

Students Excel





Manufacturing Budget

First Edition (Excel for Mac)

Written and Presented by
David H. Ringstrom, CPA
www.studentsexcel.com



David H. Ringstrom, CPA, is an author and nationally recognized instructor who has taught thousands of webinars on Microsoft Excel. His courses are based on over 30 years of consulting and teaching experience. He coined the phrase “Either you work Excel, or it works you!”





Entering Text into Worksheet Cells

Formula bar.

Four ways to edit a cell:

1. Click into the formula bar above the worksheet.
2. Double-click on the cell you wish to edit.
3. Press F2 within the cell you wish to edit.
4. Navigate to a cell and type over the contents.

2 Enter a number in cell B1 and then press Enter.

1 Type cell contents as shown.

By default text entered into a cell will overlap adjacent cells in a given row as needed...

...until something is entered in the adjacent cell. The contents of cell A1 are still present, but no longer entirely visible. Any cell can contain up to 32,000 characters.



Managing Column Widths

1 Home Insert Draw Page Layout Formulas

Undo Clipboard Font Styles

Calibri 11

2 Select one or more columns.

3 Format

4 AutoFit Column Width

Cell Size

- Row Height...
- AutoFit Row Height
- Column Width...
- AutoFit Column Width

Sheet1

6 Alternative: Right-click on a column (make sure to right-click on the worksheet frame as a different menu appears for worksheet cells).

You can also select two or more columns at once and use any of these techniques to resize multiple columns.

7 Column Width...

8 Column Width ? X

Column width: 8.43

9 OK Cancel

Sheet1



Formatting Numbers

1 Home

2 30000

3 The Accounting Format adds a dollar sign, commas, and two decimal places.

4 Optional: Click Decrease Decimal twice to remove unwanted decimal places.

5 Alternative: Type dollar signs and/or commas when entering numbers to enter and format as Currency in one step (assuming cell has no existing number format).

6 The Comma Styles button also automatically adds two decimal places.

7 The Accounting Format aligns dollar signs at the left, versus Currency format that places dollar signs adjacent to the number.

8 Choose General from the Number Format list to remove number formatting from one or more cells.

	A	B	C
6	Accounting	\$ 30,000.00	
7	Currency	\$30,000.00	

	A	B	C	D
1	Interest Rate	5.25%		
2	Term	48		
3	Principal	\$30,000		



Formatting Worksheet Cells

1 Update spreadsheet to include all of this text, and then select cells A6:E6.

2 Click the Bold icon (or press Ctrl-B).

3 Click the Underline icon (or press Ctrl-U).

4 Click the Center command to center text within the cell. Many commands do not have keyboard shortcuts.

5 Click the Undo command (or press Ctrl-Z) if you make a mistake.

6 Alternative, click a formatting icon again to turn that format off.

7 Text is bolded, underlined, and centered within the column.

Payment #	Date	Interest	Principal	Balance
1				
2				
3				
4				
5				
6				



Copying Formulas

1 Type a 1 in cell A7.

2 Enter this formula in cell A8. Formulas always begin with an equal sign.

3 Excel shows the formula result when you press Enter. Optional: Double-click the cell to edit the formula again.

4 Drag the Fill Handle in cell A8 down through cell A54.

5 Excel copies the formula down and creates a series of numbers.

Payment #	Date	Interest	Principal
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
...			
47			
48			



Entering Dates

1 Enter dates in m/d/yyyy format. You can enter a date as 01/01/2024, 1/1/2024, or 1/1/24. If you enter 1/1 and press Enter Excel adds the current year.

2 Do not include an equal sign otherwise Excel will perform division instead of returning a date.

3 Enter a second date, select cells B7:B8, and then double-click the Fill Handle.

4 Excel creates a series of dates down the column and stops when it finds a blank cell in the preceding column.

5 Dates in Excel are serial number representing the number of days since January 1, 1900. You may sometimes inadvertently lose the date format.

6 Date

7 Home

8 General

9 Short Date

Payment #	Date	Interest	Principa
1	1/1/2024		
2	2/1/2024		
3	3/1/2024		





Calculating Our Loan Payment

1 Type = followed by a minus (-) sign.

2 fx

3 Describe calculation

4 Go

5 PMT

6 OK

7 The formula appears in the formula bar as you build it.

8 Interest rates must match the basis of the term, which in this case is in months, so we divide by 12 here.

9

10 OK

Function Arguments

PMT

Rate: B1/12 = 0.004375

Nper: B2 = 48

Pv: B3 = 30000

Fv = number

Type = number

= -694.2813825

Calculates the payment for a loan based on constant payments and a constant interest rate.

