

# How a Pivot Table Works

PIVOT TABLES IN SPREADSHEETS



**Frank Sumanski**

Founder, SpreadsheetAllstars.com

Avg Rainfall

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All changes saved in Drive

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\$ % .0 .00 123

Arial 10

fx

	A	B	C	D	E	F	G	H	I	J	K	L
1		Columns										
2	Rows	Values										
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												

Pivot table editor

Rainfall!B3:F615

Suggested

- Average of Inches for each Month
- Number of unique City for each Month
- Sum of Millimetres for each Month

RowsADD

ColumnsADD

ValuesADD

FiltersADD

+ ≡

Rainfall Pivot Table 3

+

Avg Rainfall

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fx

	A	B	C	D	E	F	G	H	I	J	K	L
1		Columns										
2	Rows	Values										
3												
4												
5												
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7												
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12												
13												
14												
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16												
17												
18												

Pivot table editor

Rainfall!B3:F615

Suggested

Average of Inches for each Month

Number of unique City for each Month

Sum of Millimetres for each Month

Rows

ADD

Columns

ADD

Values

ADD

Filters

ADD

+ ≡ Rainfall Pivot Table 3

Avg Rainfall

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Arial

10

fx

	A	B	C	D	E	F
1	City					
2	Atlanta, Georgia					
3	Austin, Texas					
4	Baltimore, Maryland					
5	Birmingham, Alabama					
6	Boston, Massachusetts					
7	Buffalo, New York					
8	Charlotte, North Carolina					
9	Chicago, Illinois					
10	Cincinnati, Ohio					
11	Cleveland, Ohio					
12	Columbus, Ohio					
13	Dallas, Texas					
14	Denver, Colorado					
15	Detroit, Michigan					
16	Hartford, Connecticut					
17	Houston, Texas					
18	Indianapolis, Indiana					

Pivot table editor

Suggested

Rows

City

OrderAscendingSort byCityShow totals

Columns

Values

Filters

Rainfall

Pivot Table 1

Avg Rainfall

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fx

	A	B	C	D	E	F	G	H	I	J	K	L
1	City											
2	Atlanta, Georgia											
3	Austin, Texas											
4	Baltimore, Maryland											
5	Birmingham, Alabama											
6	Boston, Massachusetts											
7	Buffalo, New York											
8	Charlotte, North Carolina											
9	Chicago, Illinois											
10	Cincinnati, Ohio											
11	Cleveland, Ohio											
12	Columbus, Ohio											
13	Dallas, Texas											
14	Denver, Colorado											
15	Detroit, Michigan											
16	Hartford, Connecticut											
17	Houston, Texas											
18	Indianapolis, Indiana											

Pivot table editor

Suggested

Rows

City

OrderAscendingSort byCity

Show totals

Columns

Values

Filters

+ ≡ Rainfall Pivot Table 3

# Let's practice!

PIVOT TABLES IN SPREADSHEETS

# Using Filters

PIVOT TABLES IN SPREADSHEETS



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fx

SUM of Millimetres

	A	B	C	D	E	F	G	H	I	J	K
1	City	SUM of Millimetres									
2	Atlanta, Georgia	1297									
3	Austin, Texas	808									
4	Baltimore, Maryland	1079									
5	Birmingham, Alabama	1375									
6	Boston, Massachusetts	1105									
7	Buffalo, New York	1017									
8	Charlotte, North Carolina	1055									
9	Chicago, Illinois	943									
10	Cincinnati, Ohio	1062									
11	Cleveland, Ohio	995									
12	Columbus, Ohio	1017									
13	Dallas, Texas	906									
14	Denver, Colorado	404									
15	Detroit, Michigan	847									
16	Hartford, Connecticut	1159									
17	Houston, Texas	1210									
18	Indianapolis, Indiana	1087									

Pivot table editor

Suggested

Rows

City

Order

Ascending

Sort by

City

Show totals

Columns

Values

Millimetres

Summarize by

SUM

Show as

Default

+

☰

Rainfall

Pivot Table 3



Avg Rainfall

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fx

SUM of Millimetres

	A	B	C	D	E	F	G	H	I	J	K
1	City	SUM of Millimetres									
2	Atlanta, Georgia	1297									
3	Austin, Texas	808									
4	Baltimore, Maryland	1079									
5	Birmingham, Alabama	1375									
6	Boston, Massachusetts	1105									
7	Buffalo, New York	1017									
8	Charlotte, North Carolina	1055									
9	Chicago, Illinois	943									
10	Cincinnati, Ohio	1062									
11	Cleveland, Ohio	995									
12	Columbus, Ohio	1017									
13	Dallas, Texas	906									
14	Denver, Colorado	404									
15	Detroit, Michigan	847									
16	Hartford, Connecticut	1159									
17	Houston, Texas	1210									
18	Indianapolis, Indiana	1087									

Pivot table editor

City

☒ Show totals

Columns

ADD

Values

ADD

Millimetres

Summarize by SUM Show as Default

Filters

ADD

Month

Status Showing all items

Rainfall

Pivot Table 3

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fx

SUM of Millimetres

	A	B	C	D	E	F	G	H	I	J	K
1	City	SUM of Millimetres									
2	Atlanta, Georgia	1297									
3	Austin, Texas	808									
4	Baltimore, Maryland	1079									
5	Birmingham, Alabama	1375									
6	Boston, Massachusetts	1105									
7	Buffalo, New York	1017									
8	Charlotte, North Carolina	1055									
9	Chicago, Illinois	943									
10	Cincinnati, Ohio	1062									
11	Cleveland, Ohio	995									
12	Columbus, Ohio	1017									
13	Dallas, Texas	906									
14	Denver, Colorado	404									
15	Detroit, Michigan	847									
16	Hartford, Connecticut	1159									
17	Houston, Texas	1210									
18	Indianapolis, Indiana	1087									

