RANKX is a type of function in Power BI. It is a built-in function termed a sorting function, which is used extensively in sorting the data in various conditions. The syntax for this function is as follows: RANKX(<table>, <expression>, <value>, <order>, <ties>).

RANKX Function in Power BI

The RANKX function in Power BI works similarly to the one in the **excel RANK function** and assigns rank based on numbers of the specific or mentioned column. Below is the syntax of the RANKX **Power BI DAX** function.

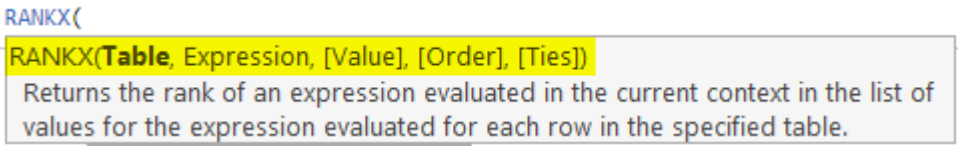


Table: We need to specify based on which table you are ranking.

Expression: We must supply the column name here based on which column you are ranking.

Value: This is a bizarre argument unless you are ranking at the advanced level. This argument will not put to use. So don't worry about this argument at this point in time.

Order: In this argument, we can mention whether the ranking is in the form of ascending or descending order. The default parameter is in descending order, i.e., it will rank the top value 1, and so on.

We can supply two arguments here: TRUE or FALSE. TRUE is for ascending order, i.e., the lowest value is 1. If you supply FALSE, it will rank in descending order. Therefore, the highest value is 1.

Ties: This is the important thing you need to learn. In this argument, we can specify what should be done if there is a TIE between two values.

- If you SKIP this, the rank after the tied value will be the rank of the tied value plus a count of tied values. So, for example, if there are 3 values tied at 5th rank, then the next rank will be 8 = (5+3).
- If you supply DENSE as the option, the next value after the tied rank will be the next rank of the tied values. So, for example, if there are 3 values tied at 5th rank, then the next rank will be 6 = (5+1).

Example of RANKX Function in Power BI

Below is an example of a RANKX function. To apply this function in Power BI, we have created the below data in Excel.

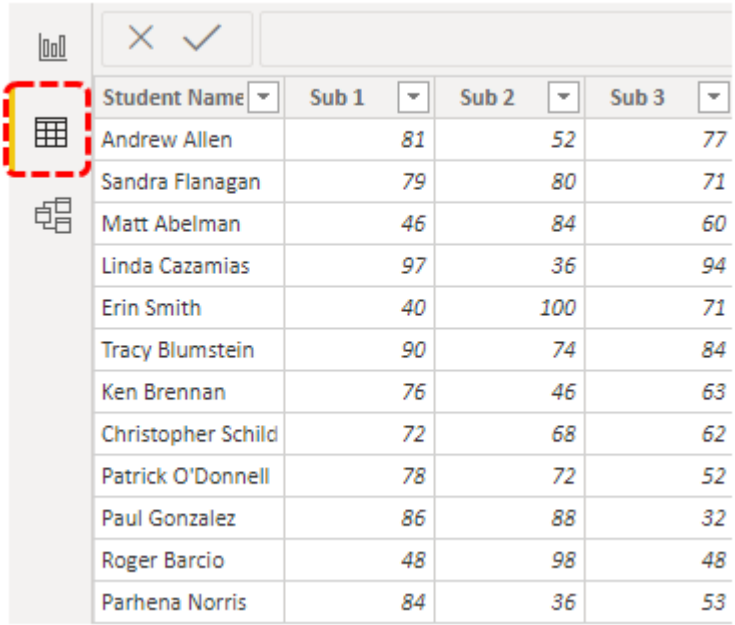
	A	B	C	D	E	F	G	H
1	**Student Name**	**Sub 1**	**Sub 2**	**Sub 3**	**Sub 4**	**Sub 5**	**Sub 6**	**Total**
2	Andrew Allen	81	52	77	87	84	57	438
3	Sandra Flanagan	79	80	71	32	47	93	402
4	Matt Abelman	46	84	60	74	94	82	440
5	Linda Cazamias	97	36	94	37	36	34	334
6	Erin Smith	40	100	71	79	51	46	387
7	Tracy Blumstein	90	74	84	63	42	59	412
8	Ken Brennan	76	46	63	37	37	37	296
9	Christopher Schild	72	68	62	53	51	95	401
10	Patrick O'Donnell	78	72	52	61	61	92	416
11	Paul Gonzalez	86	88	32	90	80	43	419
12	Roger Barcio	48	98	48	37	72	100	403
13	Parhena Norris	84	36	53	93	93	87	446
14	Katherine Ducich	66	84	57	92	36	86	421
15	Janet Martin	40	99	83	67	77	99	465
16	Cynthia Voltz	44	73	90	47	38	88	380

