



Computing

Spreadsheets

Number Operations



Aim

- I can enter data and formulas into a spreadsheet.

Success Criteria

- I can identify cells using rows and columns.
- I can type text and numbers into cells.
- I can use the SUM function to add numbers together.
- I can use the SUM function to perform further calculations.

Introducing Spreadsheets



What do you know about spreadsheets already?

Does anyone know what they are used for?

What can they do?

Discuss with a partner and be ready to feed back any ideas.



	A1		
	A	B	C
1			
2			
3			

Cell References



	A1		f_x	
		A	B	C
1	Everything in a spreadsheet goes into a cell (like a box in a grid).			
2	Each cell is named by the row and column in which it is located.			
3	See the Cells and Data Spreadsheet as an example.			

Cell References



	A	B	C	D	E	F
1			4			
2		apple				2
3				banana		
4	orange				3	
5			5			pear
6						

Formatting Cells



Cells can be formatted to look clearer or more interesting, similar to word processing or desktop publishing.

Watch then practise how to change cell colours and borders, font size, style, colour and alignment, row height, column width.

You can also select an entire row, column or the entire sheet and then adjust or format multiple rows or columns at the same time.

Explore the formatting features so you can present your work attractively, if you have time after each future activity.

Formatting Cells

Font Style

Click and drag between rows or columns to adjust height or width.

Click on a row or column heading to highlight entire row or column.

Borders

Font Size

Cell Colour

Font Colour

The screenshot shows the Microsoft Excel ribbon with the following elements highlighted by arrows:

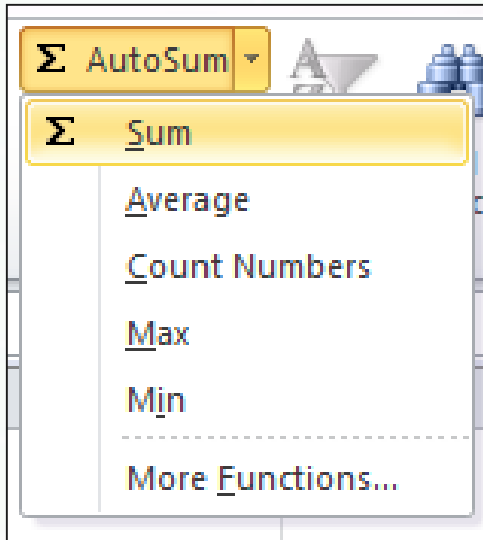
- Font Style:** Points to the 'Format Painter' icon in the 'Clipboard' group.
- Borders:** Points to the 'Borders' icon in the 'Font' group.
- Font Size:** Points to the font size dropdown menu showing '18'.
- Cell Colour:** Points to the 'Fill Color' icon (paint bucket) in the 'Font' group.
- Font Colour:** Points to the 'Font Color' icon (A with a colored underline) in the 'Font' group.

The spreadsheet below shows the following data:

	A	B	C	D	E	F
1			4			
2		apple				2
3				banana		
4	orange				3	
5						

Note: The exact look may change in different versions of the software.

Calculations



Click in the cell that you want the calculation to appear. Then click on Sum in the AutoSum menu.

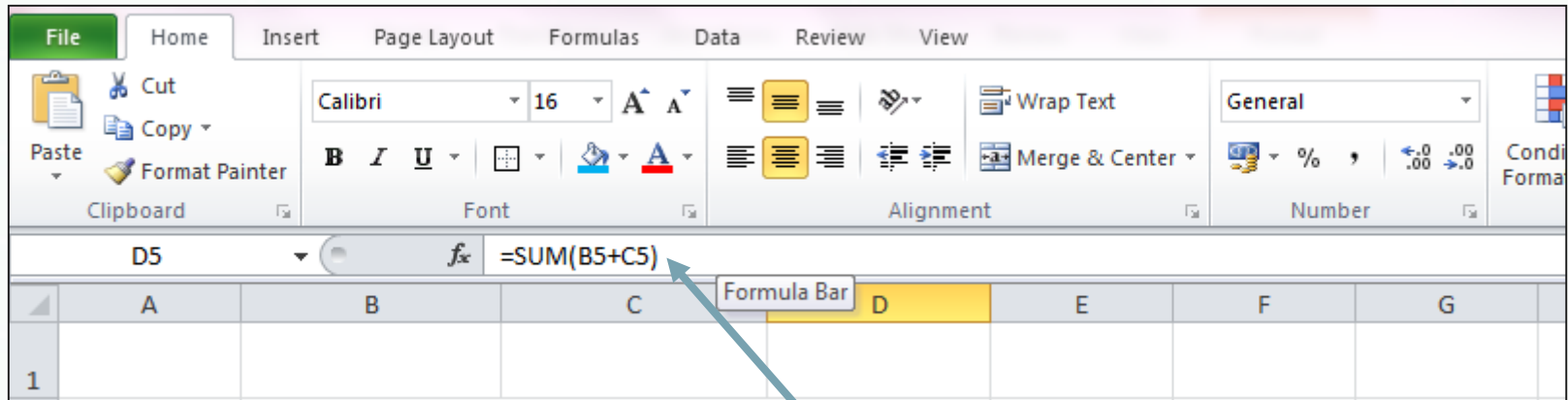
One advantage of spreadsheets is the ability to do calculations quickly, like a calculator.

