

Twitter Thread by Clint Murphy



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10 Excel Formulas To 10x Your Productivity:

You have a table of cookie sales and have to answer:

- Who sold least / most cookies by month
- Who are the top 25% / bottom 25%
- Who has the most winning months
- Who has the most losing months
- Who sold the most cookies
- How is each girl trending

Let's dive in.

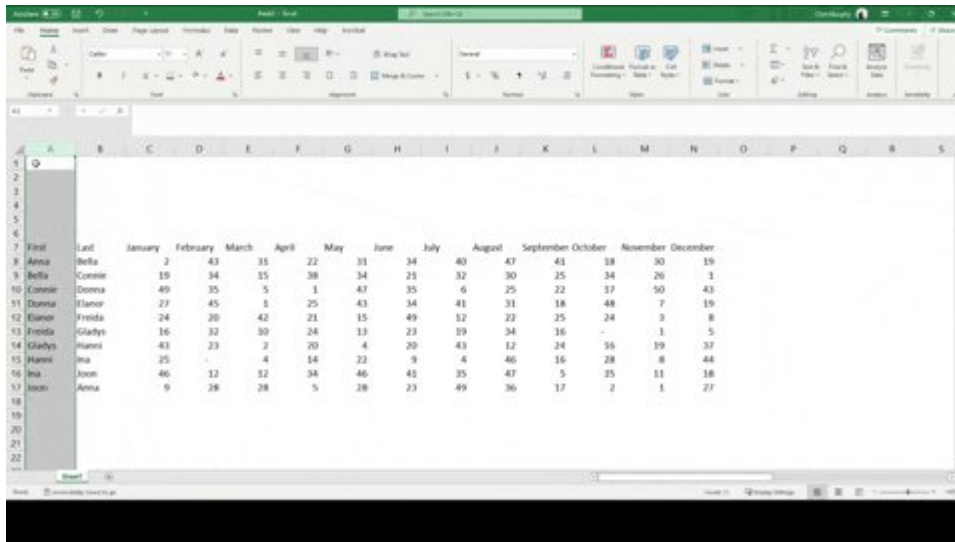
| First | Last | January | February | March | April | May | June | July | August | September | October | November | December |
|--------|--------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| Anna | Bella | 2 | 43 | 31 | 22 | 31 | 34 | 40 | 47 | 41 | 18 | 30 | 19 |
| Bella | Connie | 19 | 34 | 15 | 38 | 34 | 21 | 32 | 30 | 25 | 34 | 26 | 1 |
| Connie | Donna | 49 | 35 | 5 | 1 | 47 | 35 | 6 | 25 | 22 | 17 | 50 | 43 |
| Donna | Elanor | 27 | 45 | 1 | 25 | 43 | 34 | 41 | 31 | 18 | 48 | 7 | 19 |
| Elanor | Freida | 24 | 20 | 42 | 21 | 15 | 49 | 12 | 22 | 25 | 24 | 3 | 8 |
| Freida | Gladys | 16 | 32 | 10 | 24 | 13 | 23 | 19 | 34 | 16 | - | 1 | 5 |
| Gladys | Hanni | 43 | 23 | 2 | 20 | 4 | 20 | 43 | 12 | 24 | 16 | 19 | 37 |
| Hanni | Ina | 25 | - | 4 | 14 | 22 | 9 | 4 | 46 | 16 | 28 | 8 | 44 |
| Ina | Joon | 46 | 12 | 12 | 34 | 46 | 41 | 35 | 47 | 5 | 35 | 11 | 18 |
| Joon | Anna | 9 | 28 | 28 | 5 | 28 | 23 | 49 | 36 | 17 | 2 | 1 | 27 |

- Format & shortcuts

Before you start, format your worksheet and lay out what you want to build.

