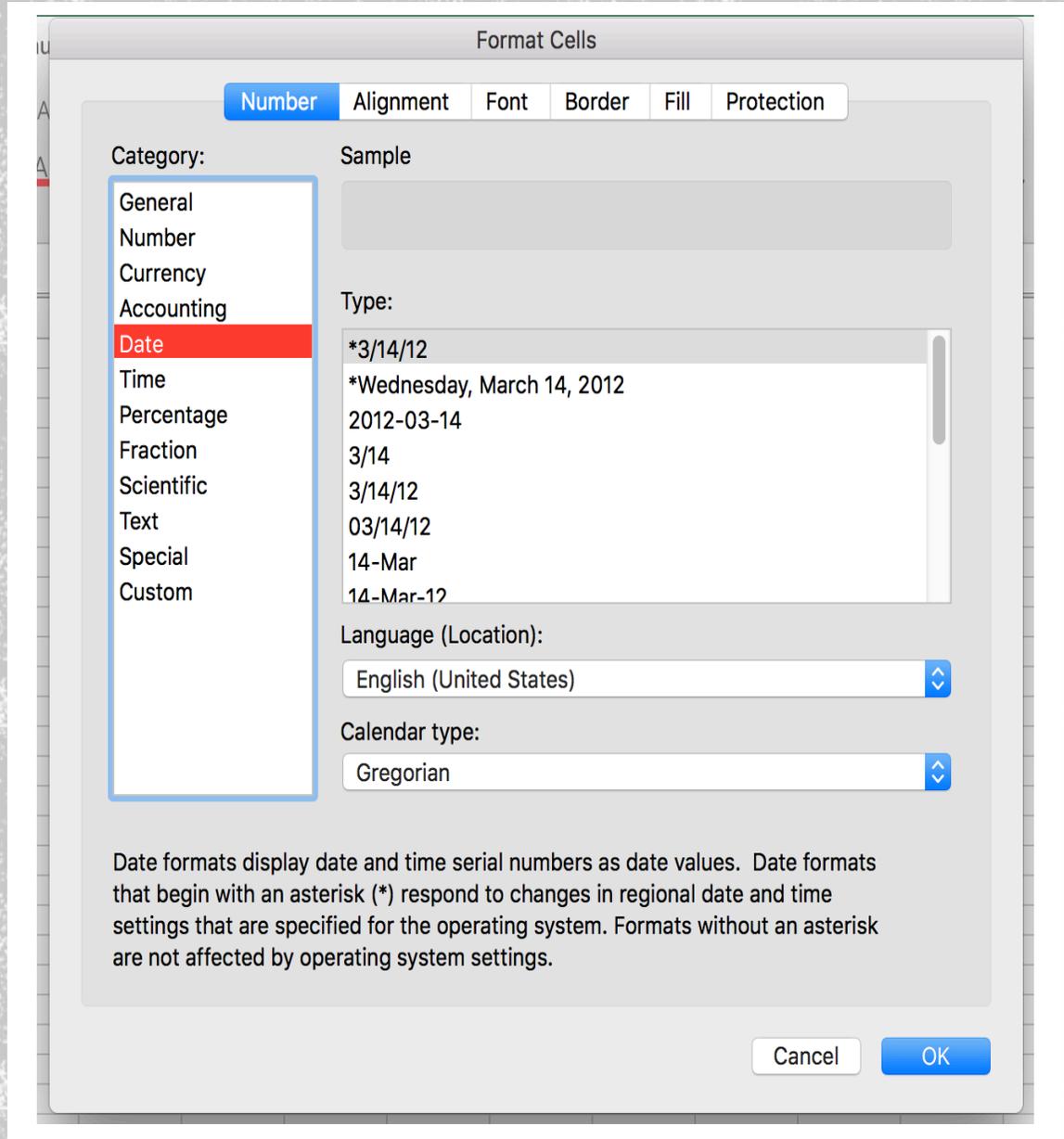
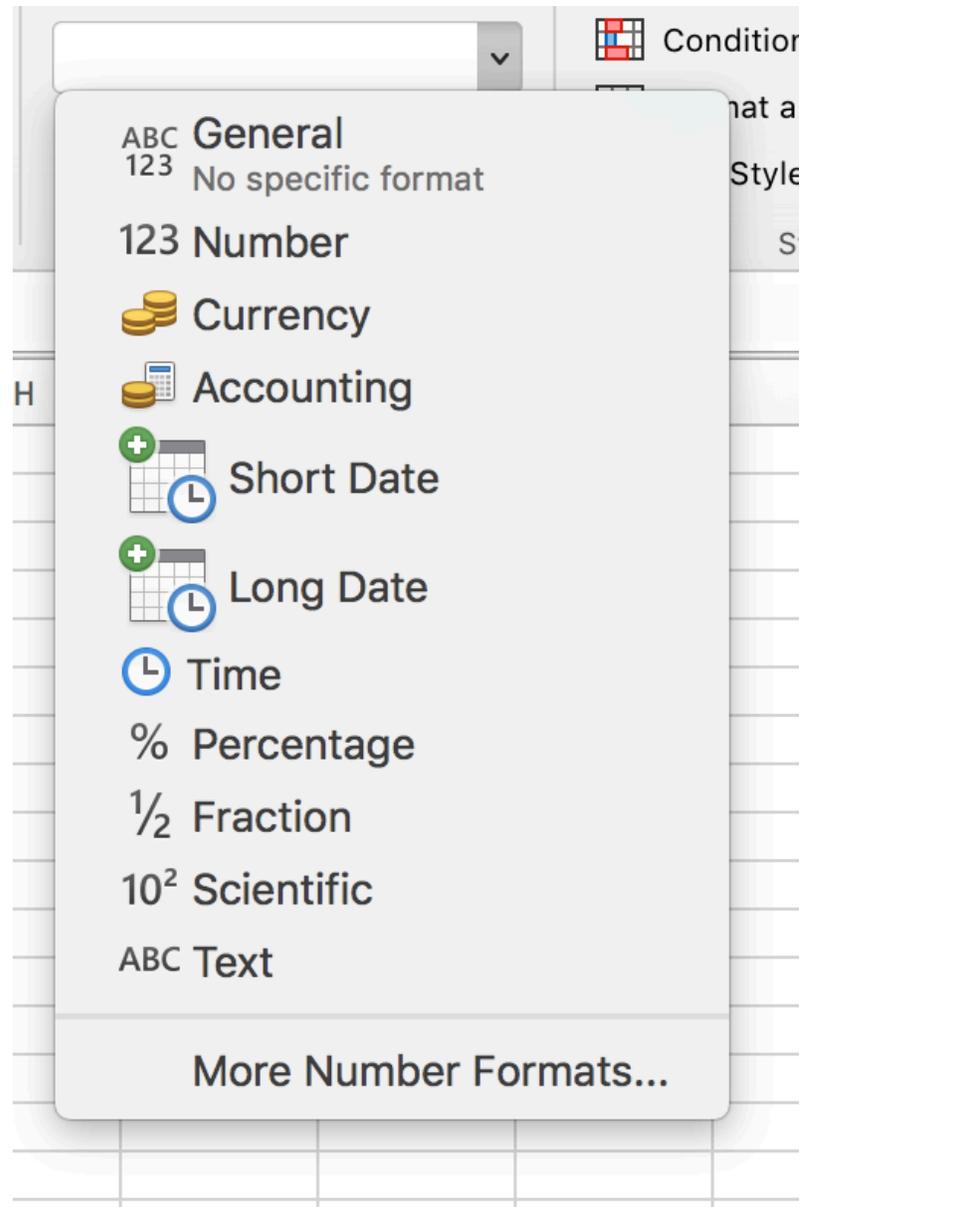
The image shows the Microsoft Excel ribbon with the 'Home' tab selected. The 'Number' group is circled in red, and the 'General' format is selected. The ribbon includes the following groups:

- Clipboard: Paste, Cut, Copy, Paste as Pictures
- Font: Font face (Calibri (Body)), Size (12), Bold (B), Italic (I), Underline (U), Paragraph (¶), Text color (A), Background color (A)
- Alignment: Left, Center, Right, Justify, Indent, Decrease Indent, Increase Indent, Wrap Text, Merge & Center
- Number: General (circled), Currency (\$), Percentage (%), Thousands Separator (,), Decimal Places (0.00), Increase Decimal, Decrease Decimal
- Styles: Conditional Formatting, Format as Table, Cell Styles
- Cells: Insert, Delete, Format
- Editing: AutoSum, Sort & Filter, Find & Select

The worksheet grid shows column A selected, and cell A1 is active.

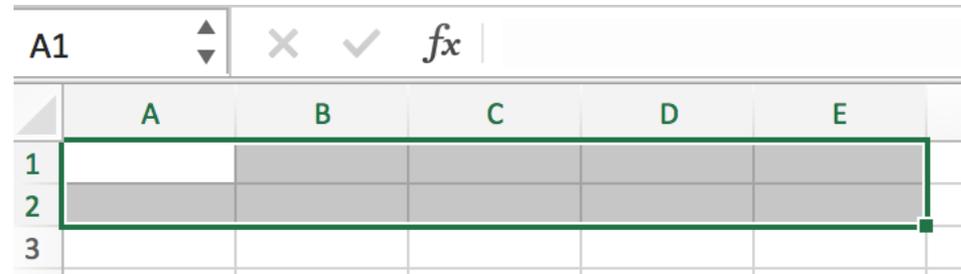
Cells accept text, numbers in different formats, dates, time etc.

By clicking in General you can see all the possible formats with examples.



# CELL FORMATTING

- Cell formatting can be done before or after data is entered.
- It can be applied to one specific cell or to a range of cells either in a row or column.



- Can be changed at any time.
- Text in a cell can also be formatted.
  - Font type, size, color, underline, strike out, super or subscript.

B16



*fx*

	A	B	C	D
1	Department Sections			
2	Couses Id	# of Section	# of Students	Prof Teaching
3	ADM	10	300	5
4	FINA	15	450	8
5	CONT	10	300	8
6	SICI	8	240	4
7	REHU	10	300	5
8				

Enter the data as shown above.

Home Insert Draw Page Layout Formulas Data Review View

Clipboard Font Alignment Number Styles Cells Editing Ideas Sensitivity

A1 Department Sections

Couses Id	# of Section	# of Student	Prof Teaching
ADM	10	300	5
FINA	15	450	8
CONT	10	300	8
SICI	8	240	4
REHU	10	300	5

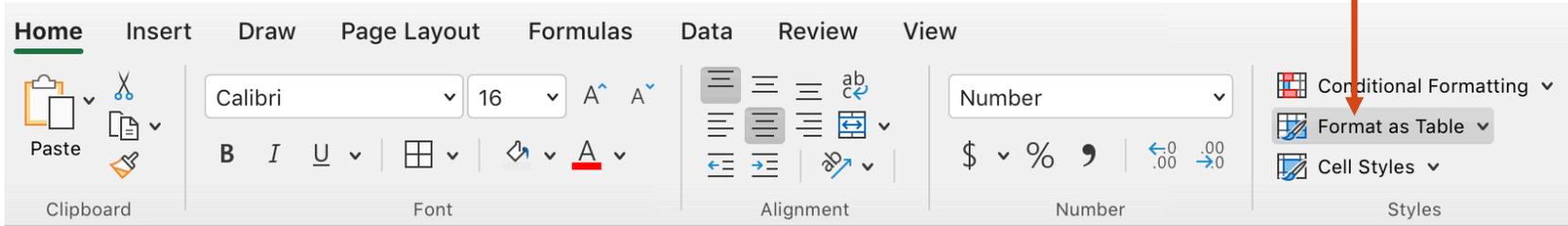
# Changing Cell Size & Formatting

Ready Sheet1 Sheet2 + 100%

To change the cell size:

1. Position the cursor between 2 cells and double click. or
2. Position the cursor between 2 cells and while holding the left mouse button drag the cell to the right.
3. Add dates, student number and other data and apply formats.