Formula result = -694.2813825

Formula result appears here.

	A	B	C	D	E	F	G	H
1	Interest Rate	5.25%						
2	Term	48						
3	Principal	\$30,000						
4	Payment	=-PMT(B1/12,B2,B3)						





Excel's Order of Operations

	A	B	C	D		A	B	C	D	E	F	G	H
1	Interest Rate	5.25%			1	Interest Rate	5.25%						
2	Term	48			2	Term	48						
3	Principal	\$30,000			3	Principal	\$30,000			3	=100*0.03		
4	Payment	\$694.28			4	Payment	\$694.28			100.21	=100+7*0.03		
5					5					3.21	=(100+7)*0.03		
6	Payment #	Date	Interest	Principal	6	Payment #	Date	Interest	Principal	Balance			
7	1	1/1/2024	\$131.25		7	1	1/1/2024	\$131.25					
8	2	2/1/2024	=B1/12*B3		8	2	2/1/2024						
9	3	3/1/2024			9	3	3/1/2024						
10	4	4/1/2024			10	4	4/1/2024						
11	5	5/1/2024			11	5	5/1/2024						
12	6	6/1/2024			12	6	6/1/2024						
13	7	7/1/2024			13	7	7/1/2024						
14	8	8/1/2024			14	8	8/1/2024						
15	9	9/1/2024			15	9	9/1/2024						
16	10	10/1/2024			16	10	10/1/2024						
17	11	11/1/2024			17	11	11/1/2024						
18	12	12/1/2024			18	12	12/1/2024						
19	13	1/1/2025			19	13	1/1/2025						
20	14	2/1/2025			20	14	2/1/2025						
21	15	3/1/2025			21	15	3/1/2025						
22	16	4/1/2025			22	16	4/1/2025						

You can include parentheses in this calculation but they're not necessary since no addition or subtraction is occurring.

Excel's Order of Operations

Excel calculates formulas from left to right and then based upon this hierarchy:

1. Parentheses
2. Exponents
3. Division
4. Multiplication
5. Addition
6. Subtraction



Use F4 to Toggle Absolute References

1 Excel sometimes, but not always, adopts the number format of other cells that you reference.

2 Drag the formula down.

3 Excel changes the cell references to the payment amount as the formula is copied down.

4 Select cell B4 in the formula bar and press F4 (or Cmd-T in Excel for Mac) to create an absolute reference.

5

Payment #	Date	Interest	Principal	Balance
1	1/1/2024	\$131.25	\$563.03	=B4-C7
2	2/1/2024		\$0.00	=B5-C8
3	3/1/2024		#VALUE!	=B6-C9
4	4/1/2024		#####	=B7-C10

t #	Date	Interest	Principal	Balance
1	1/1/2024	\$131.25	=\$B\$4-C7	=B4-C7
2	2/1/2024			
3	3/1/2024			

	B	C	D	E
1	5.25%			
2	48			
3	\$30,000			
4	\$694.28			
5			=\$B\$4-C7	=B3-D7
6	Date	Interest	Principal	Balance
7	1/1/2024	\$131.25	\$563.03	\$29,436.97
8	2/1/2024			
9	3/1/2024			
10	4/1/2024			
11	5/1/2024			





Copying Formulas

The image illustrates the process of copying formulas in Excel across three stages:

- Step 1:** The formula `=E7*B1/12` is entered in cell C8. A red circle with the number '1' highlights the cell.
- Step 2:** The formula is dragged from cell C8 to cell D8. A yellow callout box with a red circle containing the number '2' says "Drag the formula in cell D7 down to D8." (Note: The text in the callout appears to be a typo for 'D8').
- Step 3:** The formula `=E7-D8` is entered in cell E8. A red circle with the number '3' highlights the cell.





AutoSum Feature

1 Double-click the bottom of cell A6.

2 The cursor moves to the bottom of the column.

3 Select cells C55:D55.

4 Formulas

5 AutoSum

6 Excel displays ##### because the columns are not wide enough to display the entire number.

7 Double-click the right-edge of columns C and D to widen the columns to display the entire number.

Payment	Date	Interest	Principal
1	1/1/2024	\$131.25	\$563.00
2	2/1/2024	\$128.79	\$565.40
3	3/1/2024	\$126.31	\$567.90
4	4/1/2024	\$123.83	\$570.40
48	12/1/2027	\$3.02	\$691.26
		=SUM(C7:C54)	=SUM(D7:D54)
		\$3,325.51	\$30,000.00

Thank you!



We welcome your thoughts, either positive or negative, at support@studentsexcel.com

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