Shortcuts used:

- Ctrl + space bar = Insert Column
- Shift + space bar = Insert Row
- Ctrl + shift + + = Insert
- Ctrl + R = Fill Right
- =Sum(G8:G17)



The screenshot shows an Excel spreadsheet with a data table. The table has columns for months (January to December) and rows for names (Anna, Bella, Connor, Daniela, Eleanor, Frida, Gladys, Hansi, Ina, Joon, Anna). The data values are as follows:

| | Last | January | February | March | April | May | June | July | August | September | October | November | December |
|---------|---------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| Anna | Bella | 2 | 43 | 35 | 22 | 31 | 34 | 40 | 47 | 41 | 38 | 30 | 19 |
| Bella | Connor | 19 | 34 | 35 | 38 | 34 | 25 | 32 | 30 | 25 | 34 | 26 | 1 |
| Connor | Daniela | 48 | 35 | 5 | 1 | 47 | 35 | 6 | 25 | 22 | 17 | 50 | 43 |
| Daniela | Eleanor | 27 | 45 | 1 | 25 | 43 | 34 | 41 | 31 | 18 | 48 | 7 | 19 |
| Eleanor | Frida | 24 | 30 | 42 | 21 | 15 | 49 | 52 | 27 | 25 | 24 | 3 | 8 |
| Frida | Gladys | 16 | 32 | 30 | 24 | 13 | 23 | 19 | 34 | 16 | - | 1 | 5 |
| Gladys | Hansi | 43 | 23 | 2 | 20 | 4 | 20 | 43 | 12 | 24 | 56 | 19 | 37 |
| Hansi | Ina | 25 | - | 4 | 14 | 22 | 9 | 4 | 46 | 16 | 28 | 8 | 44 |
| Ina | Joon | 46 | 32 | 52 | 34 | 46 | 45 | 35 | 47 | 5 | 35 | 11 | 38 |
| Joon | Anna | 9 | 28 | 28 | 5 | 28 | 23 | 49 | 36 | 17 | 2 | 1 | 27 |

- Min and Max

Min and Max are helpful when working with large data sets.

Min returns the lowest value in a series of data.

Max returns the highest value in a series of data.

Min Formula: =Min(number1, number2...)

Max Formula: =Max(number1, number2...)

| First | Last | January | February | March | April | May | June | July | August | September | October | November | December | Total | Min | Max |
|---------|---------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|-------|-----|-----|
| Anna | Bella | 2 | 83 | 31 | 22 | 31 | 38 | 40 | 47 | 41 | 38 | 30 | 18 | | | |
| Bella | Corinne | 19 | 34 | 35 | 39 | 34 | 23 | 32 | 39 | 25 | 34 | 26 | 5 | | | |
| Corinne | Deanna | 49 | 36 | 5 | 1 | 47 | 35 | 6 | 25 | 22 | 27 | 50 | 40 | | | |
| Deanna | Elaine | 27 | 45 | 1 | 25 | 43 | 34 | 41 | 31 | 38 | 46 | 7 | 18 | | | |
| Elaine | Freddie | 24 | 29 | 42 | 23 | 33 | 49 | 12 | 22 | 23 | 24 | 3 | 8 | | | |
| Freddie | Gladys | 16 | 30 | 30 | 24 | 33 | 23 | 19 | 24 | 36 | - | - | 3 | 5 | | |
| Gladys | Hanni | 83 | 23 | 2 | 20 | 8 | 20 | 43 | 12 | 24 | 16 | 18 | 17 | | | |
| Hanni | Ina | 25 | - | 4 | 14 | 23 | 9 | 4 | 46 | 36 | 29 | 8 | 44 | | | |
| Ina | Isabel | 86 | 12 | 12 | 34 | 46 | 40 | 35 | 47 | 5 | 25 | 12 | 18 | | | |
| Isabel | Anna | 9 | 28 | 28 | 5 | 28 | 23 | 49 | 36 | 17 | 3 | 3 | 17 | | | |
| Total | | 340 | 272 | 290 | 254 | 288 | 281 | 330 | 268 | 222 | 184 | 212 | | | | |

• Concatenate

Concatenate will bring strings of data together.

