

General Principle : Formatting is NOT Rounding

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Formatting Example

The screenshot displays the Microsoft Excel interface for a workbook named "Book1". The ribbon is set to "Home", and the active cell is A5. The formula bar shows the formula $=SUM(A1:A3)$. The spreadsheet contains the following data:

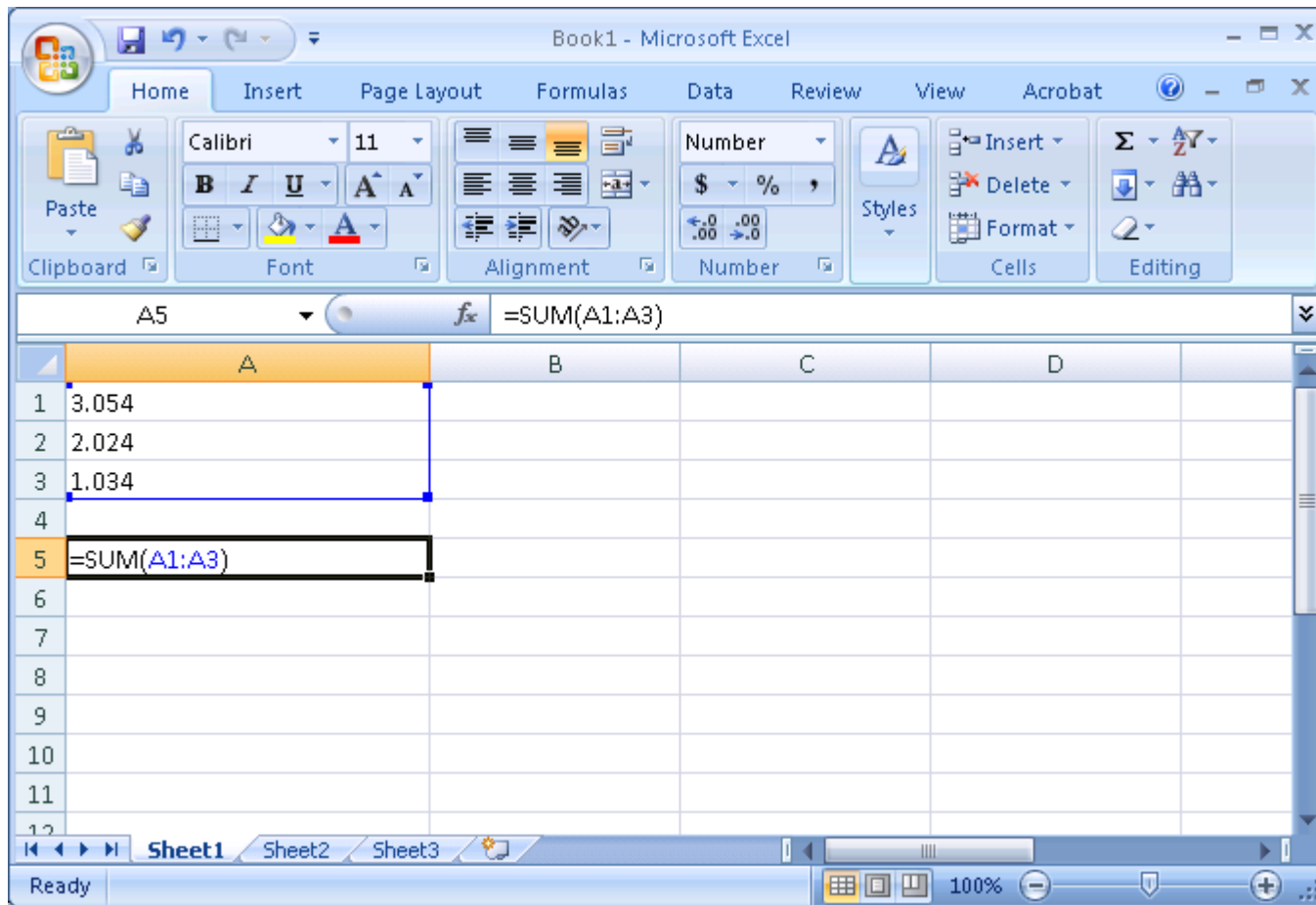
	A	B	C	D	E	F	G	H	I
1	3.05								
2	2.02								
3	1.03								
4									
5	6.11								
6									
7									
8									
9									
10									
11									
12									

The cell A5 is highlighted with a thick black border, indicating it is the active cell. The status bar at the bottom shows "Ready" and "100%".

Look Carefully at the Formatting Example

- It *appears* to say that the sum of
3.05
2.02
1.03
is 6.11
- That is not mathematically correct!
- The next slide shows what is actually in each cell. (Control / ~)

Formatting Example with Control / ~



What happened?

- What happened is that the cells in column 'A' were formatted to show only 2 digits after the decimal point.
- However, the numbers in column 'A' actually had more than 2 digits after the decimal point. The last digits were “hidden”.
- Hiding some of the digits can yield results that appear to be wrong.

Rounding Example with Control / ~

The screenshot shows the Microsoft Excel interface with the following data and formulas:

	A	B	C	D
1	3.054	=ROUND(A1,2)		
2	2.024	=ROUND(A2,2)		
3	1.034	=ROUND(A3,2)		
4				
5		=SUM(B1:B3)		
6				
7				
8				
9				
10				
11				
12				

The formula bar shows the active cell B5 containing the formula `=SUM(B1:B3)`. The status bar at the bottom indicates the spreadsheet is ready and the zoom level is 100%.

Rounding Example

- The addition in column 'B' is now mathematically correct.
- The value that appears in cell B5 is in fact the sum of the numbers appearing in cells B1:B3

Warning!

- The values ***displayed*** by a computer application are often not the values that are ***used*** inside that application.
- If you need a value that has only a certain number of digits after the decimal place, you must ***round*** that value, not merely ***format*** it.