It is the data of marks obtained from 6 subjects. Then, based on different parameters, we will rank these students.

Copy and paste the data directly to Power BI. Else, you can copy it to an Excel file and then import it to Power BI as an Excel file reference. So, you can download the Excel workbook template from the link below, which is used for this example.

You can download this Power BI RANKX Excel Template here – **Power BI RANKX Excel Template**

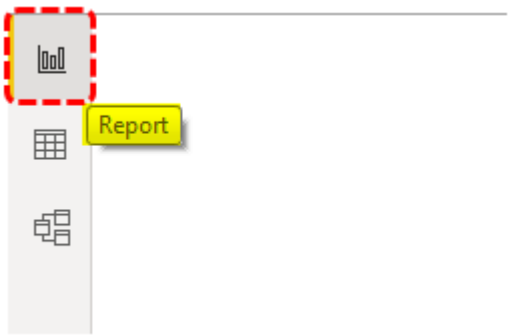
We have directly uploaded the data to Power BI.



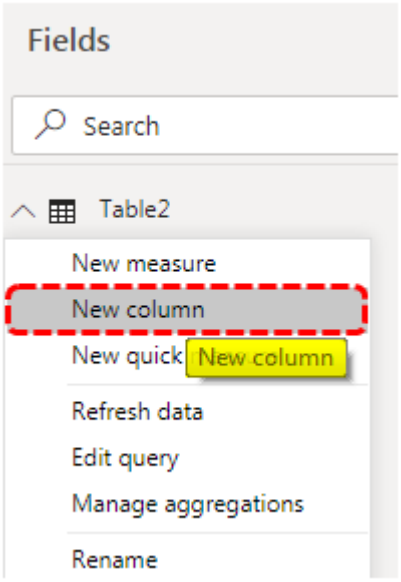
Student Name	Sub 1	Sub 2	Sub 3
Andrew Allen	81	52	77
Sandra Flanagan	79	80	71
Matt Abelman	46	84	60
Linda Cazamias	97	36	94
Erin Smith	40	100	71
Tracy Blumstein	90	74	84
Ken Brennan	76	46	63
Christopher Schild	72	68	62
Patrick O'Donnell	78	72	52
Paul Gonzalez	86	88	32
Roger Barcio	48	98	48
Parhena Norris	84	36	53

You can use the RANKX function in the following steps.

