e-eupa Certification for Administration Personnel

Level 3

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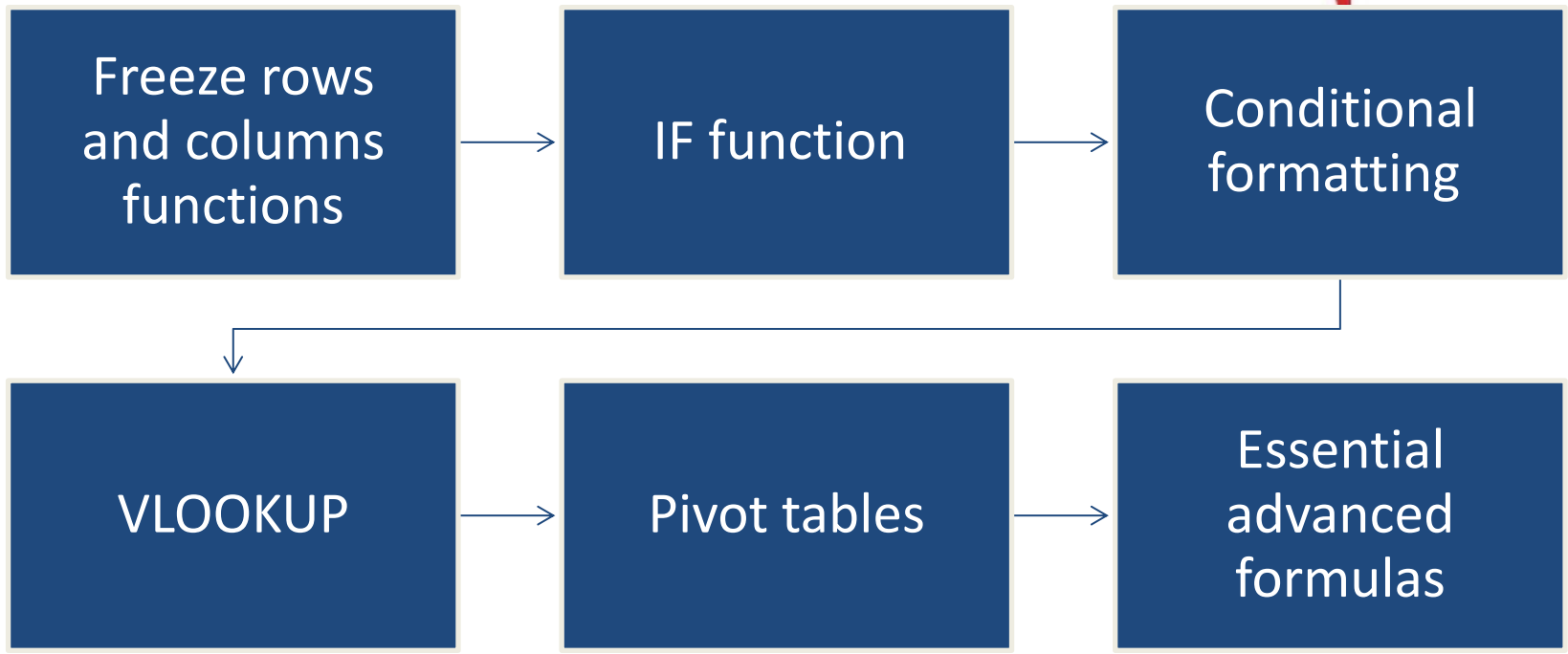
Unit Details

Work Area 9 ICT SKILLS

3.15 Use spreadsheets to produce sheets at an intermediate and advanced level: Part A

LO3.53 Demonstrate skills in using Spreadsheet software at an intermediate and advanced level to produce complex worksheets that conform to agreed specifications. Take some responsibility for the evaluation of the result.

Route map


Freeze rows and columns functions
IF function
Conditional formatting
VLOOKUP
Pivot tables
Essential advanced formulas

Freeze rows function

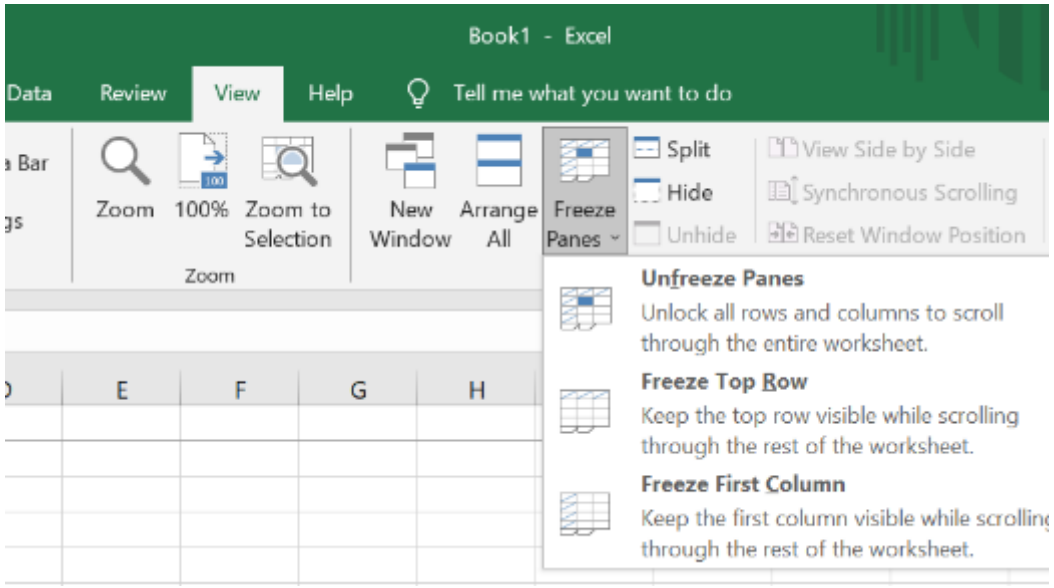
- You may want to see certain rows or columns all the time in your worksheet, especially header cells.
- By freezing rows or columns in place, you'll be able to scroll through your content while continuing to view the frozen cells.

To freeze rows:

1. Select the row below the row(s) you want to freeze

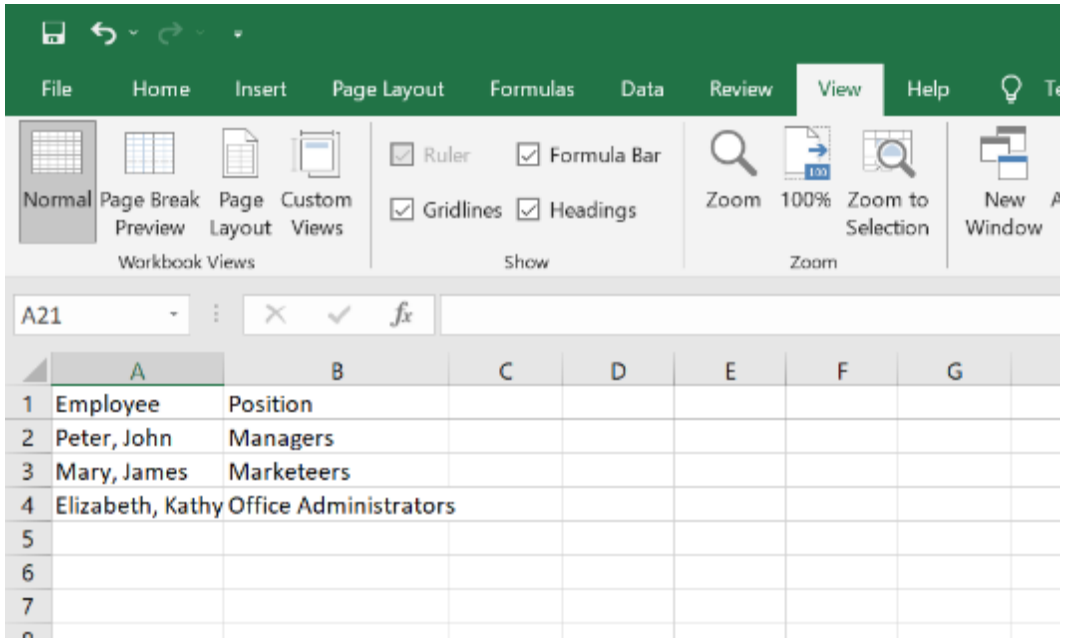
Freeze rows function

2. Click the View tab on the Ribbon.
3. Select the Freeze Panes command, then choose Freeze Panes from the drop-down menu.



Freeze rows function

4. The rows will be frozen in place, as indicated by the gray line (below the first row). You can scroll down the worksheet while continuing to view the frozen rows at the top.