When you want to combine a first and last name into a single cell, it's your tool.

The formula is:

```
=concatenate(text1, text2, text3)
```

Remember to add a " " between the first and second name as text2

| First | Last | January | February | March | April | May | June | July | August | September | October | November | December | Total | Min | Max |
|---------|---------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|-------|-----|-----|
| Anna | Bella | 2 | 83 | 31 | 22 | 31 | 38 | 40 | 47 | 41 | 38 | 30 | 18 | | | |
| Bella | Corinne | 19 | 34 | 35 | 39 | 34 | 23 | 32 | 39 | 25 | 34 | 26 | 5 | | | |
| Corinne | Deanna | 49 | 36 | 5 | 1 | 47 | 35 | 6 | 25 | 22 | 27 | 50 | 40 | | | |
| Deanna | Elaine | 27 | 45 | 1 | 25 | 43 | 34 | 41 | 31 | 38 | 46 | 7 | 18 | | | |
| Elaine | Freddie | 24 | 29 | 42 | 23 | 33 | 49 | 12 | 22 | 23 | 24 | 3 | 8 | | | |
| Freddie | Gladys | 16 | 30 | 30 | 24 | 33 | 23 | 19 | 24 | 36 | - | - | 3 | 5 | | |
| Gladys | Hanni | 83 | 23 | 2 | 20 | 8 | 20 | 43 | 12 | 24 | 16 | 18 | 17 | | | |
| Hanni | Ina | 25 | - | 4 | 14 | 23 | 9 | 4 | 46 | 36 | 29 | 8 | 44 | | | |
| Ina | Isabel | 86 | 12 | 12 | 34 | 46 | 40 | 35 | 47 | 5 | 25 | 12 | 18 | | | |
| Isabel | Anna | 9 | 28 | 28 | 5 | 28 | 23 | 49 | 36 | 17 | 3 | 3 | 17 | | | |
| Total | | 340 | 272 | 290 | 254 | 288 | 281 | 330 | 268 | 222 | 184 | 212 | | | | |

• Sparklines

Sparklines let's us answer the question: How is each girl trending.

With Sparklines, we can insert graphical data directly into a cell of our table as simply as:

- Select Range
- Insert Sparkline

- I choose Column

| Year | Month | Anna | Bella | Corinne | Dionna | Elanor | Florida | Gladys | Helen | Ima | John | Anna | Total | Max | Min |
|------|-----------|------|-------|---------|--------|--------|---------|--------|-------|-----|------|------|-------|-----|-----|
| 2011 | January | 2 | 43 | 31 | 22 | 31 | 34 | 50 | 47 | 41 | 33 | 36 | 33 | 50 | 2 |
| 2011 | February | 19 | 34 | 25 | 38 | 34 | 25 | 32 | 30 | 25 | 34 | 26 | 38 | 38 | 19 |
| 2011 | March | 49 | 35 | 5 | 8 | 47 | 35 | 6 | 25 | 22 | 17 | 30 | 49 | 49 | 5 |
| 2011 | April | 27 | 45 | 1 | 25 | 43 | 34 | 41 | 31 | 38 | 48 | 3 | 45 | 48 | 1 |
| 2011 | May | 24 | 20 | 42 | 25 | 35 | 48 | 32 | 23 | 25 | 24 | 3 | 42 | 48 | 3 |
| 2011 | June | 18 | 32 | 30 | 24 | 13 | 20 | 39 | 34 | 36 | - | 3 | 39 | 39 | - |
| 2011 | July | 42 | 23 | 2 | 20 | 4 | 20 | 42 | 52 | 24 | 16 | 18 | 52 | 52 | 2 |
| 2011 | August | 25 | - | 8 | 14 | 12 | 5 | 4 | 46 | 26 | 29 | 8 | 46 | 46 | 4 |
| 2011 | September | 46 | 52 | 13 | 34 | 46 | 45 | 35 | 47 | 5 | 35 | 11 | 52 | 52 | 5 |
| 2011 | October | 8 | 28 | 28 | 5 | 28 | 23 | 49 | 36 | 17 | 2 | 2 | 49 | 49 | 2 |
| 2011 | November | 290 | 370 | 130 | 204 | 288 | 241 | 306 | 308 | 222 | 134 | 221 | 370 | 370 | 29 |
| 2011 | December | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 12 | 5 | 0 | 1 | 12 | 12 | 0 |
| 2011 | Total | 69 | 45 | 42 | 30 | 47 | 40 | 40 | 47 | 41 | 42 | 30 | 47 | 47 | 0 |