1. Select any cell within your table.
2. On the **Home** tab, click **Format as Table**.

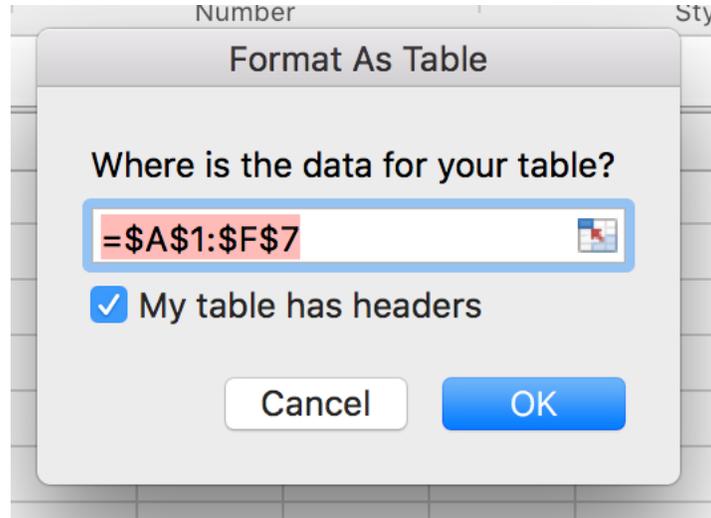


3. Select desired style.

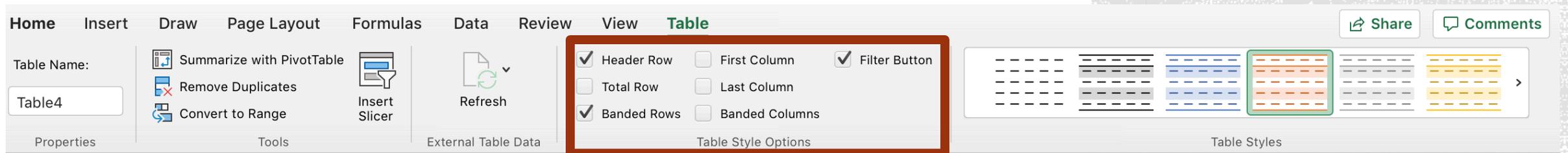


# ADDING STYLE TO A SHEET

4. Check range of table and click Ok.



5. Refine style if necessary.



# ADDING STYLE TO A SHEET

# ENTERING BASIC FORMULAS IN EXCEL

- All formulas must start with the equal sign =.
- Select the cell where you want to enter a formula.
- Write the = sign and enter formula.

	A	B	C
1	Department Sections		
2	Couses Id	# of Section	# of Students
3	ADM	10	300
4	FINA	15	450
5	CONT	10	300
6	SICI	8	240
7	REHU	10	300
8	Total	<b>=B3+B4+B5+B6+B7</b>	<b>=SUM(C3:C7)</b>

The image shows an Excel spreadsheet with a formula bar at the top displaying `=B3+B4+B5+B6+B7`. The spreadsheet has columns A, B, and C, and rows 1 through 8. Row 1 is the header for 'Department Sections'. Row 2 is the header for 'Couses Id' (sic), with sub-headers '# of Section' in column B and '# of Students' in column C. Rows 3-7 contain data for different departments: ADM (10 sections, 300 students), FINA (15 sections, 450 students), CONT (10 sections, 300 students), SICI (8 sections, 240 students), and REHU (10 sections, 300 students). Row 8 is the 'Total' row, where the formula `=B3+B4+B5+B6+B7` is entered in column B and `=SUM(C3:C7)` is entered in column C. Red circles with the numbers 1 and 2 are placed around the formula cells in row 8.

	A	B	C	D
1	Department Sections			
2	Couses Id	# of Section	# of Students	Prof Teaching
3	ADM	10	300	5
4	FINA	15	450	8
5	CONT	10	300	8
6	SICI	8	240	4
7	REHU	10	300	5
8	Total	53	1590	=
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				

fx | =

3

Formula Builder

**Most Recently Used**

- AVERAGE
- SUM
- IF
- HYPERLINK
- COUNT
- MAX
- SIN
- SUMIF
- PMT
- STDEV

All

- ABS

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**fx AVERAGE**

Returns the average (arithmetic mean) of its arguments, which can be numbers or names, arrays, or references that contain numbers.

**Syntax**

AVERAGE(number1,number2,...)

- **Number1:** number1,number2,... are 1 to 255

# USING EXCEL FUNCTIONS

1. Click the *fx* symbol. The equal sign = will appear.
2. Double click on the selected function from the Formula Builder menu or click on Insert Function.
3. Check if selected range is correct. If not it can be modified directly in the function.
4. Click the  or Enter.