Next we are going to look at the Number Operations Spreadsheet.

As well as typing text and numbers into a cell, we can instruct the computer to add the contents of two cells automatically.

This is done using the SUM function.

Calculations



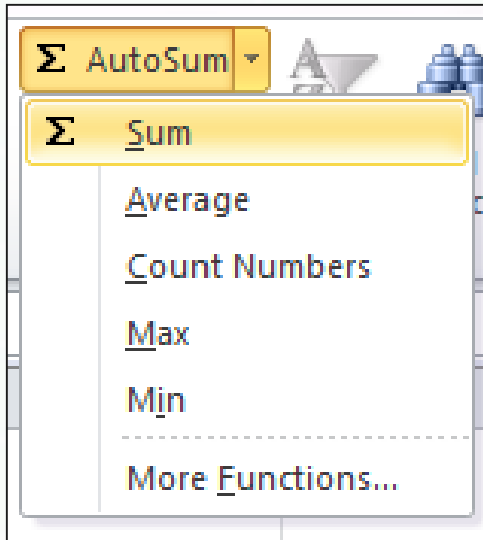
The function appears in the formula bar here.

A formula is always shown by using the '=' sign first, followed by 'SUM'

The calculation then goes inside the brackets

In this case:
`=SUM(B5+B6)`

Calculations



Click in the cell that you want the calculation to appear. Then click on Sum in the AutoSum menu.

What if we changed the contents of the cells now?

Next, we are going to enter calculations for Subtract, Multiply and Divide.

To multiply we use the '*' symbol, e.g.

Numbers: $3 * 4 = 12$

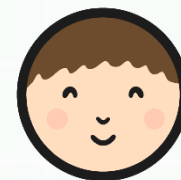
Cells: B5 * C5

To divide, we use the '/' symbol, e.g.

Numbers: $12 / 4 = 3$

Cells: B5 / C5

Try It Yourself



Use the Spreadsheets and Activity Sheets to try entering and formatting data, then using calculations for the Number Operations.



Number Operations

Number Operations

Can you create the following spreadsheet to calculate the correct answers in the cells?

	A	B	C
1			
2		Activity 1: Number Operations	
3			
4		First Number	Second Number
5		10	2
6		12	4
7		6	3
8		20	5
9			
10		Can you enter the formulae to calculate the correct answers in the cells?	
11			

The Multiplier

Can you create the following spreadsheet? The green and yellow boxes are automatic.

	A	B	C
1			
2		Activity 2: The Multiplier	
3			
4		0	x
5			
6		Edit the values in the green and yellow boxes to calculate the result.	
7			
8			

What happens when you change the numbers in the green and yellow boxes?



Number Operations

Number Operations

Open the Number Operations Spreadsheet and calculate the correct answers in the cells.

	A	B	C
1			
2		Activity 1: Number Operations	
3			
4		First Number	Second Number
5		10	2
6		12	4
7		6	3
8		20	5
9			
10		Can you enter the formulae to calculate the correct answers in the cells?	
11			

The Multiplier

Try the following spreadsheet. What do you think will happen if you change the numbers in the green and yellow boxes?

	A	B	C
1			
2		Activity 2: The Multiplier	
3			
4		0	x
5			
6		Edit the values in the green and yellow boxes to calculate the result.	
7			
8			



Number Operations

Cells and Data

Open the Cells and Data Spreadsheet. Practise how to name each cell using numbers and letters. You could work in pairs or with an adult. Try entering your own words or numbers and changing the font colour.

	A	B	C	D	E	F
1			4			
2		apple				2
3				bananas		
4	orange				3	
5			5			pear
6						

Number Operations

Open the Number Operations Spreadsheet. Can you enter the correct formulae to perform each of the number operations and calculate the correct answers in the cells?

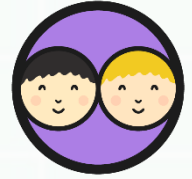
	A	B	C	D	E	F	G	H	I
1									
2		Activity 1: Number Operations							
3									
4		First Number	Second Number	Add					
5		10	2	12					
6		12	4						
7		6	3						
8		20	5						
9									

Enter the formula required to add the first number and second number together, giving the total in the final column.



Computing | Year 6 | Spreadsheets | Number Operations | Lesson 1

Beat the Computer



How do we refer to cells?

How do we insert calculations into cells and what symbols do we use?

Can anyone 'beat the computer' using The Multiplier?

One person must suggest a pair of numbers to type in for automatic calculation.

Can anyone say the answer before the computer calculates it?



Aim



- I can enter data and formulas into a spreadsheet.

Success Criteria

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	A	B	C	D	E	F
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						