Pivot table editor

City

OrderAscendingSort byCity

Show totals

Columns

ADD

Values

ADD

Millimetres

Summarize bySUMShow asDefault

Filters

ADD

+ ≡ Rainfall Pivot Table 3

# Let's practice!

PIVOT TABLES IN SPREADSHEETS

# Putting All the Pieces Together

PIVOT TABLES IN SPREADSHEETS



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fx '01-Jan

	A	B	C	D	E	F	G	H	I	J	K	L
1	Dataset = Average Rainfall in 50 Major US Cities from 1981-2010. Source - CurrentResults.com											
2												
3		Month	Days	City	Inches	Millimetres						
4		01-Jan	11	Atlanta, Georgia	4.2	107						
5		02-Feb	10	Atlanta, Georgia	4.7	119						
6		03-Mar	10	Atlanta, Georgia	4.8	122						
7		04-Apr	9	Atlanta, Georgia	3.4	85						
8		05-May	9	Atlanta, Georgia	3.7	93						
9		06-Jun	12	Atlanta, Georgia	5.3	134						
10		07-Jul	12	Atlanta, Georgia	5.3	134						
11		08-Aug	10	Atlanta, Georgia	3.9	99						
12		09-Sep	8	Atlanta, Georgia	4.5	114						
13		10-Oct	7	Atlanta, Georgia	3.4	87						
14		11-Nov	9	Atlanta, Georgia	4.1	104						
15		12-Dec	11	Atlanta, Georgia	3.9	99						
16		01-Jan	7	Austin, Texas	2.2	56						
17		02-Feb	7	Austin, Texas	2.0	51						

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Rainfall

Explore

Avg Rainfall

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	A	B	C	D	E	F	G	H	I	J	K	L
1	SUM of Days	Month										
2	City	01-Jan	02-Feb	03-Mar	04-Apr	05-May	06-Jun	07-Jul	08-Aug	09-Sep	10-Oct	11-Nov
3	Atlanta, Georgia	11	10	10	9	9	12	12	10	8	7	9
4	Austin, Texas	7	7	9	7	9	5	5	5	7	8	8
5	Baltimore, Maryland	10	9	10	11	11	10	10	9	9	8	9
6	Birmingham, Alabama	11	10	10	9	10	12	12	10	7	8	9
7	Boston, Massachusetts	11	10	12	11	12	10	10	9	9	9	11
8	Buffalo, New York	19	16	15	13	13	11	11	10	11	13	15
9	Charlotte, North Carolina	10	9	10	9	10	11	11	10	7	7	8
10	Chicago, Illinois	11	9	11	12	12	10	10	10	8	10	11
11	Cincinnati, Ohio	11	10	12	13	13	12	12	11	11	10	11
12	Cleveland, Ohio	17	14	14	14	13	10	10	10	10	11	14
13	Columbus, Ohio	14	11	13	14	14	11	11	9	8	9	11
14	Dallas, Texas	7	7	8	7	10	5	5	5	5	8	7
15	Denver, Colorado	5	6	7	8	11	9	9	9	7	5	6
16	Detroit, Michigan	13	11	12	12	12	10	10	10	10	10	12
17	Hartford, Connecticut	11	10	12	11	13	10	10	10	10	10	11
18	Houston, Texas	10	9	9	7	8	9	9	8	8	8	8

Pivot table editor

Order: Ascending

Sort by: City

Show totals

Columns

Month

Order: Ascending

Sort by: Month

Show totals

Values

Days

Summarize by: SUM

Show as: Default

Rainfall

Pivot Table 4

Avg Rainfall

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	A	B	C	D	E	F	G	H	I	J	K	L
1	SUM of Days	Month										
2	City	01-Jan	02-Feb	03-Mar	04-Apr	05-May	06-Jun	07-Jul	08-Aug	09-Sep	10-Oct	11-Nov
3	Atlanta, Georgia	11	10	10	9	9	12	12	10	8	7	9
4	Austin, Texas	7	7	9	7	9	5	5	5	7	8	8
5	Baltimore, Maryland	10	9	10	11	11	10	10	9	9	8	9
6	Birmingham, Alabama	11	10	10	9	10	12	12	10	7	8	9
7	Boston, Massachusetts	11	10	12	11	12	10	10	9	9	9	11
8	Buffalo, New York	19	16	15	13	13	11	11	10	11	13	15
9	Charlotte, North Carolina	10	9	10	9	10	11	11	10	7	7	8
10	Chicago, Illinois	11	9	11	12	12	10	10	10	8	10	11
11	Cincinnati, Ohio	11	10	12	13	13	12	12	11	11	10	11
12	Cleveland, Ohio	17	14	14	14	13	10	10	10	10	11	14
13	Columbus, Ohio	14	11	13	14	14	11	11	9	8	9	11
14	Dallas, Texas	7	7	8	7	10	5	5	5	5	8	7
15	Denver, Colorado	5	6	7	8	11	9	9	9	7	5	6
16	Detroit, Michigan	13	11	12	12	12	10	10	10	10	10	12
17	Hartford, Connecticut	11	10	12	11	13	10	10	10	10	10	11
18	Houston, Texas	10	9	9	7	8	9	9	8	8	8	8

Pivot table editor

Order Ascending

Sort by City

Show totals

Columns

Month

Order Ascending

Sort by Month

Show totals

Values

Days

Summarize by SUM

Show as Default

Rainfall

Pivot Table 4

# Let's practice!

PIVOT TABLES IN SPREADSHEETS