AVERAGE					
✖ ✔ <i>fx</i>   =B3*\$E\$1					
	A	B	C	D	E
1	Department Sections				0.1
2	Couses Id	# of Section	# of Students	Prof Teaching	
3	ADM	10	300	10	=B3*\$E\$1
4	FINA	15	450	15	
5	CONT	10	300	8	
6	SICI	8	240	10	
7	REHU	10	300	10	
8	Total	53	1590	10.6	

# OTHER FORMULAS ABSOLUTE REFERENCE & COPY

1. Enter formula.
2. Position cursor in the formula bar left of E1.
3. Press F4 function key. The \$ signs will appear in formula.

+

E3    fx    =B3\*\$E\$1

	A	B	C	D	E
1	Department Sections				0.1
2	Couses Id	# of Section	# of Students	Prof Teaching	
3	ADM	10	300	10	=B3*\$E\$1
4	FINA	15	450	15	=B4*\$E\$1
5	CONT	10	300	8	=B5*\$E\$1
6	SICI	8	240	10	=B6*\$E\$1
7	REHU	10	300	10	=B7*\$E\$1
8	Total	=B3+B4+B5+B6+B7	=SUM(C3:C7)	=AVERAGE(D3:D7)	

# OTHER FORMULAS ABSOLUTE REFERENCE & COPY

1. To copy formula to all cells in the column position cursor in the bottom right corner of the cell with the formula until a + appears.
2. While holding the left mouse button, drag the + until the end of the data.

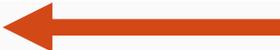
# Hierarchy of Operations

## OTHER FORMULAS

Type	Operator	Order Performed
<b>Arithmetic operations</b> are performed first, in order shown	( ) ^ * / % + -	1 <sup>st</sup> parentheses 2 <sup>nd</sup> exponentiation 3 <sup>rd</sup> : multiplication, division, modulus 4 <sup>th</sup> : addition, subtraction
<b>Relational operations</b> are performed second	= <> < <= > >=	All relational operators have equal precedence
<b>Logical operations</b> are performed last, in the order shown	NOT AND OR	1 <sup>st</sup> : NOT 2 <sup>nd</sup> : AND 3 <sup>rd</sup> : OR

SUM   *fx* | =F3-C3/C3  WRONG

	A	B	C	D	E	F	G
1	Department Sections				0.1		
2	Couses Id	# of Section	# of Students (Sem1)	Prof Teaching		# of Students (Sem2)	% of Change
3	ADM	10	300	10	=B3*\$E\$1	250	=F3-C3/C3
4	FINA	15	450	15	=B4*\$E\$1	400	
5	CONT	10	300	8	=B5*\$E\$1	285	
6	SICI	8	240	10	=B6*\$E\$1	220	
7	REHU	10	300	10	=B7*\$E\$1	275	
8	Total	=B3+B4+B5+B6+B7	=SUM(C3:C7)	=AVERAGE(D3:D7)	=SUM(E3:E7)		

G3   *fx* | =(F3-C3)/C3  RIGHT

	A	B	C	D	E	F	G
1	Department Sections				0.1		
2	Couses Id	# of Section	# of Students (Sem1)	Prof Teaching		# of Students (Sem2)	% of Change
3	ADM	10	300	10	=B3*\$E\$1	250	=(F3-C3)/C3
4	FINA	15	450	15	=B4*\$E\$1	400	
5	CONT	10	300	8	=B5*\$E\$1	285	
6	SICI	8	240	10	=B6*\$E\$1	220	
7	REHU	10	300	10	=B7*\$E\$1	275	
8	Total	=B3+B4+B5+B6+B7	=SUM(C3:C7)	=AVERAGE(D3:D7)	=SUM(E3:E7)		

A1 fx Department Sections

	B	C	D	E	F	G
1	Name Box Department Sections			0.1		
2	Courses Id	# of Section	# of Students (Sem1)	Prof Teaching	# of Students (Sem2)	% of Change
3	ADM	10	300	10	=B3*\$E\$1	250 =(F3-C3)/C3
4	FINA	15	450	15	=B4*\$E\$1	400 =(F4-C4)/C4
5	CONT	10	300	8	=B5*\$E\$1	285 =(F5-C5)/C5
6	SICI	8	240	10	=B6*\$E\$1	220 =(F6-C6)/C6
7	REHU	10	300	10	=B7*\$E\$1	275 =(F7-C7)/C7
8	Total	=B3+B4+B5+B6+B7	=SUM(C3:C7)	=AVERAGE(D3:D7)	=SUM(E3:E7)	