- Quartile

In statistics, a quartile divides the number of data points into four parts, or quarters, of more-or-less equal size.

It lets us know the bottom 25% of sales people and the top 25% of sales people are.

Formula: =quartile(array,quart)

quart = the quartile we want.

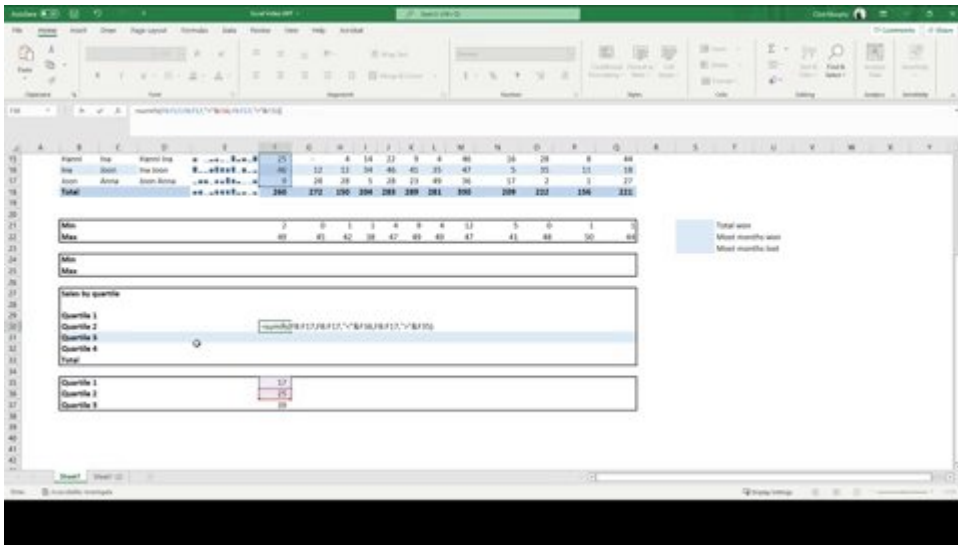
| Year | Month | Anna | Bella | Corinne | Dionna | Elanor | Florida | Gladys | Helen | Ima | John | Anna | Total | Max | Min |
|------|-----------|------|-------|---------|--------|--------|---------|--------|-------|-----|------|------|-------|-----|-----|
| 2011 | January | 2 | 43 | 31 | 22 | 31 | 34 | 50 | 47 | 41 | 33 | 36 | 33 | 50 | 2 |
| 2011 | February | 19 | 34 | 25 | 38 | 34 | 25 | 32 | 30 | 25 | 34 | 26 | 38 | 38 | 19 |
| 2011 | March | 49 | 35 | 5 | 8 | 47 | 35 | 6 | 25 | 22 | 17 | 30 | 49 | 49 | 5 |
| 2011 | April | 27 | 45 | 1 | 25 | 43 | 34 | 41 | 31 | 38 | 48 | 3 | 45 | 48 | 1 |
| 2011 | May | 24 | 20 | 42 | 25 | 35 | 48 | 32 | 23 | 25 | 24 | 3 | 42 | 48 | 3 |
| 2011 | June | 18 | 32 | 30 | 24 | 13 | 20 | 39 | 34 | 36 | - | 3 | 39 | 39 | - |
| 2011 | July | 42 | 23 | 2 | 20 | 4 | 20 | 42 | 52 | 24 | 16 | 18 | 52 | 52 | 2 |
| 2011 | August | 25 | - | 8 | 14 | 12 | 5 | 4 | 46 | 26 | 29 | 8 | 46 | 46 | 4 |
| 2011 | September | 46 | 52 | 13 | 34 | 46 | 45 | 35 | 47 | 5 | 35 | 11 | 52 | 52 | 5 |
| 2011 | October | 8 | 28 | 28 | 5 | 28 | 23 | 49 | 36 | 17 | 2 | 2 | 49 | 49 | 2 |
| 2011 | November | 290 | 370 | 130 | 204 | 288 | 241 | 306 | 308 | 222 | 134 | 221 | 370 | 370 | 29 |
| 2011 | December | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 12 | 5 | 0 | 1 | 12 | 12 | 0 |
| 2011 | Total | 69 | 45 | 42 | 30 | 47 | 40 | 40 | 47 | 41 | 42 | 30 | 47 | 47 | 0 |