Freeze columns function

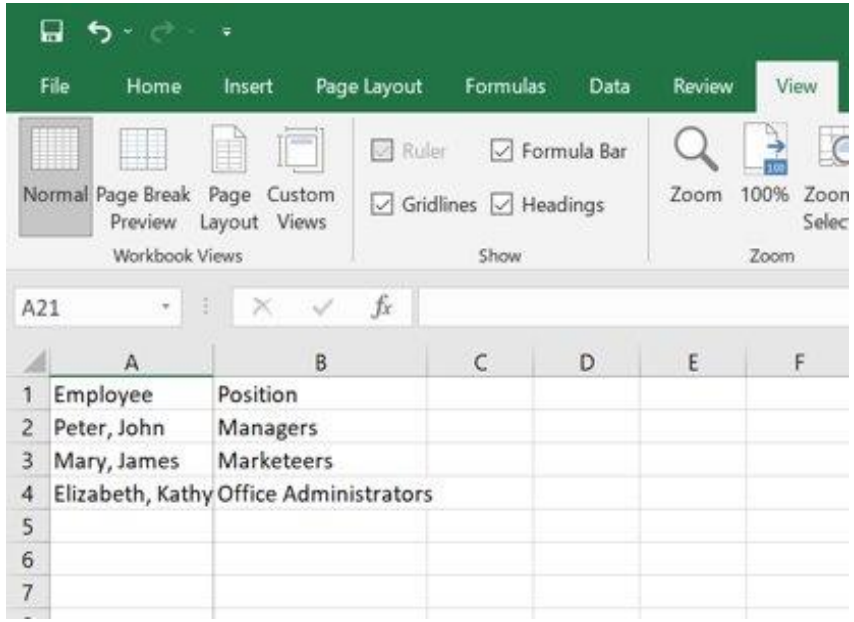
1. Select the **column** to the right of the column(s) you want to **freeze**. In our example, we want to freeze **column A**, so we'll select column **B**.

2. Click the View tab on the Ribbon.

3. Select the Freeze Panes command, then choose Freeze Panes from the drop-down menu.

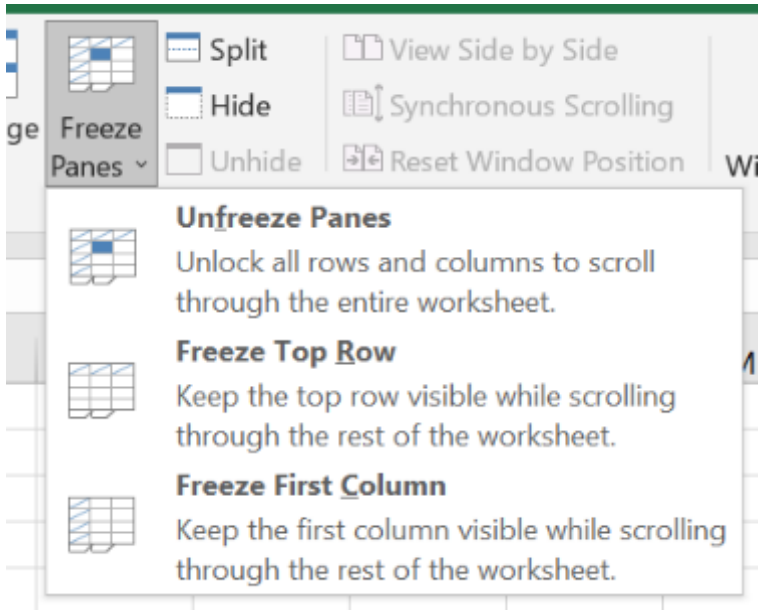
Freeze columns function

4. The column will be frozen in place, as indicated by the gray line between the two columns. You can scroll across the worksheet while continuing to view the frozen column on the left.

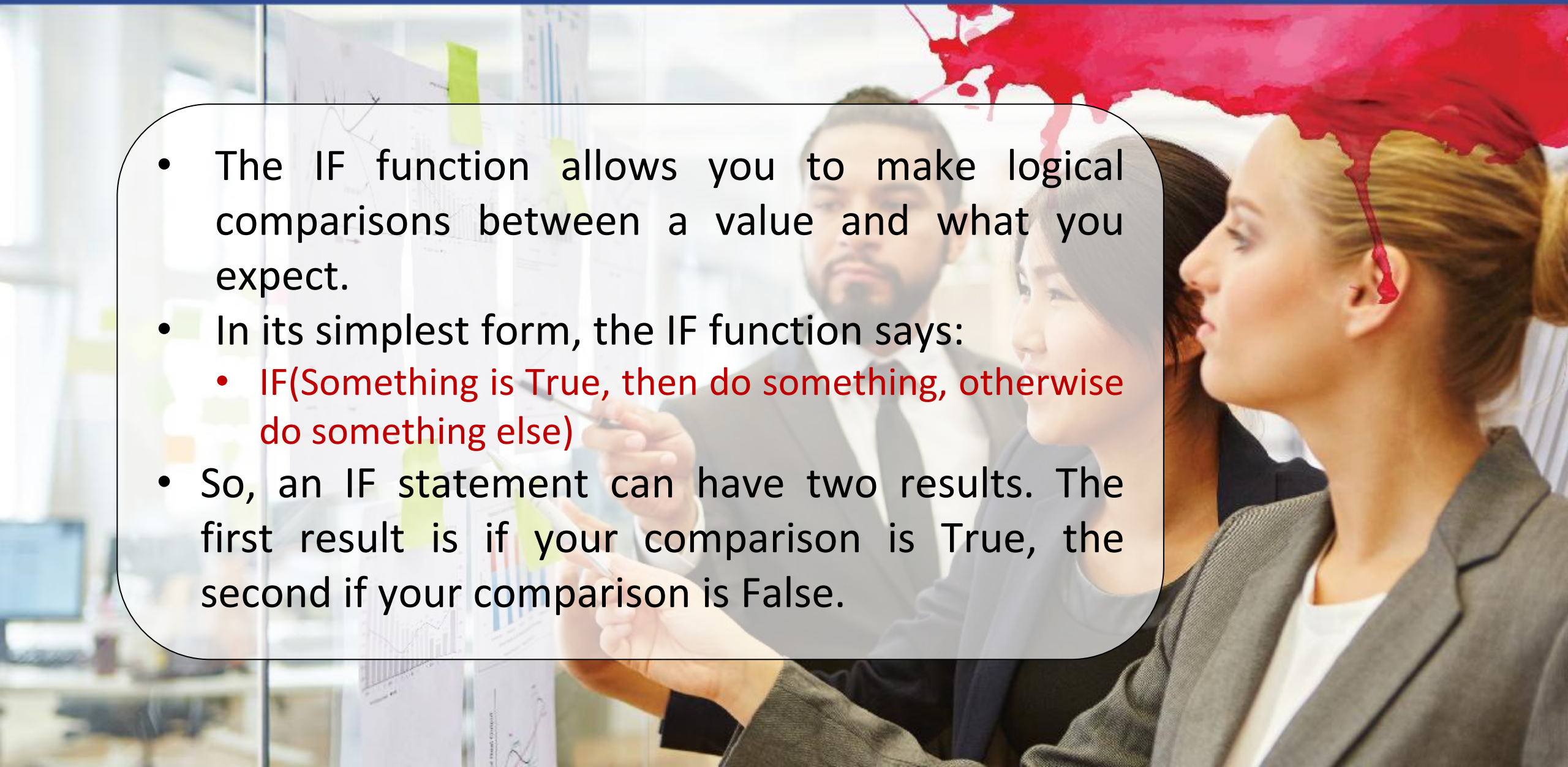


Freeze columns function

TIP: To unfreeze rows or columns, click the Freeze Panes command, then select Unfreeze Panes from the drop-down menu.



IF function



- The IF function allows you to make logical comparisons between a value and what you expect.
- In its simplest form, the IF function says:
  - IF(Something is True, then do something, otherwise do something else)
- So, an IF statement can have two results. The first result is if your comparison is True, the second if your comparison is False.