# OTHER FORMULAS

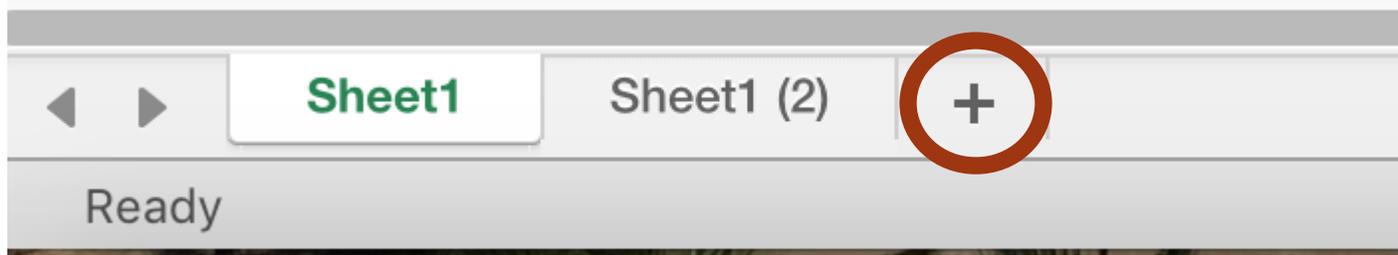
G
% of Change
-0.166666667
-0.111111111
-0.05
-0.083333333
-0.083333333

Alignment: Left, Center, Right, Justify, Merge, Wrap, Indent, Decrease Indent, Increase Indent, Rotate, Rotate Down, Rotate Up.

Number: General, Currency (\$), Percentage (%), Comma, Thousand Separator, Decrease Decimal, Increase Decimal.

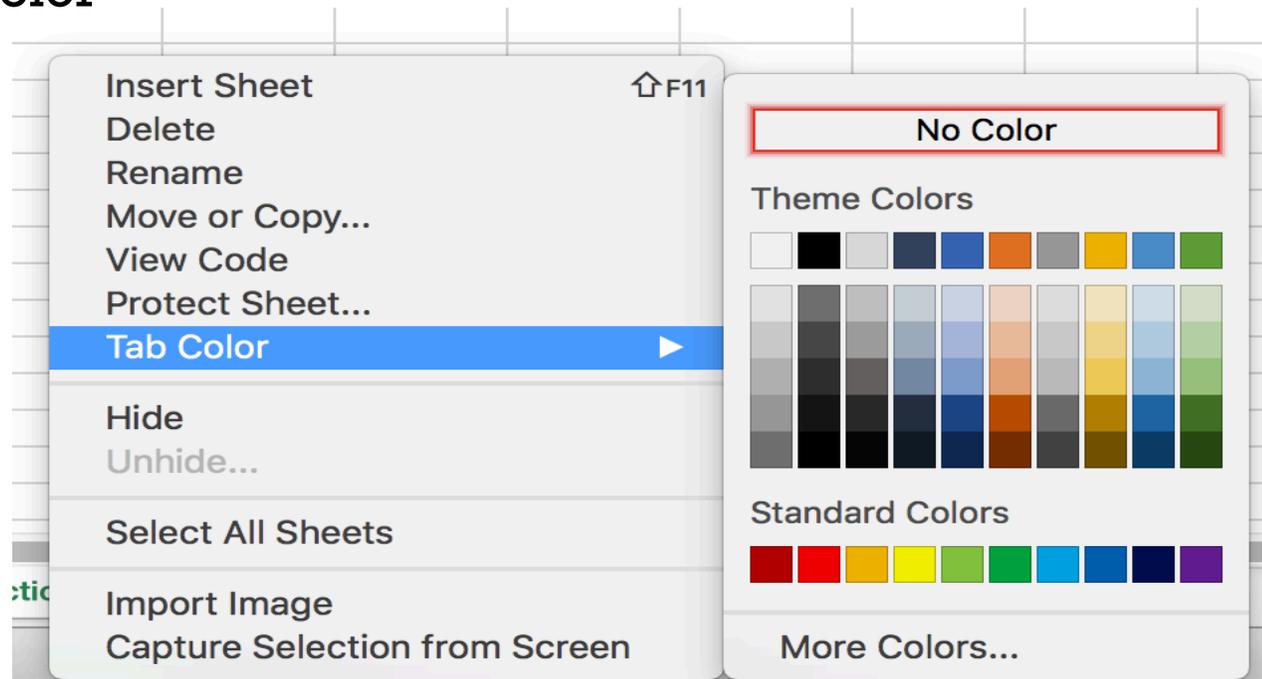
G
% of Change
-16.67%
-11.11%
-5.00%
-8.33%
-8.33%