- Sumifs

We use sumifs when we want to add cells that meet multiple criteria, generally in a list.

In our scenario, we want to sum numbers between two quartiles.

Formula = sumifs(range, criteria1 range, criteria1, criteria2 range, criteria2)



- X-Lookup

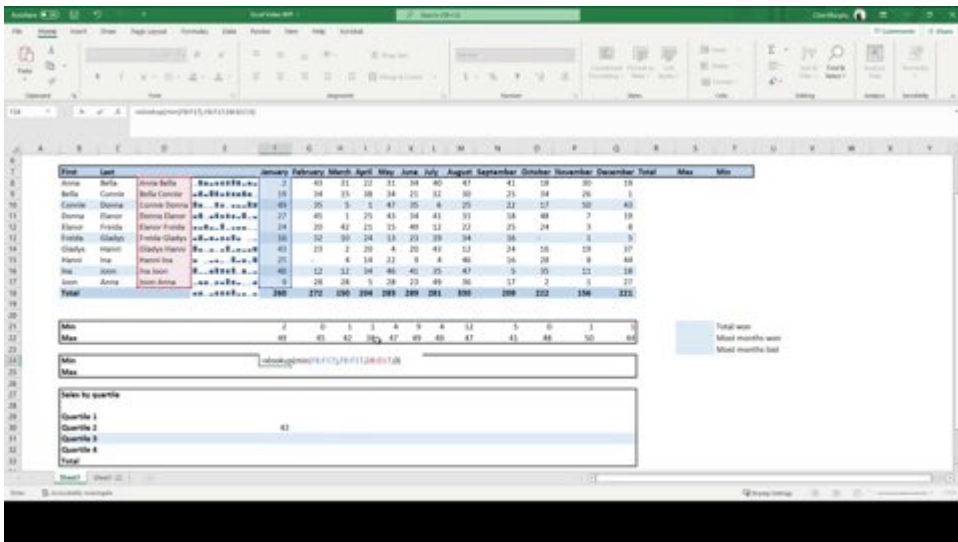
X-Lookup is an upgraded V-Lookup.

We use it to find data in a table or range.

We are going to combine our X-Lookup with our Min and Max function.

The formula: =XLOOKUP(lookup value, lookup array, return array)

Ours will pull the min / max person by month.

