

VIA AFRIKA DIGITAL EDUCATION ACADEMY

Google Workspace

SESSION 6

Processing numerical data using Google Sheets, Part 2

CLASS NOTES



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Course content

Google Workspace

Session 1: Getting started with Google Workspace

Session 2: Producing written documents using Google Docs, Part 1

Session 3: Producing written documents using Google Docs, Part 2

Session 4: Producing written documents using Google Docs, Part 3

Session 5: Processing numerical data using Google Sheets, Part 1

Session 6: Processing numerical data using Google Sheets, Part 2

Session 7: Preparing presentations using Google Slides

Google Workspace

Session 6: Processing numerical data using Google Sheets, Part 2

Class Notes



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Outcomes and content

Outcomes of the session

By the end of the session, you will:

- have produced a marksheet
- know how to use formulae to perform calculations (addition, subtraction, multiplication, and division)
- understand the order of preference
- understand the difference between and among Cell Names, Ranges and References
- know how to use basic functions to solve simple problems (MIN, MAX, SUM, COUNT and AVERAGE)
- identify problems based on error indicators (#VALUE, #NAME, #NUM, #REF and #DIV/0)
- understand how to troubleshoot basic errors in formulae and functions
- know how to work with sheets in a spreadsheet (insert, delete and rename)
- know how to perform calculations using functions (COUNTA, COUNTBLANK, ROUND and COUNTIF)
- be able to present numerical data
- know how to create graphs/charts from given data and choose appropriate graph types (column, line and pie)
- be able to edit graphs (chart title, axis titles, data labels and legend) understand how to troubleshoot basic problems in graphs

Content of the session

This session will focus on:

- formulae
- working with Cell Names, Cell Ranges and Cell References
- basic functions
- problems based on error indicators
- troubleshooting basic errors in formulae and functions
- working with sheets in a spreadsheet

- functions
- presenting numerical data
- graphs/charts
- editing graphs
- troubleshooting basic problems in graphs

Outcomes of session 5 as a reminder

By the end of this session, you will:

- understand the purpose of a spreadsheet
- understand the concepts of a cell, a row, a column, and sheet
- understand the use of Cell References
- know how to format and edit cells (key in data, wrap text, merge and unmerge cells, align text, add borders and shading and adjust text direction)
- know how to use the Autofill Feature
- know how to use number formats (plain text, number, currency, time and date)
- know how to resize rows and columns
- know how to format and edit spreadsheets (paper size, page margins and page orientation)
- know how to set a print area and print titles (gridlines and repeat rows/columns)

Overview

Welcome to Session 6 of **Vadea's Google Workspace Course**. This is Part 2 of **Processing numerical data using Google Sheets**.

Building on what you learned during Session 5, we will create a marksheet during this session. You will learn how to perform calculations using formulae and produce charts or graphs.

There are regular tasks and quizzes just to check that you are developing the knowledge needed to move on.

Remember that devices and apps are updated all the time, so the app features and icons that you see here might differ slightly from the app in which you are working.

Producing a marksheet

More about cells

In order to use Google Sheets effectively, you need to be able to work well with specific Cell Names, Cell Ranges and Cell References.

Cell Name

The Cell Name identifies a cell by the column the cell is in, and the row it is in. For example, Cell A3 can be found in Column A and in Row 3.

Cell Range

A Cell Range is a set of individual cells with which you wish to work. A Cell Range is stated in a particular way. They are keyed in as a pair of cells separated by a colon. They can be:

- A number of cells in a column, for example A2:A15. This refers to all the cells in Column A from Row 2 up to Row 15.
- A number of cells in a row, for example A2:F2. This refers to all the cells in Row 2 from Column A to Column F.
- A number of cells in more than one column and across rows, for example A2:B15. This refers to all the cells in Column A from Row 2 up to Row 15 and from Column B, Row 2 up to Row 15.

You can enter the Cell Range manually, or you can highlight the range using your cursor.

Cell Reference

A Cell Reference refers to a cell or a Cell Range on a worksheet. Cell References are a useful formula, because Google Sheets can find the values or data that you want that formula to calculate in another part of the worksheet or even another part of the spreadsheet. (Remember, Google Sheets files are called spreadsheets, and each spreadsheet is made up of one or more sheets or worksheets. One spreadsheet can have many sheets in it.)