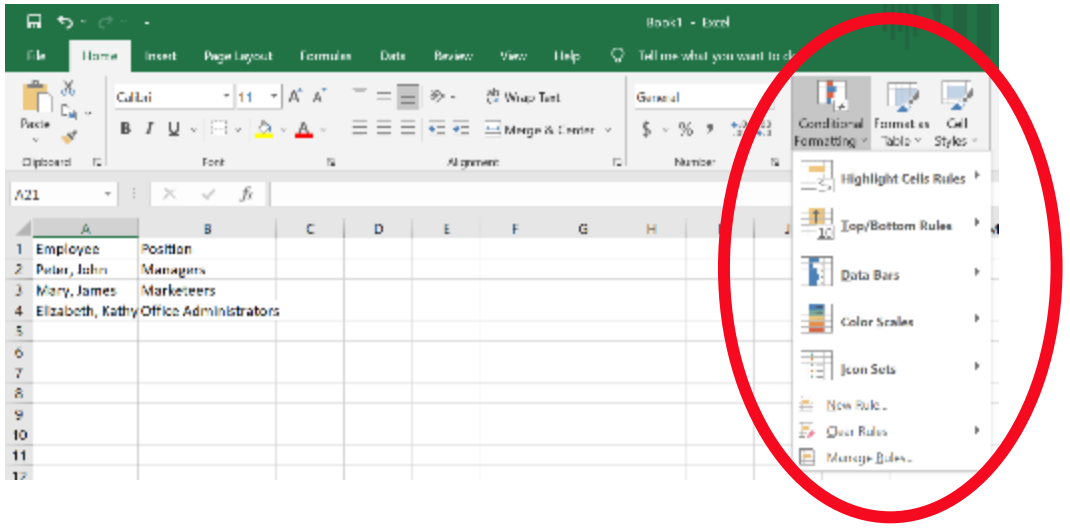
IF function, examples

=IF(C2=”Yes”,1,2)
In the example, cell D2 says: IF(C2 = Yes, then return a 1, otherwise return a 2)

=IF(C2=1,”Yes”,”No”)
In this example, the formula in cell D2 says: IF(C2 = 1, then return Yes, otherwise return No)

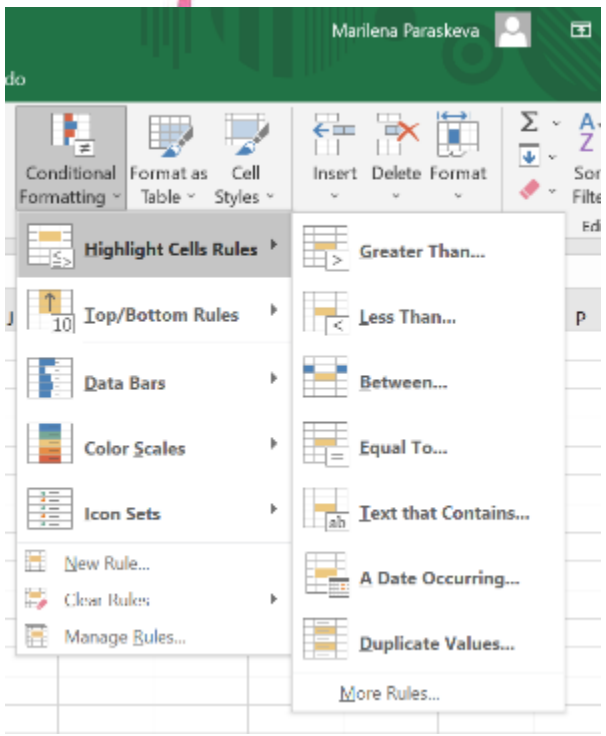
Conditional formatting

- Conditional formatting applies one or more rules to any cells you want.
- Access it in the Home tab



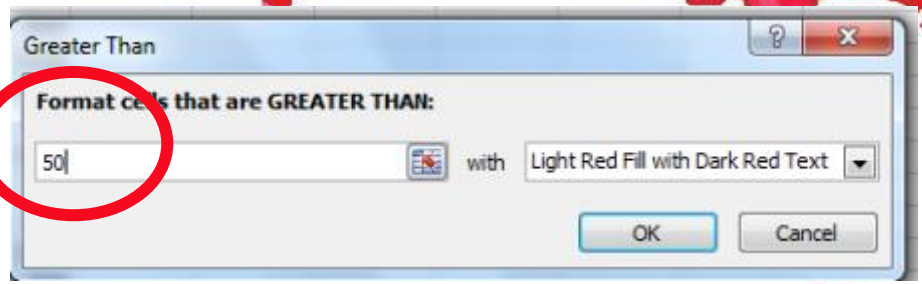
Conditional formatting

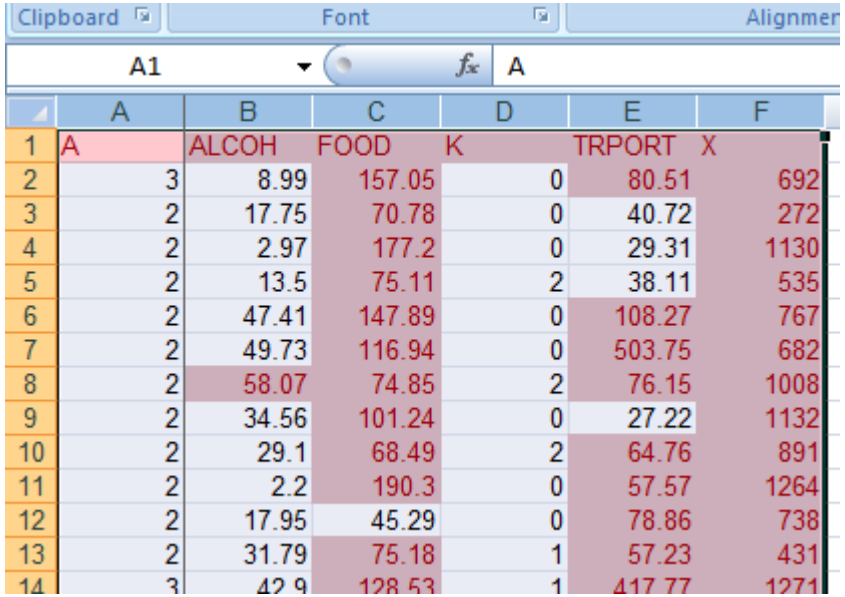
- To create a conditional formatting rule:
- Select the cells you want to add formatting to.
- Select Highlight Cells Rules or Top/Bottom Rules. We'll choose Highlight Cells Rules for this example. A menu will appear with several rules.
- Select the desired rule (Greater Than, for example).



Conditional formatting

- From the dialog box, enter a value in the space provided
- In this example, we want to format cells that are greater than 50, so we'll enter 50 as our value.
- Select a formatting style from the drop-down menu.
- Conditional formatting offers many more options and functions. Go ahead and explore!





	A	B	C	D	E	F
1	A	ALCOH	FOOD	K	TRPORT	X
2	3	8.99	157.05	0	80.51	692
3	2	17.75	70.78	0	40.72	272
4	2	2.97	177.2	0	29.31	1130
5	2	13.5	75.11	2	38.11	535
6	2	47.41	147.89	0	108.27	767
7	2	49.73	116.94	0	503.75	682
8	2	58.07	74.85	2	76.15	1008
9	2	34.56	101.24	0	27.22	1132
10	2	29.1	68.49	2	64.76	891
11	2	2.2	190.3	0	57.57	1264
12	2	17.95	45.29	0	78.86	738
13	2	31.79	75.18	1	57.23	431
14	3	42.9	128.53	1	417.77	1271

Removing conditional formatting

- Select the cells that have conditional formatting.
- In the Home tab, click the Conditional Formatting command. A drop-down menu will appear.
- Select Clear Rules.
- A menu will appear. You can choose to clear rules from the Selected Cells, Entire Sheet, This Table, or This PivotTable.

VLOOKUP

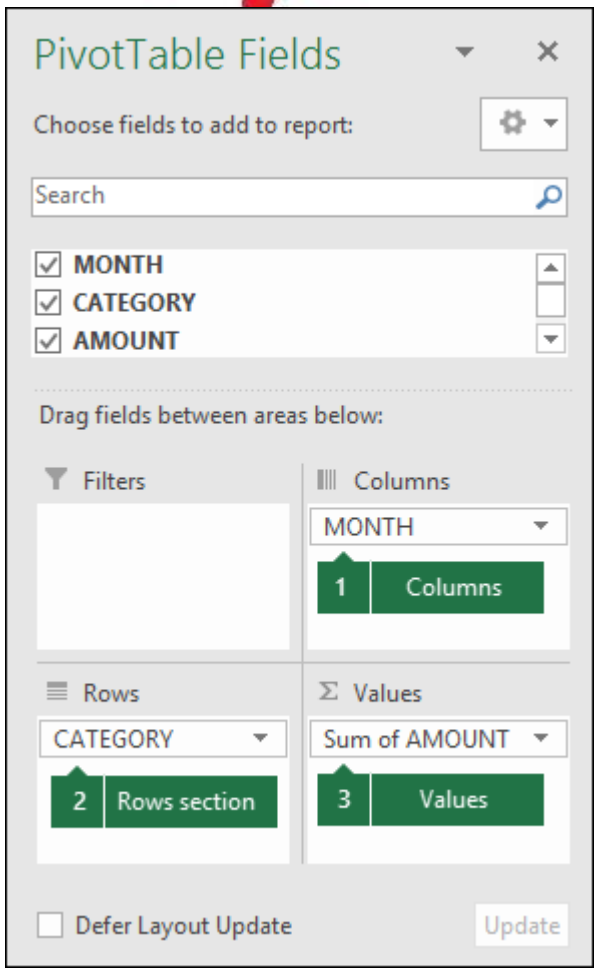
- VLOOKUP lets you search for specific information in your spreadsheet.
- There are four pieces of information that you will need in order to build the VLOOKUP syntax:
  - The value you want to look up, also called the lookup value.
  - The range where the lookup value is located. Remember that the lookup value should always be in the first column in the range for VLOOKUP to work correctly.
  - The column number in the range that contains the return value. For example, if you specify B2: D11 as the range, you should count B as the first column, C as the second, and so on.
- The syntax for the VLOOKUP function in Microsoft Excel is:
- VLOOKUP(value, table, index_number, [approximate_match])

Creating a pivot table

- Click a cell in the source data or table range.
- Go to Insert > Tables > PivotTable.
- Excel will display the Create PivotTable dialog with your range or table name selected.
- In the Choose where you want the PivotTable report to be placed section, select New Worksheet, or Existing Worksheet. For Existing Worksheet, you'll need to select both the worksheet and the cell where you want the PivotTable placed.
- If you want to include multiple tables or data sources in your PivotTable, click the Add this data to the Data Model check box.
- Click OK, and Excel will create a blank PivotTable, and display the PivotTable Fields list.