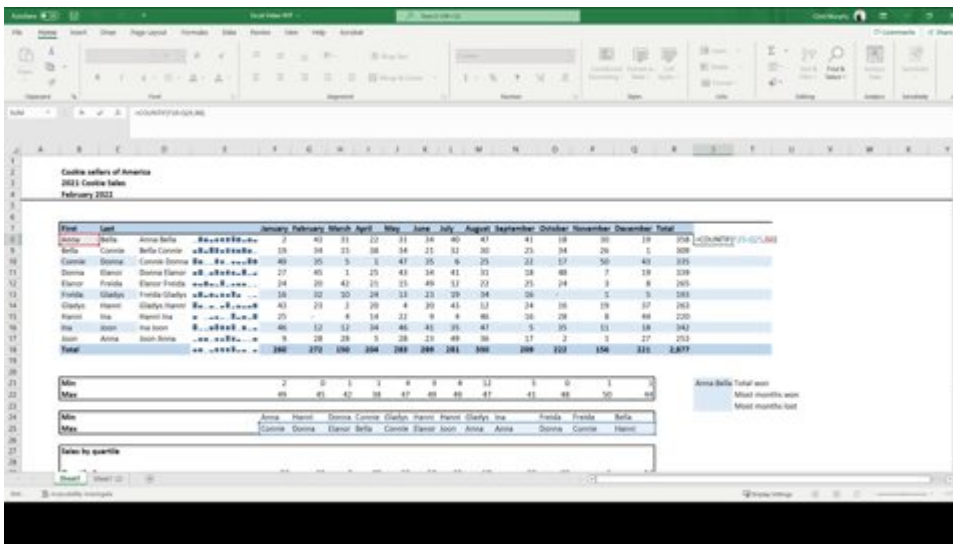


- Countif

Countif will count a value that meets certain criteria.

We will use this to determine how many times someone was the minimum value or maximum value in a month.

Formula: =countif(range, criteria)

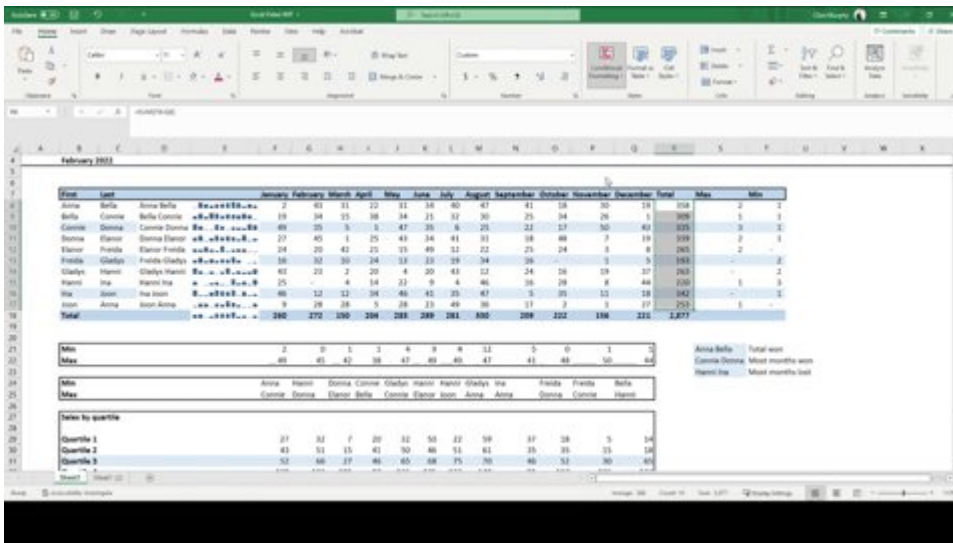


- Conditional formatting

Conditional formatting lets us highlight information for the readers.

We can either set our own rules or use preset rules, as we will in our example.

By using different colors it draws your eyes to the good, and bad.



- Finished product

You always want your finished product to look good and be consistent.

When someone reads your work and it looks good, they ask less questions.

When you are asked less questions, you are more productive.