You can set one cell to have the same value or content as another cell

For example, we can set Cell C2 to be the same as Cell A2.

1. Type =A2 in Cell C2 and then press Enter.
2. Cell C2 will now have the same value as Cell A2.

Task

- Familiarise yourself with Cell Names, Cell Ranges and Cell References by exploring on your own in Google Sheets.

Using formulae

In Google Sheets, once we have put data into our cells, we will use a number of different formulae and functions to work with that data to calculate information that is useful to us. This could include class averages, percentages, or the numbers of learners who achieved certain marks. We will start off with basic formulae involving Mathematics operations (add, subtract, minus and divide).

A formula in Google Sheets always starts with an = sign and then will use either data or Cell References to complete it. For example, =A2-3 means subtract 3 from the data in Cell A2.

Basic operations

You can do addition: +

Look at the diagram shown after number (6) below. Here, we want to add the number in Cell A2 to the number in Cell A3.

1. Select a cell in which you are going to work.
2. Type the equal sign =
3. Select the cell with the data you want (or type its Cell Reference in the selected cell).
4. Enter the + operator for addition.
5. Select the cell that contains the data you wish to add to the data in your selected cell (or type its name in the selected cell).
6. Press Enter.

B5		fx =A2+A3		
	A	B	C	
1	Marks			
2	34			
3	22			
4				
5	Add the marks ?	=A2+A3		
6				

7. What is the solution for this operation? See if you can do the operation and make a note of the answer you get.

You can do subtraction: -

Look at the diagram shown under number (6) below. Here, we want to subtract the number in Cell A3 from the number in Cell A2.

1. Select the cell in which you are going to work.
2. Type the equal sign =
3. Select the cell with the data you want (or type its Cell Reference in the selected cell).
4. Enter the - operator for subtraction.
5. Select the cell that contains the data you wish to subtract from the data in your selected cell (or type its name in the selected cell).
6. Press Enter.

B5		fx =A2-A3		
	A	B	C	
1	Marks			
2	34			
3	22			
4				
5	Add the marks ?	=A2-A3		
6				

7. What is the solution for this operation? See if you can do the operation and make a note of the answer you get.

You can do multiplication: *

Look at the diagram shown under number (6) below. Here, we want to multiply the value of Cell A2 with the value of Cell A3.

1. Select a cell in which you are going to work.
2. Type the equal sign =
3. Select the cell with the data you want (or type its Cell Reference in the selected cell).
4. Enter the * operator for subtraction (use Shift 8 on your keyboard).
5. Select the cell that contains the data with which you wish to multiply the data in your selected cell (or type its name in the selected cell).
6. Press Enter.

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C
1	Marks		
2	34		
3	22		
4			
5	Add the marks	=A2*A3	
6			

The formula bar at the top shows the formula $=A2*A3$ being entered into cell B5. The cell A2 (34) is highlighted with a dashed orange border, and the cell A3 (22) is highlighted with a dashed purple border. The cell B5 is highlighted with a solid blue border.

7. What is the solution for this operation? See if you can do the operation and make a note of the answer you get.

You can do division: /

Look at the diagram shown after number (6) below. Here, we want to divide the number in Cell A3 with the number in Cell A2.

1. Select a cell in which you are going to work.
2. Type the equal sign =
3. Select the cell with the data you want (or type its Cell Reference in the selected cell).
4. Enter the / operator for subtraction.
5. Select the cell that contains the data with which you wish to divide the data in your selected cell (or type its name in the selected cell).
6. Press Enter.

B5			
	A	B	C
1	Marks		
2	34		
3	22		
4			
5	Add the marks	? =A2/A3	
6			

7. What is the solution for this operation? See if you can do the operation and make a note of the answer you get.

Multiple operations

When you need to do different operations in the same calculation, remember that Google Sheets will use the mathematics rule that says that operations happen in a strict order.

Let's take for for example, $32+2*3$ versus $(32+2)*3$

If you do not use brackets, this is the order of operation

1. Do the calculation for $32+2*3$

B6			
	A	B	C
1	32+2*3		
2	32		
3	2		
4	3		
5			
6	Solution	? =A2+A3*A4	
7			

2. What is the solution for this operation? See if you can do the operation and make a note of the answer you get.

You can change the order of operation by using brackets

1. If you want to add or subtract before you multiply or divide, put that operation in brackets.
2. Do the operation for $(32+2)*3$

	A	B	C
1	$(32+2)*3$		
2	32		
3	2		
4	3		
5			
6	Solution	$= (A2+A3)*A4$	
7			

3. What is the solution for this operation? See if you can do the operation and make a note of the answer you get. Do you notice the difference between the solutions, depending on the order of operation you use?