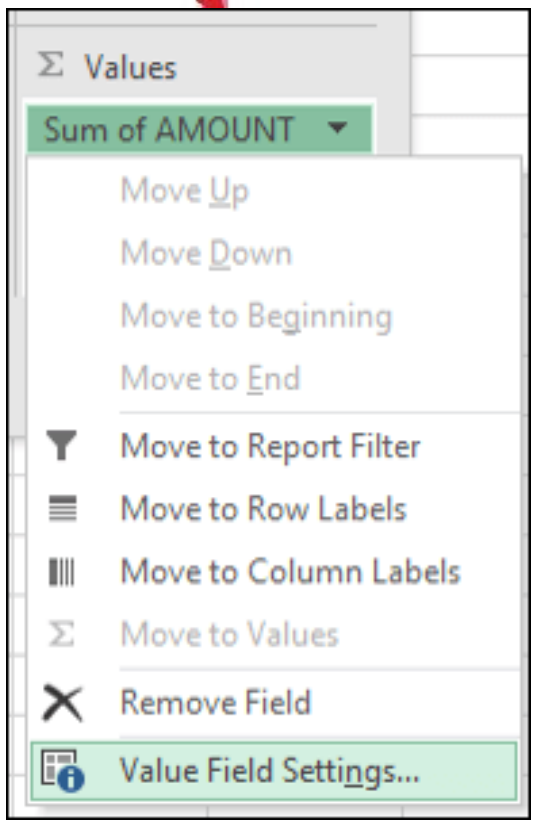
Working with a pivot table

- In the Field Name area at the top, select the check box for any field you want to add to your PivotTable.
- By default, non-numeric fields are added to the Row area, date and time fields are added to the Column area, and numeric fields are added to the Values area.
- You can also manually drag-and-drop any available item into any of the PivotTable fields, or if you no longer want an item in your PivotTable, simply drag it out of the Fields list or uncheck it.



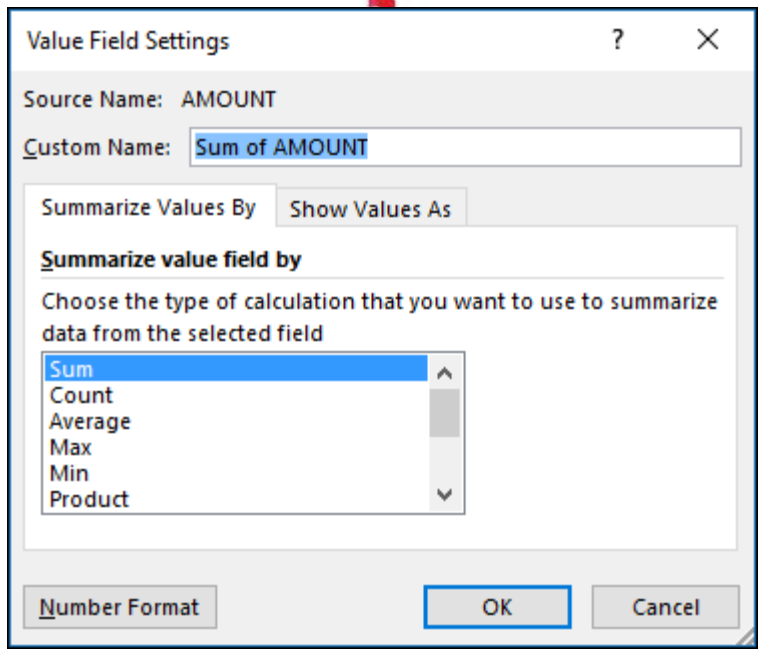
Working with a pivot table

- Summarize Values By
- By default, PivotTable fields that are placed in the Values area will be displayed as a SUM.
- If Excel interprets your data as text, it will be displayed as a COUNT.
- This is why it's so important to make sure you don't mix data types for value fields.
- You can change the default calculation by first clicking on the arrow to the right of the field name, then select the Value Field Settings option.

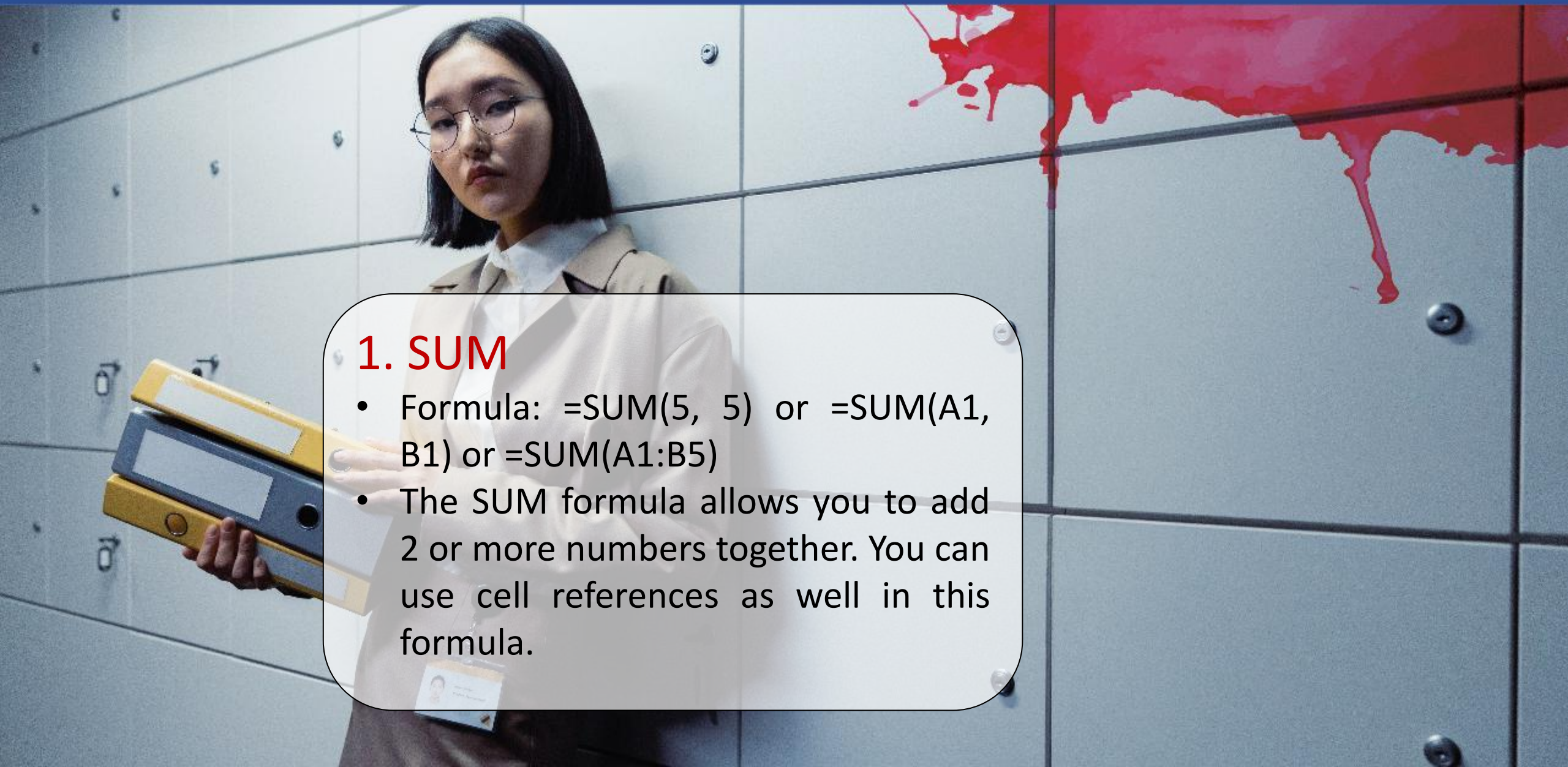


Working with a pivot table

- Next, change the calculation in the Summarize Values By section. Note that when you change the calculation method, Excel will automatically append it in the Custom Name section, like "Sum of FieldName", but you can change it.
- If you click the Number Format button, you can change the number format for the entire field.



