CX-1937 Write Up: How to Create Formulas to Summarize Data

1.Created a VLOOKUP to get the CS Team associated with each manager in SMB (**COLUMN U: Teams):**

```
=VLOOKUP(T3,'Dynamic Team Assignments'!D:F,3,FALSE)
```

Essentially what this is is saying:

1st argument: For the manager name in Cell "T3"
2nd argument: Look up in the ***Dynamic Team Assignments*** tab, in Columns D-F
3rd argument: Give me the value in the the "3"rd column
4th argument: It needs to be an exact match otherwise return nothing

***One thing to note: you could probably skip this step if you add "Team" as one of the drop down items in the form when you create a new challenge - this will then get populated in the responses*

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2. To get the score by itself, I had to use another Google sheet function called "**SPLIT**":

```
=SPLIT(C3, "/")
```

Essentially this is just saying:

1st argument: For cell "C3" (which has the number of correct responses)
2nd argument: Split the cell in half based on this character

This gives you the scores by themselves, i.e. "7"

I used this value, divided by the number of questions in the challenge, to get the percentage for each rep under each manager.

```
=V3/W3, Format > Number > Percent (and then decrease number of decimals places to get whole numbers)
```

i.e. "7/12" = 58%

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3. To get the average overall score for ALL of SMB (or any other organization that you do a challenge for) that you can use this as a comparison (and again, all of this is dynamic so if new scores come in, the calculation is automatically updated)

```
=AVERAGE($X$3:X)
```

Starting from the first cell with percentages, calculate the average all the through the rest of the column.

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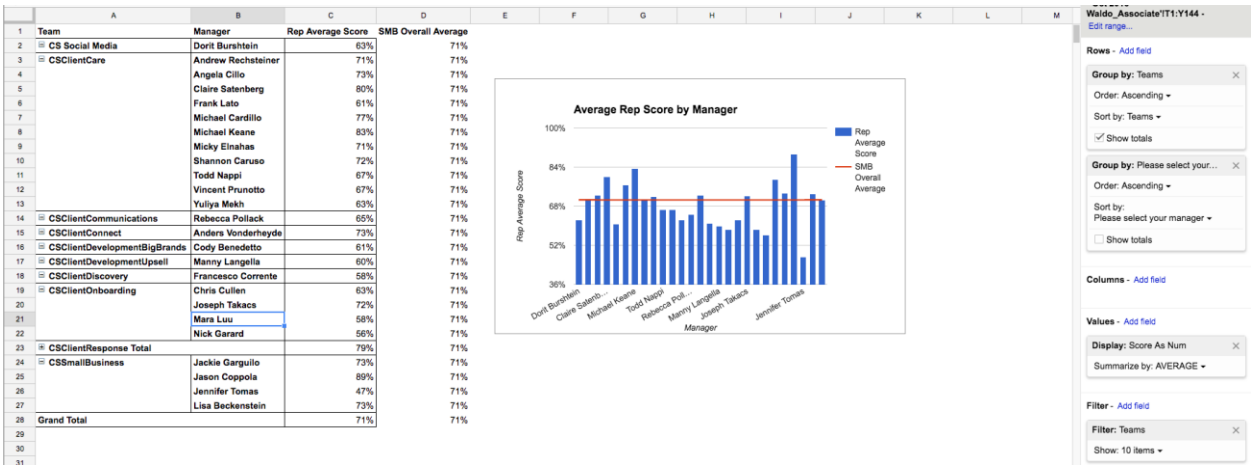
Once you have all those data points, you can start creating the pivot tables that will be used to build the graphs needed for the visualizations.

For the pivot table, you can **GROUP BY** (using the rows) "**Team**" and/or "**CS Manager**", depending on what view of the results you would like to measure.

For the **VALUES**, you pull in the "**Rep's Score**" based on the calculation - or whatever metric you want to measure. You can select different options, but for this request I went with "**AVERAGE**".