Task

- Practise using all four operations (+, -, * and /) in formulae in Google Sheets.
- Find the answers to the calculations above in the explanations on how to add, subtract, divide and multiply.
- You can find the solutions in the Task Memos at the end of these Class Notes.

Using basic functions

Functions are pre-programmed formulae in Google Sheets, so they save you the time and energy of having to enter formulae manually.

Structure of a function

A function typically has four basic elements.

1. An equal sign.
2. A function name.
3. A set of brackets ()
4. An argument or arguments (the information or inputs that the function uses to do its job) that go into the brackets.

For example, =SUM(A1:A30)

Each function takes a different argument. Some take one argument while others take several.

Basic functions

Google Sheets provides us with some useful functions. Below is a list of some of them.

Function	What it does
SUM	Adds all the values in a specific Cell Range.
MIN	Returns the smallest value in a specific Cell Range.
MAX	Returns the biggest value in a specific Cell Range.
AVERAGE	Calculates the average for a specific Cell Range.
COUNT	This function counts all cells in a range that contain only numeric values.

You can add up a set of marks using the SUM Function

1. Select the cell in which you want to calculate the SUM.
2. Key in =SUM(
3. Select a Cell Range.
4. Key in)
5. Press Enter.

	A	B
1	Learner name	Mark out of 100
2	Candice Joubert	56
3	Dylan Janse van Rensburg	79
4	Elizabeth Barret	35
5	Gloria Nkebele	51
6	Innocence Ndebele	60
7	Linda Mmela	77
8	Mambo Runganani	80
9	Mampe Msimang	82
10	Martin Mokone	55
11	Nikiwe Zuma	44
12	Peter September	72
13	Ronel Coetzee	42
14	Rose Naidu	36
15	Thandi Mxenge	64
16	Yusuf Timol	84
17		
18	Total	917
19	Lowest score	35
20	Highest score	84
21	Average	61
22	Number of learners	15
23		

You can see who got the lowest mark using the MIN Function

1. Select the cell in which you want to place the information from the MIN Function.
2. Key in =MIN(
3. Select a Cell Range.
4. Key in)
5. Press Enter.

B19		fx =MIN(B2:B16)
	A	B
1	Learner name	Mark out of 100
2	Candice Joubert	56
3	Dylan Janse van Rensburg	79
4	Elizabeth Barret	35
5	Gloria Nkebele	51
6	Innocence Ndebele	60
7	Linda Mmela	77
8	Mambo Runganani	80
9	Mampe Msimang	82
10	Martin Mokone	55
11	Nikiwe Zuma	44
12	Peter September	72
13	Ronel Coetzee	42
14	Rose Naidu	36
15	Thandi Mxenge	64
16	Yusuf Timol	84
17		
18	Total	917
19	Lowest score	35
20	Highest score	84
21	Average	61
22	Number of learners	15
23		

You can see who got the highest mark using the MAX Function

1. Select the cell in which you want to place the information from the MAX Function.
2. Key in =MAX(
3. Select a Cell Range.
4. Key in)
5. Press Enter.

	A	B
1	Learner name	Mark out of 100
2	Candice Joubert	56
3	Dylan Janse van Rensburg	79
4	Elizabeth Barret	35
5	Gloria Nkebele	51
6	Innocence Ndebele	60
7	Linda Mmela	77
8	Mambo Runganani	80
9	Mampe Msimang	82
10	Martin Mokone	55
11	Nikiwe Zuma	44
12	Peter September	72
13	Ronel Coetzee	42
14	Rose Naidu	36
15	Thandi Mxenge	64
16	Yusuf Timol	84
17		
18	Total	917
19	Lowest score	35
20	Highest score	84
21	Average	61
22	Number of learners	15
23		

You can calculate a class average using the AVERAGE Function

1. Select the cell in which you want to calculate the AVERAGE.
2. Key in = AVERAGE(
3. Select a Cell Range.
4. Key in)
5. Press Enter.