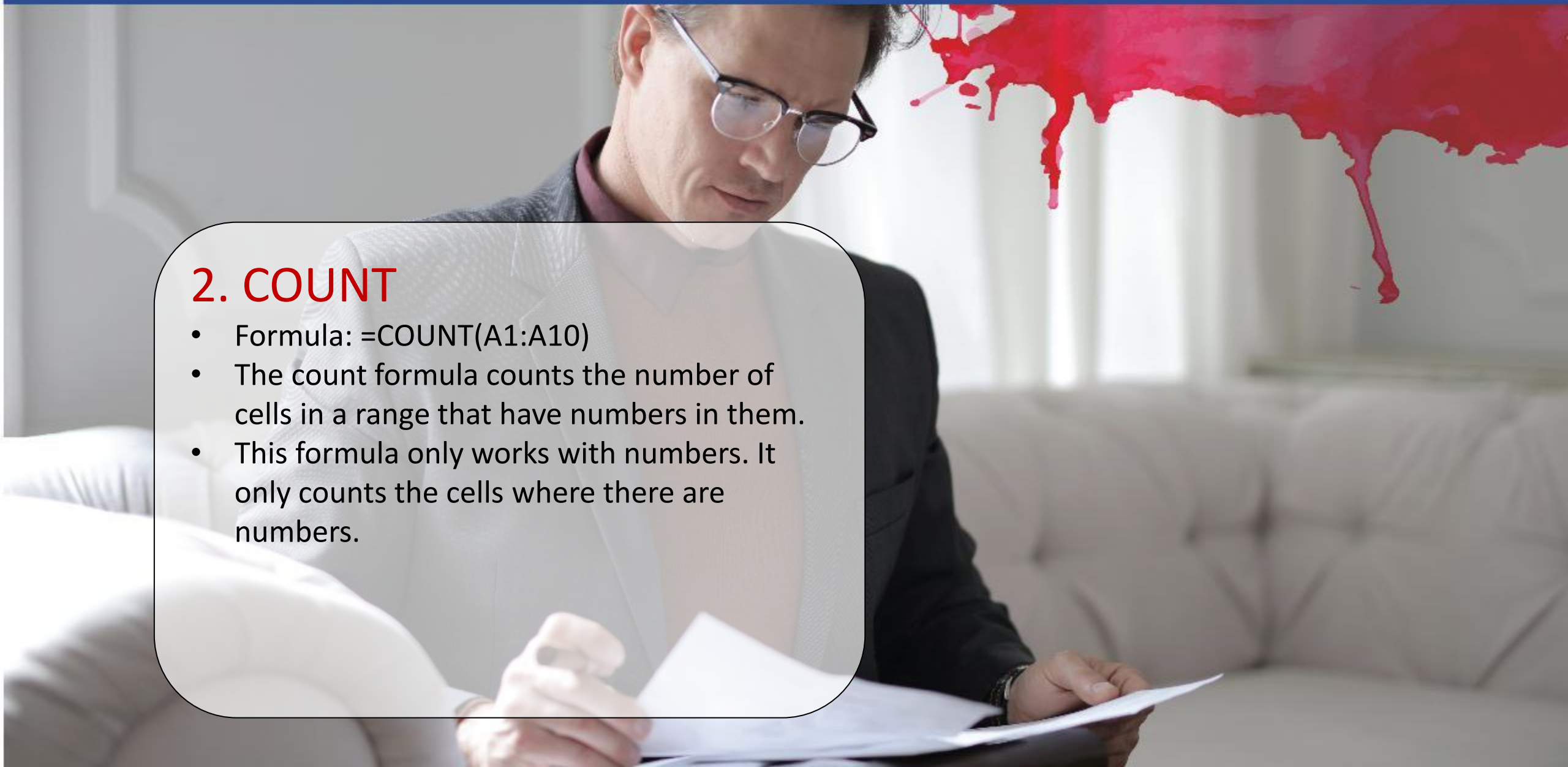
Essential advanced formulas



1. SUM

- Formula: =SUM(5, 5) or =SUM(A1, B1) or =SUM(A1:B5)
- The SUM formula allows you to add 2 or more numbers together. You can use cell references as well in this formula.

Essential advanced formulas



2. COUNT

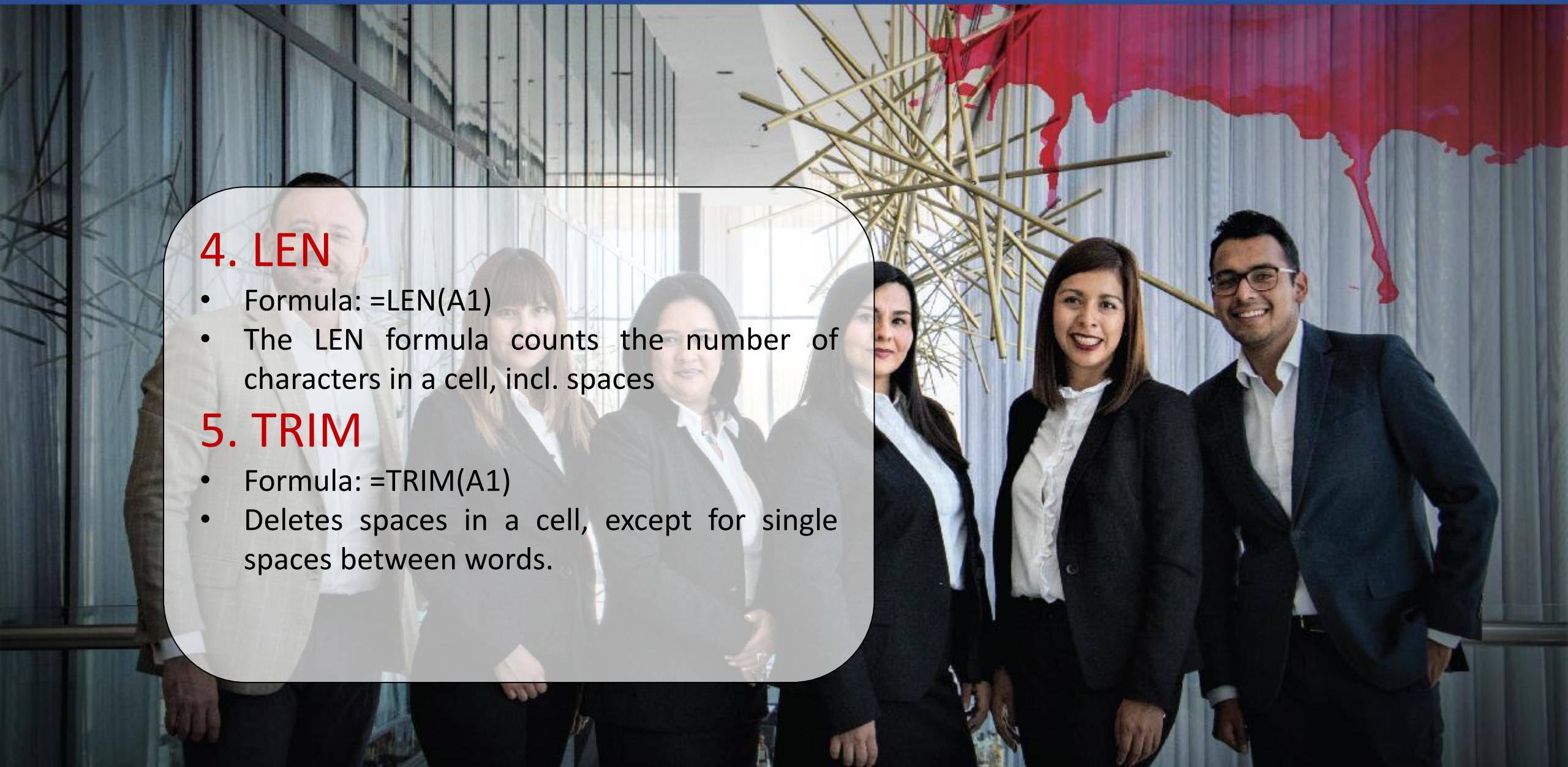
- Formula: =COUNT(A1:A10)
- The count formula counts the number of cells in a range that have numbers in them.
- This formula only works with numbers. It only counts the cells where there are numbers.

Essential advanced formulas

3. COUNTA

- Formula: =COUNTA(A1:A10)
- Counts the number of non-empty cells in a range. It will count cells that have numbers and/or any other characters in them.
- The COUNTA Formula works with all data types.
- It counts the number of non-empty cells no matter the data type.