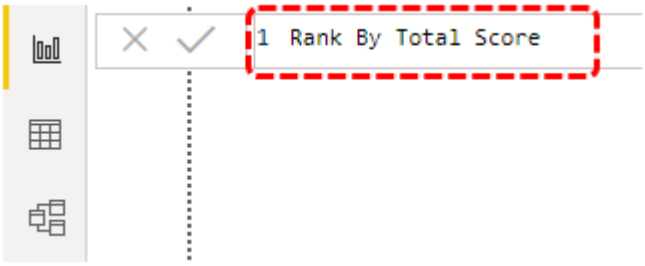
1. **Go to the "Report" view.**



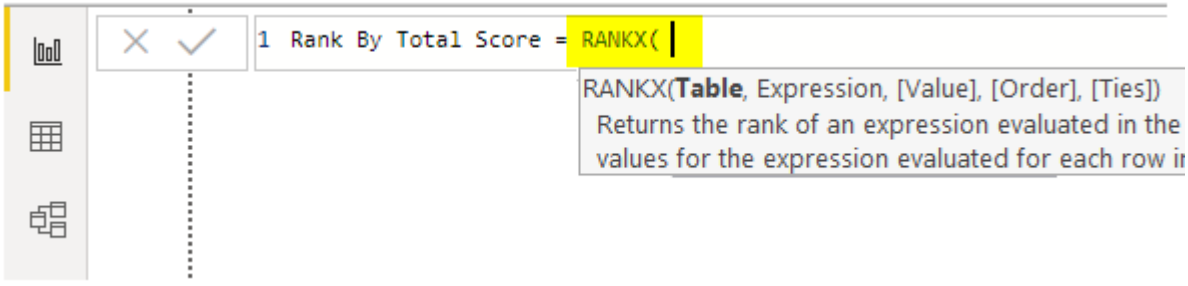
2. **In the "Fields" section, right-click on the table name and choose "New column."**



3. **First, we need to enter what should be the column name. We will name it "Rank By Total Score."**

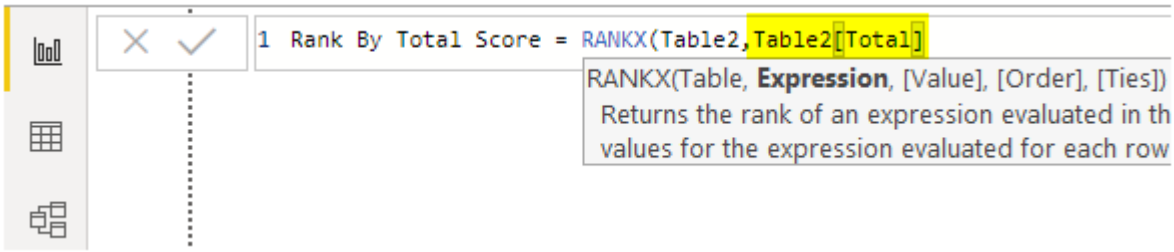


4. **For this new column, open the Power BI RANKX function.**



5. **The table is the first parameter of this function, so our table name is "Table2," and supplies the same.**

6. **Expression is nothing but based on which column value we need to rank. Based on "Total," we are ranking in this case so that we will supply the same.**



7. **Close the bracket and press the "Enter" key to get this new calculated column in the table.**

8. **Now, insert a blank “Table” visual to see how our RANKX formula works.**

9. **Drag and drop “Student Name,” “Total,” and the newly calculated column, i.e., “Rank By Total Score,” to the “Values” field of the “Table” visual.**

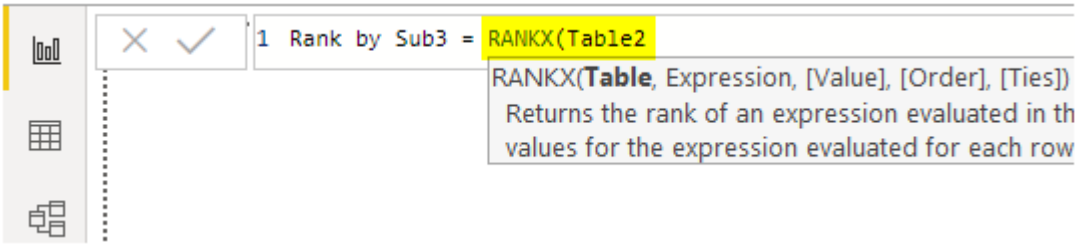
10. **It will give us each student’s RANK against the total score.**

So, we have a ranking based on the scores of each student.