B21		fx =AVERAGE(B2:B16)	
	A	B	
1	Learner name	Mark out of 100	
2	Candice Joubert	56	
3	Dylan Janse van Rensburg	79	
4	Elizabeth Barret	35	
5	Gloria Nkebele	51	
6	Innocence Ndebele	60	
7	Linda Mmela	77	
8	Mambo Runganani	80	
9	Mampe Msimang	82	
10	Martin Mokone	55	
11	Nikiwe Zuma	44	
12	Peter September	72	
13	Ronel Coetzee	42	
14	Rose Naidu	36	
15	Thandi Mxenge	64	
16	Yusuf Timol	84	
17			
18	Total	917	
19	Lowest score	35	
20	Highest score	84	
21	Average	61	
22	Number of learners	15	
23			

You can count rows using the COUNT Function

1. Select the cell in which you want to place the information from the COUNT Function.
2. Key in =COUNT(
3. Select a Cell Range.
4. Key in)
5. Press Enter.

	A	B
1	Learner name	Mark out of 100
2	Candice Joubert	56
3	Dylan Janse van Rensburg	79
4	Elizabeth Barret	35
5	Gloria Nkebele	51
6	Innocence Ndebele	60
7	Linda Mmela	77
8	Mambo Runganani	80
9	Mampe Msimang	82
10	Martin Mokone	55
11	Nikiwe Zuma	44
12	Peter September	72
13	Ronel Coetzee	42
14	Rose Naidu	36
15	Thandi Mxenge	64
16	Yusuf Timol	84
17		
18	Total	917
19	Lowest score	35
20	Highest score	84
21	Average	61
22	Number of learners	15
23		

Remember, COUNT counts only the number of cells that contain numerical values.

Task

Enter some random test results on your marksheet and have fun playing with the basic functions.

- SUM
- MIN
- MAX
- AVERAGE
- COUNT

Identifying and dealing with errors

When you enter data into a spreadsheet and use formulae, you will from time to time receive an error message. Do not panic! Simply follow these instructions to fix the error.

Errors and possible fixes

Error	What it means	Possible fixes
#VALUE!	There's something wrong with the way your formula is typed or there's something wrong with the cells you are referencing.	<ul style="list-style-type: none">• Check that the formula has been entered correctly.• Check for text or spaces in referenced cells.
#NAME?	There is a typing error in the formula name.	<ul style="list-style-type: none">• Check the formula for typing errors.
#NUM!	You've entered a numeric value using a number format that's not supported between the brackets of the formula.	<ul style="list-style-type: none">• Check values entered in the brackets of the formula.• Enter values as unformatted numbers (for example, 100 instead of R100,00).
#REF!	Your formula refers to a cell that's not valid. This happens most often when cells that were referenced by formulae have been deleted.	<ul style="list-style-type: none">• Adjust the formula so that it uses a Range Reference instead of individual cells.
#DIV/0!	Microsoft Excel shows the #DIV/0! error when a number is divided by zero.	<ul style="list-style-type: none">• Make sure the divisor in the function or formula isn't zero or a blank cell (for example, 34/0).

Task

- Use the information you have mastered during this lesson to write a short information sheet for your colleagues.
- Explain how to easily identify and fix errors in Google Sheets.

More functions

There are two other functions that are worth learning about to make your teaching administration easier. These functions are the COUNTIF and ROUND Functions.