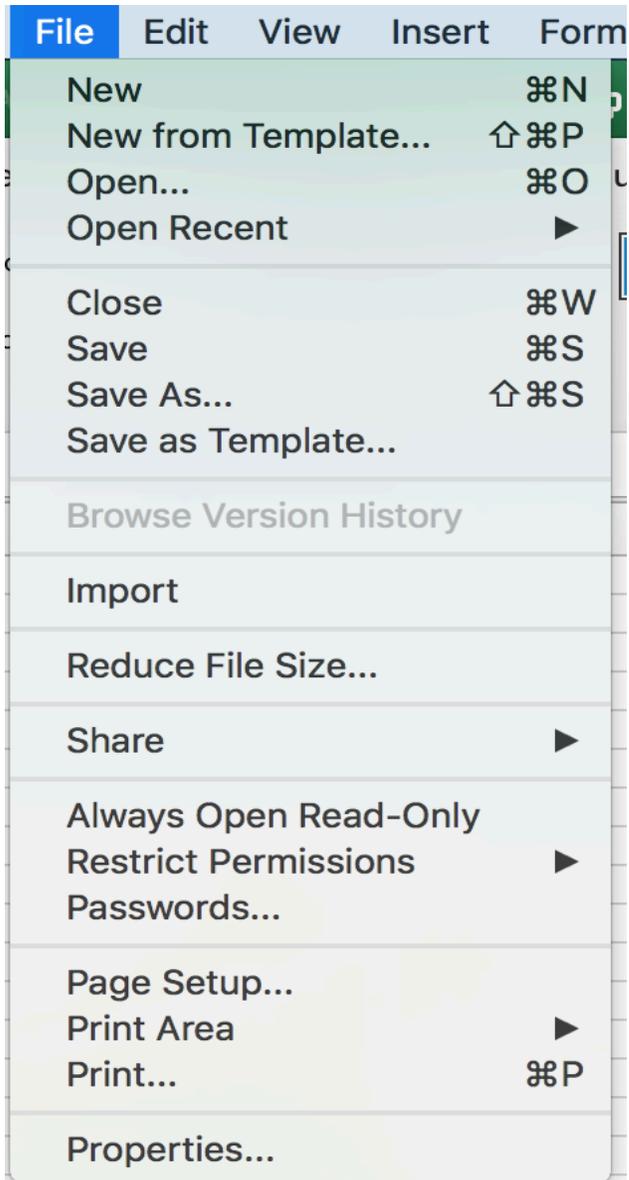
To add a new sheet click +



# CREATING & NAMING SHEETS

- Double click on Sheet1.
- Enter name of sheet and press return or click once again.
- To **add color** to the Tab, right click once and select Tab color





# SAVING & PRINTING

	A	B	C	D	E
1	<b>STUDENT ENROLLMENT</b>				
2	<b>Section</b>	<b>Sem 2 17-18</b>	<b>Sem 1 17-18</b>	<b>Sem 2 16-17</b>	<b>Sem 1 16-17</b>
3	3107	155	208	204	261
4	3106	183	182	214	207
5	4137	48	51	36	34
6	4125	44	68	52	53
7	4145	40	31	41	32
8	4020	31	32	27	29

# PRACTICE

- Compute totals and averages for each semester.
- Compute % of change between 17-18 semesters, 16-17 semesters, between first semesters of both years, and between second semesters of both years.
- Compute the maximum amount of students in each class.
- Format cells and table.