Essential advanced formulas



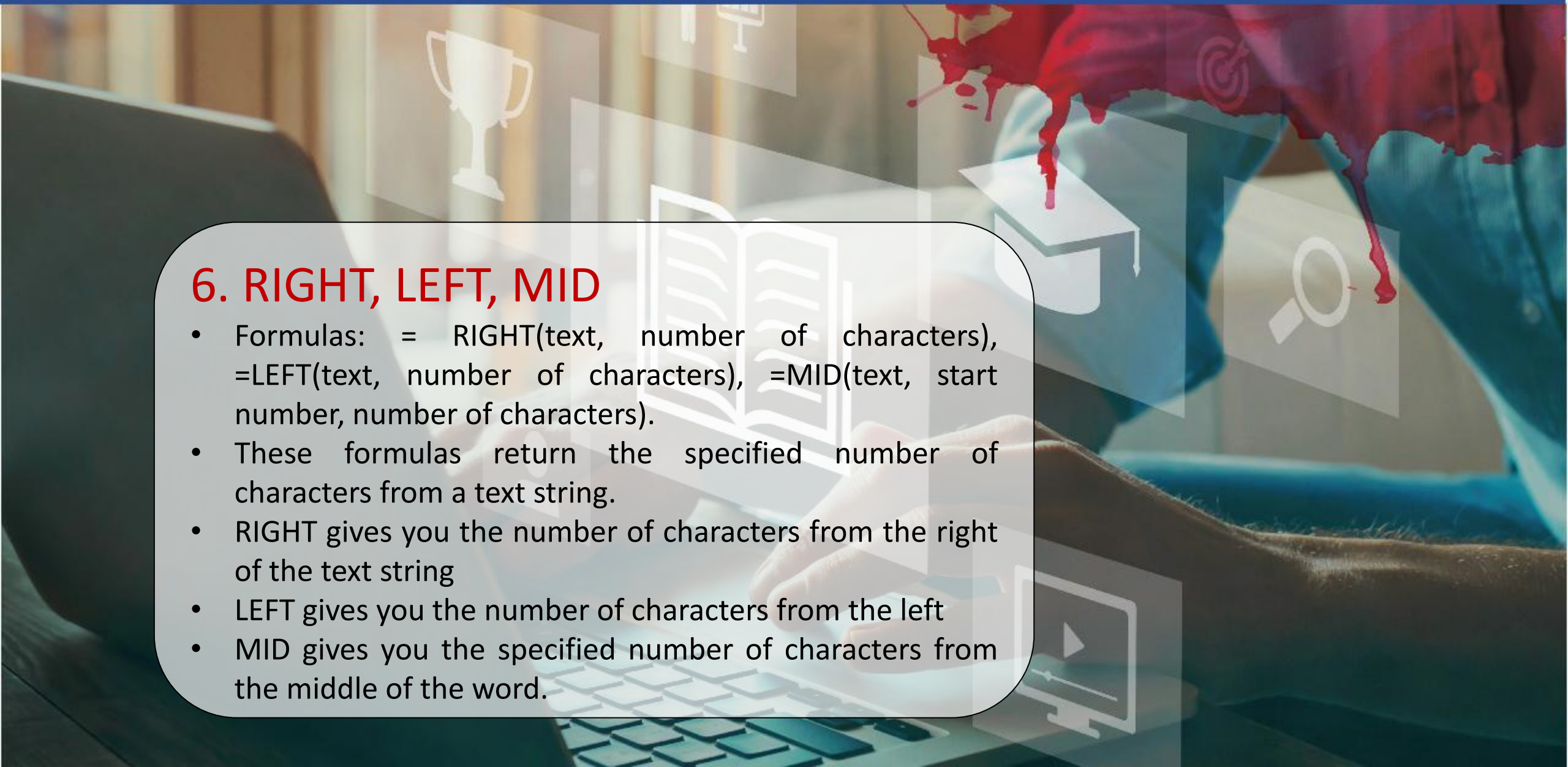
4. LEN

- Formula: =LEN(A1)
- The LEN formula counts the number of characters in a cell, incl. spaces

5. TRIM

- Formula: =TRIM(A1)
- Deletes spaces in a cell, except for single spaces between words.

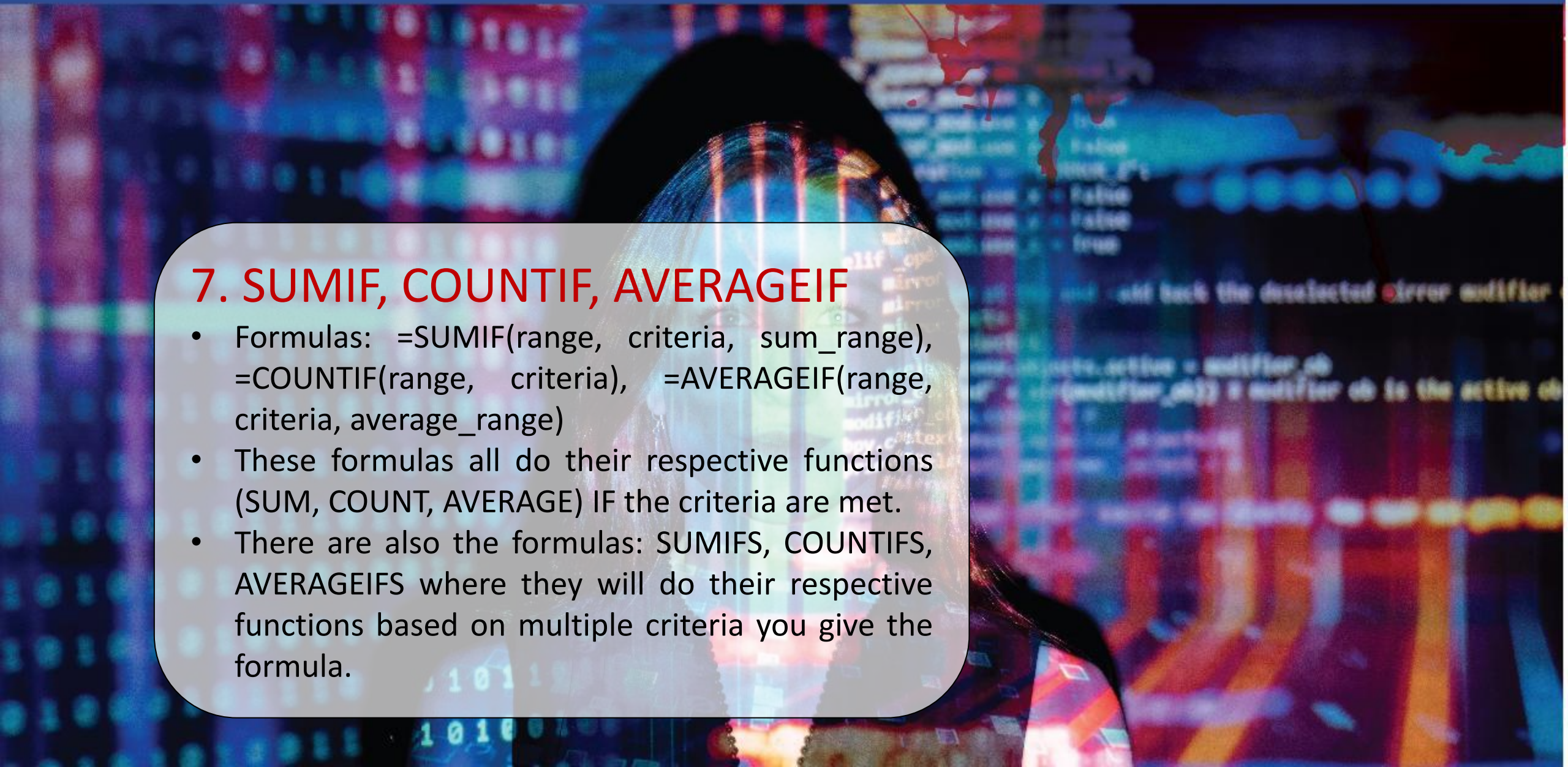
Essential advanced formulas



6. RIGHT, LEFT, MID

- Formulas: = RIGHT(text, number of characters), =LEFT(text, number of characters), =MID(text, start number, number of characters).
- These formulas return the specified number of characters from a text string.
- RIGHT gives you the number of characters from the right of the text string
- LEFT gives you the number of characters from the left
- MID gives you the specified number of characters from the middle of the word.