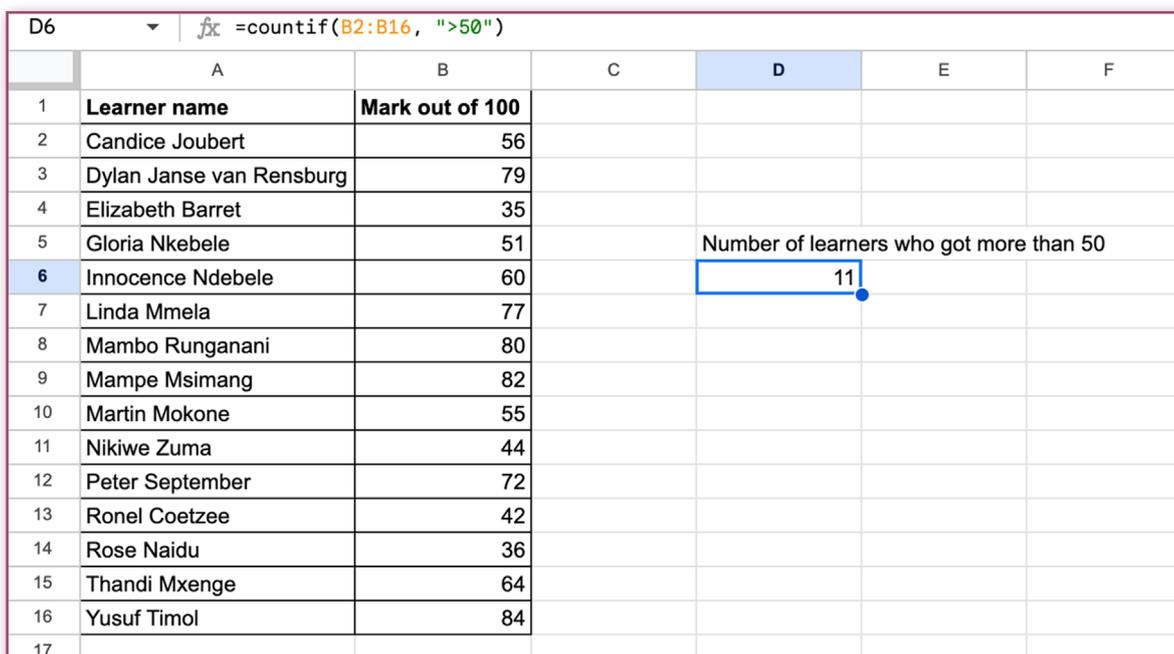
COUNTIF

When you want to calculate how many learners passed a test you could count them all one by one. This is slow. You can, however, use the COUNTIF Function built into Google Sheets to make things easier.

You can use the COUNTIF Function to count numbers of a certain value and above that value

In our example, we want to know how many learners achieved 50% or higher on a test.

1. Select the cell in which you want to display the number of values.
2. In that cell, key in =COUNTIF(
3. Select the Cell Range that contains the numbers to be counted.
4. Key in a comma.
5. Enter the criterion that you are looking for. We are looking for marks above 39 so we will key in ">39". (Remember to put your criteria between quotation marks.)
6. Key in)
7. Press Enter.



The screenshot shows a Google Sheet with a table of learner names and their marks. The formula bar at the top shows the formula =COUNTIF(B2:B16, ">50"). The result of the formula, 11, is displayed in cell D6. The table data is as follows:

	A	B	C	D	E	F
1	Learner name	Mark out of 100				
2	Candice Joubert	56				
3	Dylan Janse van Rensburg	79				
4	Elizabeth Barret	35				
5	Gloria Nkebele	51				
6	Innocence Ndebele	60		Number of learners who got more than 50 11		
7	Linda Mmela	77				
8	Mambo Runganani	80				
9	Mampe Msimang	82				
10	Martin Mokone	55				
11	Nikiwe Zuma	44				
12	Peter September	72				
13	Ronel Coetzee	42				
14	Rose Naidu	36				
15	Thandi Mxenge	64				
16	Yusuf Timol	84				
17						

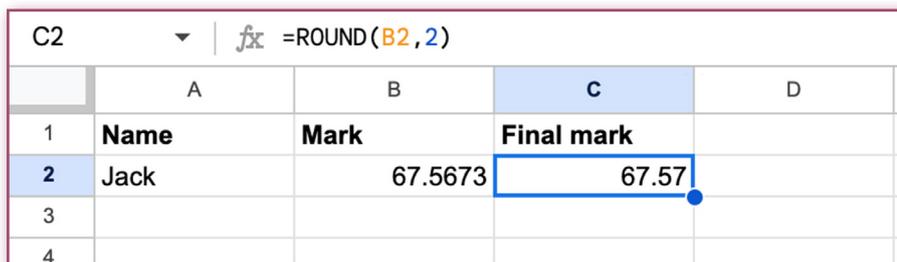
ROUND

Sometimes the learner's average will not be a whole number, so we need to round the number. There are rules to follow, and the Google Sheets Function does it all for you.

You can use the ROUND Function to round numbers to two digits after the decimal comma

We want two digits after the decimal comma in our example.

1. Select the cell in which you want to display the rounded off number.
2. In that cell, key in =ROUND(
3. Select the cell that contains the number to be rounded.
4. Key in a comma.
5. Type the number of digits you want after the decimal comma.
6. Key in)
7. Press Enter.