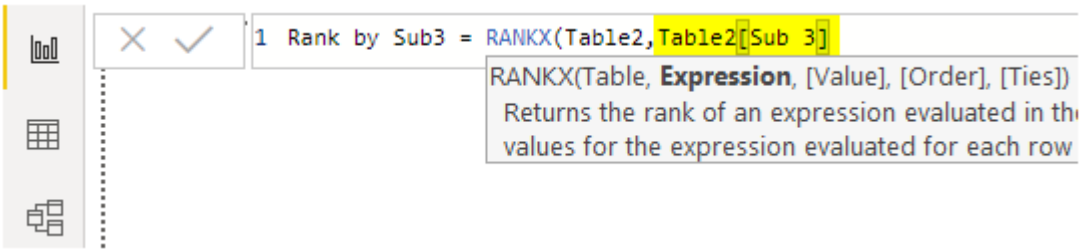
11. **By using the RANK column, we can sort the data. Place a cursor on a rank column to see a small down arrow key.**

12. **Now, assume you want to rank students based on "Sub3" scores. For this, insert one more column.**

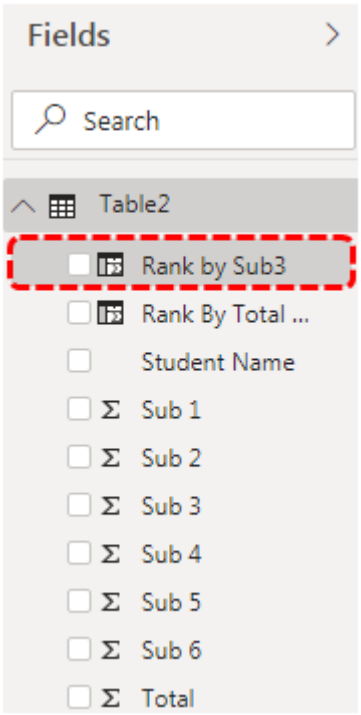
13. **Once again, open the Power BI RANKX function and supply the TABLE name.**



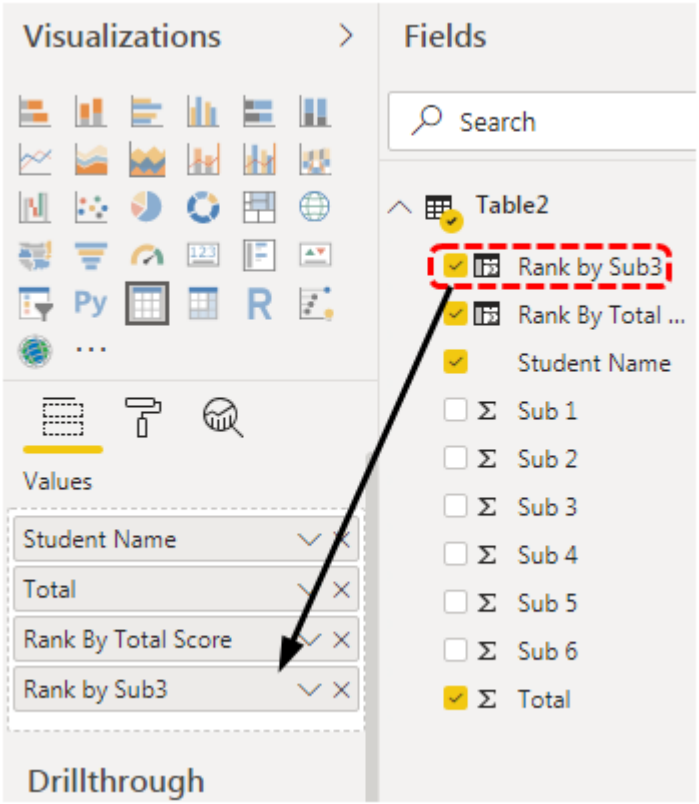
14. **For Expression, instead of the "Total" column, supply the "Sub 3" column.**