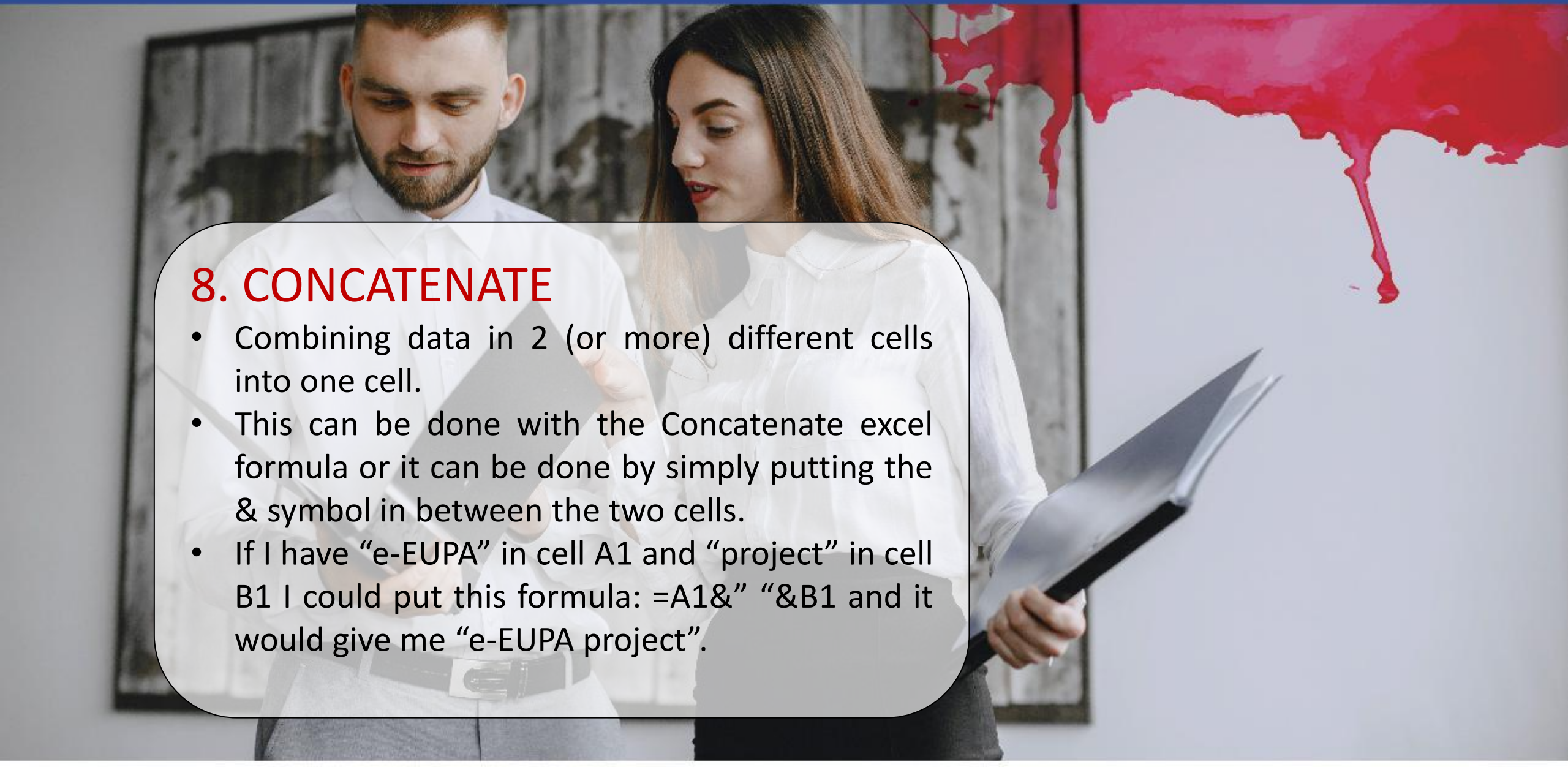
Essential advanced formulas



7. SUMIF, COUNTIF, AVERAGEIF

- Formulas: =SUMIF(range, criteria, sum_range), =COUNTIF(range, criteria), =AVERAGEIF(range, criteria, average_range)
- These formulas all do their respective functions (SUM, COUNT, AVERAGE) IF the criteria are met.
- There are also the formulas: SUMIFS, COUNTIFS, AVERAGEIFS where they will do their respective functions based on multiple criteria you give the formula.

Essential advanced formulas



8. CONCATENATE

- Combining data in 2 (or more) different cells into one cell.
- This can be done with the Concatenate excel formula or it can be done by simply putting the & symbol in between the two cells.
- If I have “e-EUPA” in cell A1 and “project” in cell B1 I could put this formula: =A1&” “&B1 and it would give me “e-EUPA project”.

Essential advanced formulas

More Excel Formulas

- Time formulas (NOW, TODAY, MONTH, YEAR, DAY, etc.)
- Other formulas like AND and OR

Inserting charts in Excel

- To insert a chart:
- Select the cells you want to chart, including the column titles and row labels. These cells will be the source data for the chart.
- In our example, we have selected cells A1:F24.

	A	B	C	D	E	F
1	A	ALCOH	FOOD	K	TRPORT	X
2	3	8.99	157.05	0	80.51	692
3	2	17.75	70.78	0	40.72	272
4	2	2.97	177.2	0	29.31	1130
5	2	13.5	75.11	2	38.11	535
6	2	47.41	147.89	0	108.27	767
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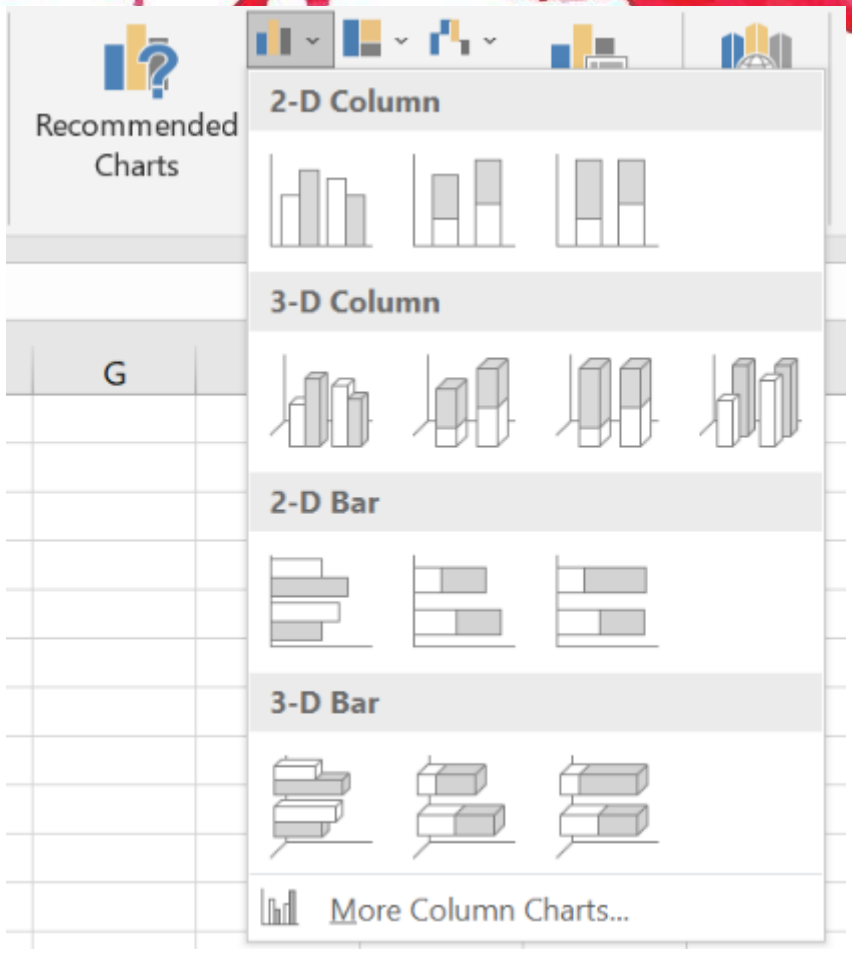
13	2	31.79	75.18	1	57.23	431
14	3	42.9	128.53	1	417.77	1271
15	2	26.97	95.63	3	70.1	709
16	1	18.69	81.14	0	109.1	451
17	2	39.73	117.34	3	100.73	975
18	1	7.28	63.56	0	18.98	309
19	2	46.3	110.51	2	79.34	775
20	1	5.13	40.64	0	31.95	206
21	2	13.85	241.23	3	157.12	445
22	3	26.87	158.49	1	109.89	797
23	2	3.6	98.25	2	7.13	495
24	3	0.7	80.02	1	26.42	732
25	2	3.83	115.03	3	22.6	859
26	2	58.13	244.31	0	155.09	1903
27	1	5.2	60.8	0	41.65	476
28	2	1.95	67.37	1	254.83	881
29	1	4	63.44	0	201.35	480
30	2	21.29	58.29	0	36.51	660
31	1	0.5	29.14	0	11.95	144
32	1	4.38	172.57	4	244.89	616
33	2	12.65	100.52	3	54.98	506
34	2	20.55	53.78	0	21.74	192