The screenshot shows a Google Sheet with the following data:

	A	B	C	D
1	Name	Mark	Final mark	
2	Jack	67.5673	67.57	
3				
4				

The formula bar at the top shows: C2 | fx =ROUND(B2,2)

Task

Practice the COUNTIF and ROUND Functions using this information.

Learner number	Mark out of 40
45829	39
10937	22
83627	14
29374	6
41092	28
87302	33
37295	29

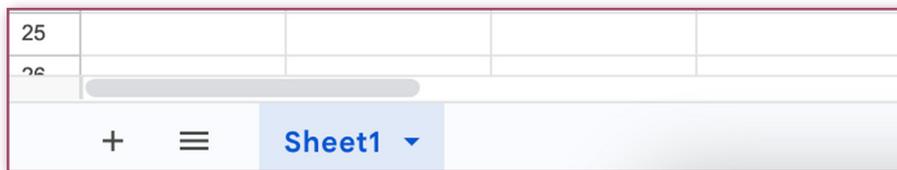
- Pass mark is 40%.
- How many learners did not pass?
- Note that you will first have to calculate the percentage and round it off.
- You can see the solutions in the Task Memos at the end of these Class Notes.

Working with sheets

When we work with Google Sheets, we could create a new spreadsheet (file) for each class, but that means we will have to move from one spreadsheet to another when we work. It is more efficient to put all our class marksheet (each on its own sheet) into one spreadsheet. You can create a spreadsheet called something like 'Class marks' and then have a sheet for each class.

You can add a sheet to your spreadsheet

1. In the bottom left of the screen, notice the words Sheet 1 on a tab.
2. Click the Plus Sign to the left of the tab.



3. A new sheet, called Sheet 2 is automatically created.



4. Add more sheets by clicking the Plus Sign.

You can delete a sheet from your spreadsheet

1. In the tabs showing the sheets in your spreadsheet on the bottom left of the screen, click your Right Touchpad Button over the tab that you want to rename.
2. Select Delete from the menu.
3. If you have any data on the sheet, you will be warned. You can decide if you are happy for the data to be deleted, or you want to cancel the deletion.

You can rename a sheet in your spreadsheet

1. In the tabs showing the sheets in your spreadsheet on the bottom left of the screen, click your Right Touchpad Button over the tab.
2. Select Rename from the menu.
3. The existing name of the sheet will be highlighted in blue. Key the new name into the blue highlight.

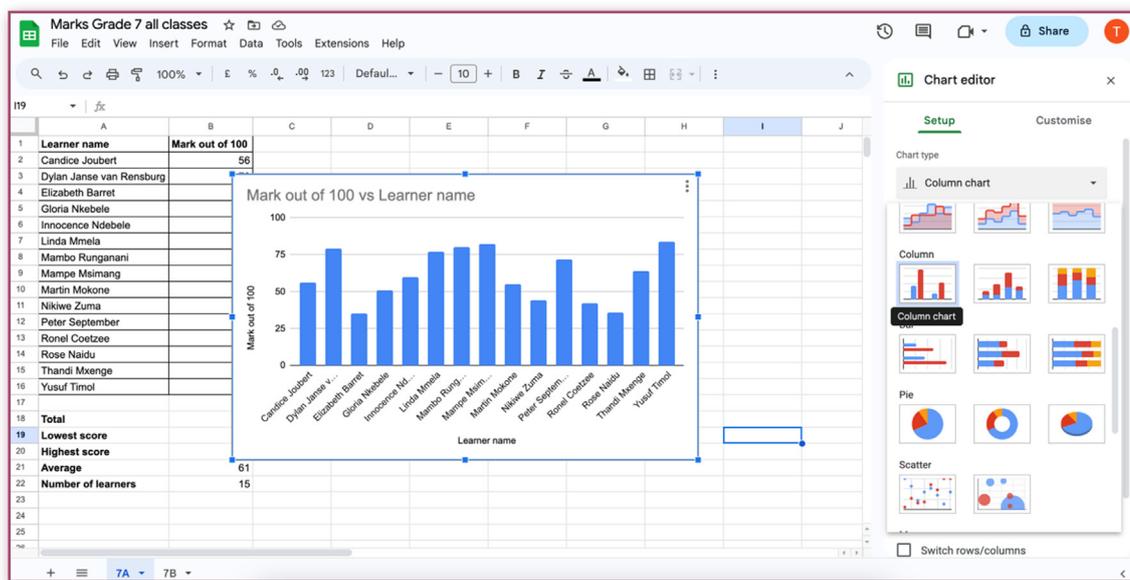
Task

- Insert a new sheet into your spreadsheet.
- Change the sheet name.