Make your work look good.

| First | Last | January | February | March | April | May | June | July | August | September | October | November | December | Total | Max | Min | | |
|--------------|--------|---------------|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------------|---|---|
| Anna | Bella | Anna Bella | ..##### | 2 | 43 | 31 | 22 | 31 | 34 | 40 | 47 | 45 | 18 | 35 | 19 | 258 | 2 | 1 |
| Bella | Connie | Bella Connie | ##### | 19 | 34 | 15 | 18 | 34 | 21 | 32 | 30 | 25 | 34 | 26 | 1 | 309 | 1 | 1 |
| Connie | Donna | Connie Donna | ##### | 49 | 35 | 5 | 1 | 47 | 35 | 6 | 25 | 22 | 17 | 50 | 43 | 331 | 3 | 1 |
| Donna | Elanor | Donna Elanor | ##### | 27 | 45 | 1 | 25 | 43 | 34 | 41 | 31 | 18 | 48 | 7 | 19 | 318 | 2 | 1 |
| Elanor | Freida | Elanor Freida | ##### | 26 | 20 | 42 | 21 | 15 | 49 | 12 | 22 | 25 | 24 | 3 | 8 | 285 | 2 | - |
| Freida | Gladys | Freida Gladys | ##### | 16 | 32 | 10 | 24 | 13 | 21 | 19 | 34 | 16 | - | 1 | 5 | 281 | - | 2 |
| Gladys | Hanni | Gladys Hanni | ##### | 43 | 23 | 2 | 20 | 4 | 20 | 43 | 12 | 24 | 16 | 19 | 57 | 263 | - | 2 |
| Hanni | Ina | Hanni Ina | ##### | 25 | - | 4 | 14 | 22 | 9 | 4 | 46 | 16 | 28 | 8 | 44 | 220 | 1 | 3 |
| Ina | Joon | Ina Joon | ##### | 46 | 12 | 12 | 34 | 46 | 41 | 35 | 47 | 5 | 35 | 11 | 18 | 342 | - | 1 |
| Joon | Anna | Joon Anna | ##### | 9 | 28 | 28 | 5 | 28 | 23 | 49 | 36 | 17 | 2 | 1 | 27 | 253 | 1 | - |
| Total | | | | 260 | 272 | 150 | 204 | 281 | 289 | 281 | 330 | 209 | 222 | 156 | 221 | 2,877 | | |

| | | | | | | | | | | | | | |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| Min | 2 | 0 | 1 | 1 | 4 | 9 | 4 | 12 | 5 | 0 | 1 | 0 | |
| Max | 49 | 45 | 42 | 38 | 47 | 49 | 49 | 47 | 45 | 48 | 50 | 46 | |

| | | | | | | | | | | | | |
|-----|--------|-------|--------|--------|--------|--------|-------|--------|------|--------|--------|-------|
| Min | Anna | Hanni | Donna | Connie | Gladys | Hanni | Hanni | Gladys | Ina | Freida | Freida | Bella |
| Max | Connie | Donna | Elanor | Bella | Connie | Elanor | Joon | Anna | Anna | Donna | Connie | Hanni |

| Sales by quartile | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Quartile 1 | 27 | 32 | 7 | 20 | 32 | 50 | 22 | 39 | 37 | 18 | 5 | 34 |
| Quartile 2 | 43 | 51 | 15 | 41 | 50 | 46 | 53 | 41 | 35 | 35 | 15 | 18 |
| Quartile 3 | 52 | 66 | 27 | 46 | 65 | 64 | 75 | 70 | 46 | 52 | 30 | 60 |
| Quartile 4 | 138 | 123 | 101 | 97 | 136 | 125 | 133 | 140 | 91 | 117 | 106 | 124 |
| Total | 260 | 272 | 150 | 204 | 281 | 289 | 281 | 330 | 209 | 222 | 156 | 221 |

Anna Bella Total won
Connie Donna Most months won
Hanni Ina Most months lost



TL;DR:

If you want to 10x your Excel productivity, learn these 10 formulas and techniques:

- Conditional formatting
- Format & shortcuts
- Min +Max formula
- Concatenate
- Sparklines
- X-Lookup
- Quartile
- Countif
- Sumifs

If you enjoyed this thread, please:

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<https://t.co/zYF73vj2C>

Until next time,

Clint Murphy

10 Excel Formulas To 10x Your Productivity:

— Clint Murphy (@IAmClintMurphy) June 23, 2022