Once you have the data pieces you want to graphically represent available, simply select `"Insert" -> "Chart"`

Google Sheets provides many different options, but for showing a trend line analysis, you will need select a bar graph and make sure that you bring in the data point that will do the comparison (in the example below, the "SMB Overall Average")



Team	Manager	Rep Average Score	SMB Overall Average
CS Social Media	Dorit Burshtein	63%	71%
CSClientCare	Andrew Rechsteiner	71%	71%
	Angela Cillo	73%	71%
	Claire Satenberg	80%	71%
	Frank Lato	61%	71%
	Michael Cardillo	77%	71%
	Michael Keane	83%	71%
	Micky Elnahas	71%	71%
	Shannon Caruso	72%	71%
	Todd Nappi	67%	71%
	Vincent Prunotto	67%	71%
	Yuliya Mekh	63%	71%
CSClientCommunications	Rebecca Pollack	65%	71%
CSClientConnect	Anders Vonderheyde	73%	71%
CSClientDevelopmentBigBrands	Cody Benedetto	61%	71%
CSClientDevelopmentUpsell	Manny Langella	60%	71%
CSClientDiscovery	Francesco Corrente	58%	71%
CSClientOnboarding	Chris Cullen	63%	71%
	Joseph Takacs	72%	71%
	Mara Luu	58%	71%
	Nick Garard	56%	71%
CSClientResponse Total		79%	71%
CSSmallBusiness	Jackie Garguilo	73%	71%
	Jason Coppola	89%	71%
	Jennifer Tomas	47%	71%
	Lisa Beckenstein	73%	71%
Grand Total		71%	71%

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To summarize** the correct number of responses for each question, you can use the following steps:

**** Make sure you have filled out the form with the correct answers (this will be your ANSWER KEY).**

Create a separate tab that pulls in each question - this will help you keep this data point organize (you could do the calculations in the same tab but it might get a little messy).

Then, for each question, you can use a formula similar to the one below:

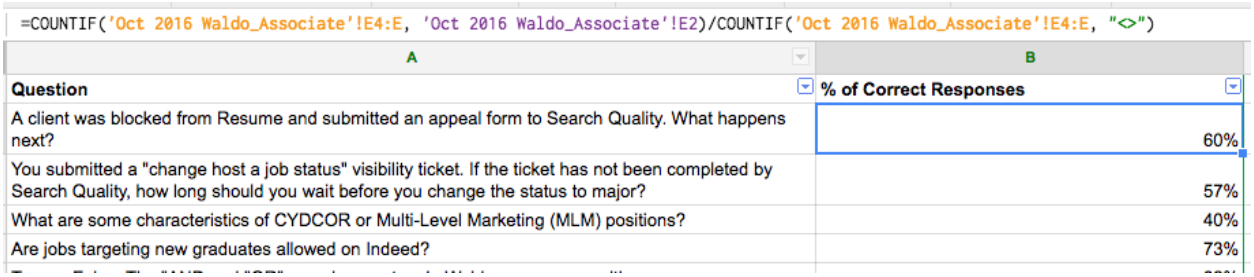
```
=COUNTIF('Oct 2016 Waldo_Associate'!E4:E, 'Oct 2016 Waldo_Associate'!E2)/COUNTIF('Oct 2016 Waldo_Associate'!E4:E, "<>")
```

What this is saying is:

1st argument: For all of the answers in Cells “E4:E” (so starting from the 1st answer all the way to the bottom), how many of those equal the answer in “E2” (this would be the cell with correct answer - so just make sure this is the right answer!). You will use this as your **NUMERATOR**.

2nd argument: For all of the cells starting from “E4” through rest of column “E”, give me the overall count of responses (the “<>” means the cell has something in it - aka no EMPTY cells). This gives you the total number of responses (and again, is dynamic because it goes through the entire column). You will use this as your **DENOMINATOR**.

You can use this for all of the remaining questions as long as you are referencing the correct cells & columns for each question. Again, you can just format the output using: `Format -> Number -> Percent.`



A	B
Question	**% of Correct Responses**
A client was blocked from Resume and submitted an appeal form to Search Quality. What happens next?	60%
You submitted a "change host a job status" visibility ticket. If the ticket has not been completed by Search Quality, how long should you wait before you change the status to major?	57%
What are some characteristics of CYDCOR or Multi-Level Marketing (MLM) positions?	40%
Are jobs targeting new graduates allowed on Indeed?	73%

Finally, you can simply create another bar graph, using the data points you’ve collected for each answer. Again, you would just go to `Insert -> Chart`; Google sheets does a good job of recommending the right type of graph and you can make adjustments to the title & legend as needed.