Presenting numerical data

Creating charts

Charts (often called graphs) can help us to show and explain complex data in a simple format that is easier to understand quickly. They are particularly useful when we are comparing the performance of learners in a class, or over time. Select the type of chart according to what you want to do.



Column (bar) chart

A column or bar chart is used to compare values across a few categories. You could use this, for example, to show a comparison of term averages among the different classes you teach.

You can create a column or bar chart

1. Select the data for the chart.
2. Click the Insert Menu.
3. Select Chart.
4. Select your preferred column chart.

Line chart

A line chart is used to show trends across time or categories. You could use this, for example, to show a comparison of year averages among the different classes you have taught in the last three years.

You can create a line chart

1. Select the data for the chart.
2. Click the Insert Menu.
3. Select Chart.
4. Select your preferred line chart.

Pie Chart

A pie chart is a graph in which a circle is divided up into slices (like a pie) that each represent a proportion of the whole or, in other words, the size of each slice of the pie). Use a pie chart when the total of your number is 100%. You could use this for example to show the portion of learners who achieved different grades (0 to 39%, 40% to 49%, 50 to 59% etc.).

You can create a pie chart

1. Select the data for the chart.
2. Click the Insert Menu.
3. Select Chart.
4. Select your preferred pie chart.

Task

- Play around with your marksheet to create different types of charts.

Editing charts

Once you have prepared your chart, you may wish to make some changes to what it looks like and the information it contains.

You can change the chart and axis titles of the chart

1. Click in the chart.
2. A Toolbar will open on the right.
3. Click Customise.
4. Click the drop-down menu next to Chart and Axis Titles.
5. Select the chart title or axis title (horizontal or vertical).
6. Click in the Title Text Textbox and key in your preferred name.
7. Change the font and format if you wish.
8. Click anywhere on the sheet to save the change.

You can change the legend of the chart

1. Click in the chart.
2. A Toolbar will open on the right.
3. Click Customise.
4. Click the drop-down menu next to Legend.
5. Select a position for the legend.
6. Change the font and format if you wish.
7. Click anywhere on the sheet to save the change.

Reflection

- Make notes in your PD Journal.
- What changes will you make to your way of working now that you know how to use Google Sheets?

Task memos

Task: Basic operations

- Addition = 56
- Subtraction = 12
- Multiplication = 748
- Division = 1,55
- $32+2*3 = 38$
- $(32+2)*3 = 102$

Task: ROUNDING and COUNTIF

	A	B	C	D	E
1	Learner number	Mark out of 40	%	Rounded	
2	45829	39	97.50%	98	
3	10937	22	55.00%	55	
4	83627	14	35.00%	35	
5	29374	6	15.00%	15	
6	41092	28	70.00%	70	
7	87302	33	82.50%	83	
8	37295	29	72.50%	73	
9					
10		FAILED	2		
11					

About the Final Assessment



At the end of this training session, you will be asked to complete the Final Assessment.

If you complete the Final Assessment successfully, you will qualify for your virtual badge and certificate. You can see a sample here.



Final Assessment

Indicate the **ONE** correct response for each question.

1	Select the best option to complete these sentences. The Cell Name _____ a cell by the _____ the cell is in, and the _____ it is in. For example, Cell A3 can be found in the Column A and in Row 3.
a	(1) references (2) angle (3) row
b	(1) identifies (2) column (3) row
c	(1) column (2) identifies (3) row
2	Select the best option to complete these sentences. A Cell Range is a set of _____ with which you want to work. A Cell Range is stated in a particular way. They are keyed in as a _____ separated by a _____.
a	(1) individual cells (2) pair of cells (3) colon
b	(1) pair of cells (2) individual cells (3) semicolon
c	(1) individual cells (2) pair of cells (3) semicolon
3	Select the best option to complete these sentences. A _____ refers to a cell or a Cell Range on a _____. Cell References are a useful formula because Google Sheets can find the _____ that you want that formula to calculate in another part of the worksheet or even another part of the spreadsheet.
a	(1) Cell Range (2) worksheet (3) values or data
b	(1) Cell Reference (2) formula (3) values or data
c	(1) Cell Reference (2) worksheet (3) values or data
4	A formula in Google Sheets always starts with an = sign and then will use either data or Cell References to complete it. For example, =A2-3 means Subtract 3 from the data in Cell A2. Which formula is correctly structured to work in Google Sheets?
a	=A3+4
b	+3+4
c	/A4+A5

Final Assessment (continued)

Indicate the ONE correct response for each question.