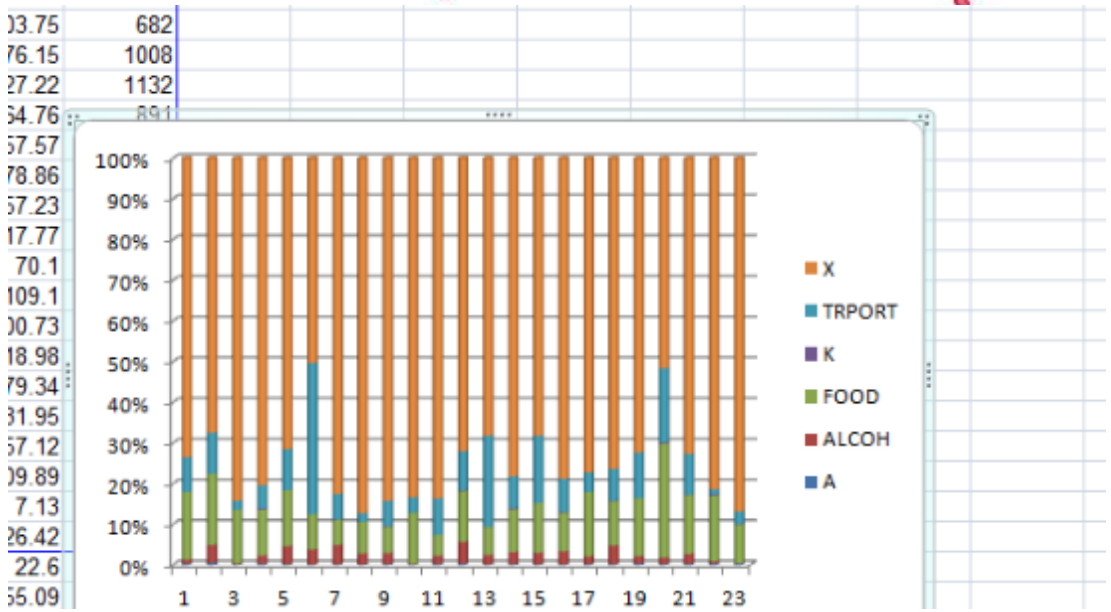
Inserting charts in Excel

- From the Insert tab, click the desired Chart command. In our example, we'll select Column.
- Choose the preferred chart type from the drop-down menu



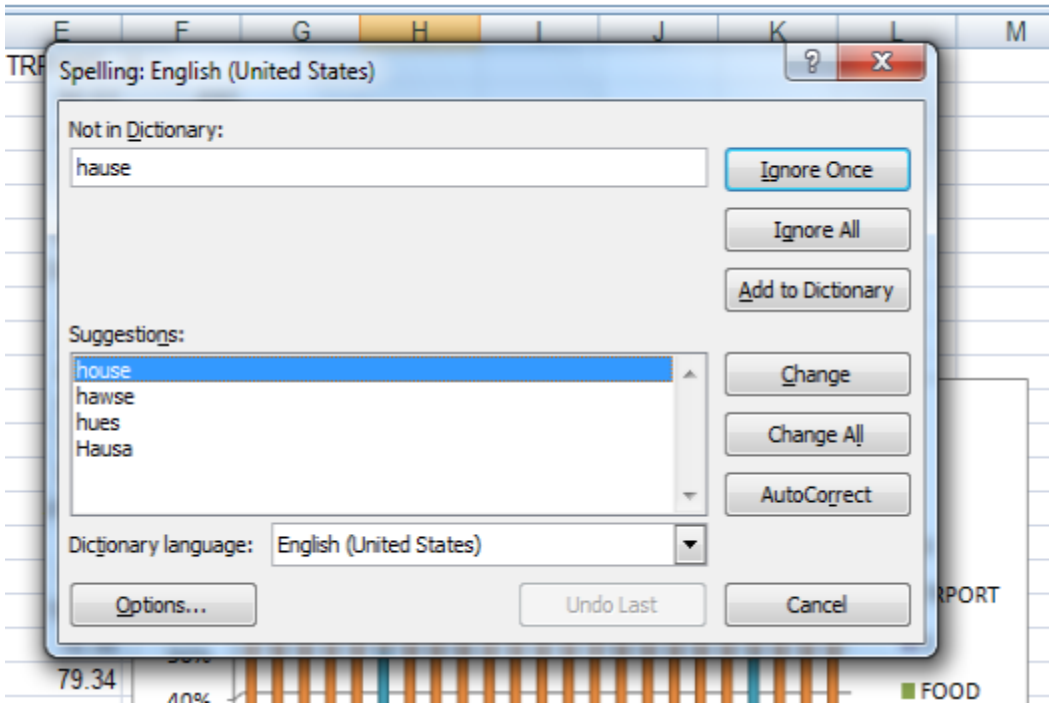
Inserting charts in Excel

- The selected chart will be inserted in the worksheet.
- Excel allows you to add chart elements
- To add a chart element, click the Add Chart Element command on the Design tab, then choose from the drop-down menu.



Spelling and grammar in Excel

- From the Review tab, click Spelling.
- The Spelling dialog box will appear. For each spelling error in your worksheet, Spell Check will try to offer suggestions for the correct spelling
- A dialog box will appear after reviewing all spelling errors. Click OK to close Spell Check.



Methodological Tool I

Create a spreadsheet

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Revision Questions

Question 1

- Which functions of excel are necessary for creating or processing non routine documents?

Question 2

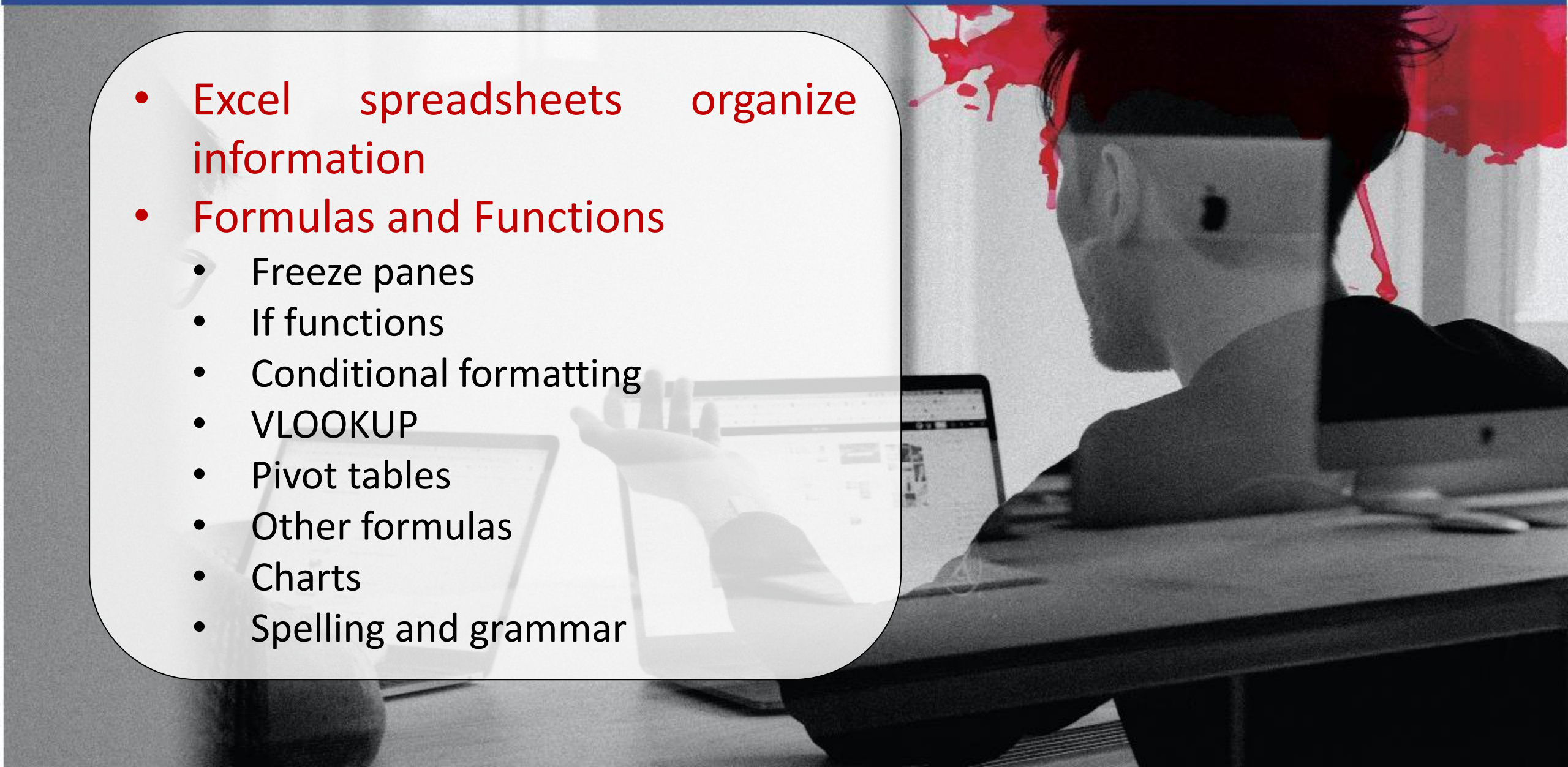
- How can we check spelling and grammar of a spreadsheet?

Question 3

- How can we add a chart?

Module Key points

- Excel spreadsheets organize information
- Formulas and Functions
  - Freeze panes
  - If functions
  - Conditional formatting
  - VLOOKUP
  - Pivot tables
  - Other formulas
  - Charts
  - Spelling and grammar



WELL DONE!

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