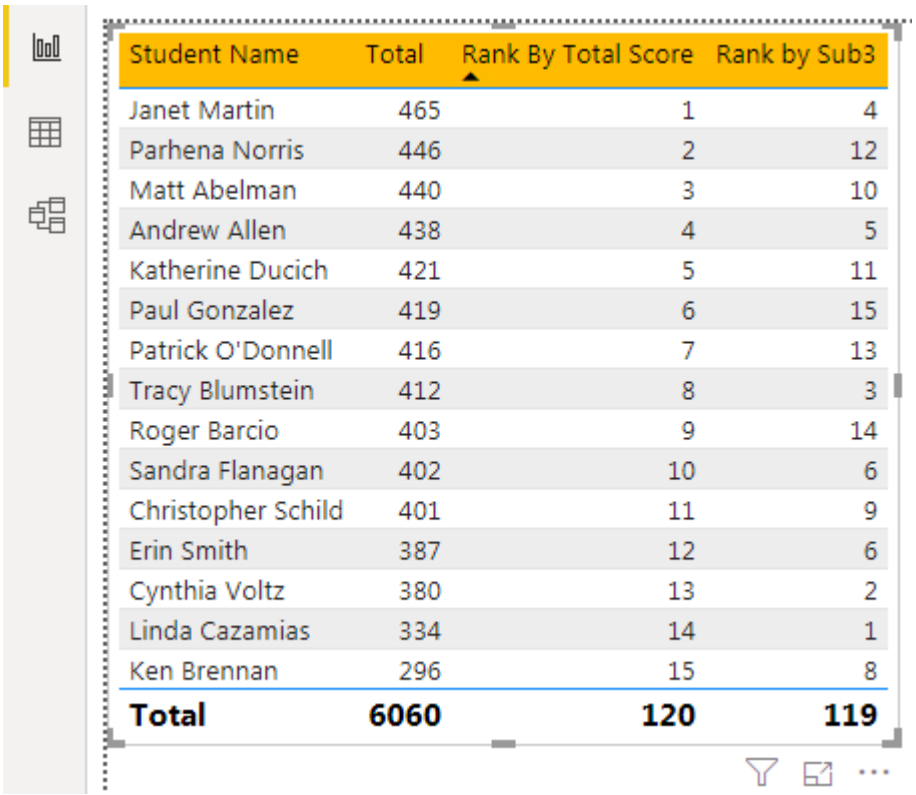
15. **Press the "Enter" key. We will have a new calculated column.**



16. **For the existing table, only insert this newly calculated rank column, “Rank by Sub3,” in the “Values” field.**



17. **Now, we can see the table with the old and new rankings.**



Student Name	Total	Rank By Total Score	Rank by Sub3
Janet Martin	465	1	4
Parhena Norris	446	2	12
Matt Abelman	440	3	10
Andrew Allen	438	4	5
Katherine Ducich	421	5	11
Paul Gonzalez	419	6	15
Patrick O'Donnell	416	7	13
Tracy Blumstein	412	8	3
Roger Barcio	403	9	14
Sandra Flanagan	402	10	6
Christopher Schild	401	11	9
Erin Smith	387	12	6
Cynthia Voltz	380	13	2
Linda Cazamias	334	14	1
Ken Brennan	296	15	8
Total	**6060**	**120**	**119**

The first student, “Janet Martin,” was ranked as 1 based on the total score column but based on “Sub 3,” he is ranked as 4.

Note: We have done so much formatting to this table. You can download the Power BI RANKX template from the link below and apply each formatting technique as applied.

You can download this Power BI RANKX Template here – **Power BI RANKX Template**

Things to Remember

- We can skip optional arguments by entering a comma.
- If we want different ranking techniques in case of a tie, we must use the “TIE” argument of the function.
- The first two arguments are mandatory, and the rest are optional.