5	You can multiply one number with another number by following these steps in order.
a	<ol style="list-style-type: none">1. Select a cell in which you are going to work.2. Select the cell with the data you want (or type its Cell Reference in the selected cell).3. Type the equal sign.4. Enter the * operator for multiplication.
b	<ol style="list-style-type: none">1. Select a cell in which you are going to work.2. Type the equal sign.3. Select the cell with the data you want (or type its Cell Reference in the selected cell).4. Enter the operator for multiplication.
c	<ol style="list-style-type: none">1. Select a cell in which you are going to work.2. Type the plus sign.3. Select the cell with the data you want (or type its Cell Reference in the selected cell).4. Enter the / operator for multiplication.
6	A function typically has four basic elements.
a	<ol style="list-style-type: none">1. A divide sign.2. A function name.3. A set of brackets.4. The information or inputs that the function uses to do its job that go into the brackets.
b	<ol style="list-style-type: none">1. An equal sign.2. A function name.3. A set of brackets.4. The information or inputs that the function uses to do its job that go into the brackets.
c	<ol style="list-style-type: none">1. A plus sign.2. A function name.3. A set of brackets.4. The information or inputs that the function uses to do its job that go into the brackets.

Final Assessment (continued)

Indicate the ONE correct response for each question.

7	The Function SUM _____
a	adds all the values in a specific Cell Range.
b	calculates the average for a specific Cell Range.
c	this function counts all cells in a range that contain only numeric values.
8	The Function COUNT _____
a	calculates the average for a specific Cell Range.
b	counts all cells in a range that contain only numeric values.
c	adds all the values in a specific Cell Range.
9	You can see who got the lowest mark using the MIN Function by following these steps in order.
a	<ol style="list-style-type: none"> 1. Select the cell in which you want to place the information from the MIN Function. 2. Key in =MIN(. 3. Select a Cell Range. 4. Key in) 5. Press Enter.
b	<ol style="list-style-type: none"> 1. Select the cell in which you want to place the information from the MIN Function. 2. Key in =MIN[. 3. Select a Cell Range. 4. Key in] 5. Press Enter.
c	<ol style="list-style-type: none"> 1. Select the cell in which you want to place the information from the MIN Function. 2. Select a Cell Range. 3. Key in =MIN(4. Key in) 5. Press Enter.
10	The error #VALUE! means _____
a	there is something wrong with the way your formula is typed or there is something wrong with the cells you are referencing.
b	there is a typing error in the formula name.
c	you have entered a numeric value using a number format that's not supported between the brackets of the formula.

Final Assessment (continued)

Indicate the ONE correct response for each question.

11	The error #NAME? means _____
a	there is something wrong with the way your formula is typed or there is something wrong with the cells you are referencing.
b	there is a typing error in the formula name.
c	you have entered a numeric value using a number format that is not supported between the brackets of the formula.
12	You can use the COUNTIF Function to _____
a	calculate the average of a set of values.
b	add a set of values.
c	count the number of numbers of a certain value and above that value.
13	Select the best option to complete the sentence. A _____ or bar chart is used to _____ values _____ a few categories.
a	(1) pie (2) compare (3) across
b	(1) column (2) compare (3) across
c	(1) tower (2) compare (3) across
14	Select the best option to complete these sentences. Charts can help us to _____ complex data in a simple format that is easier to understand quickly. Select the _____ according to what you want to do.
a	(1) show and explain (2) type of chart
b	1) type of chart (2) show and explain
c	1) calculate (2) type of chart
15	Select the best option to complete the sentence. A Line Chart is used to show _____ across _____ or _____.
a	(1) concepts (2) time (3) categories
b	(1) trends (2) time (3) place
c	(1) trends (2) time (3) categories

Acknowledgements

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