

Pivot Table Fundamentals

Here is a small data set:

	A	B	C	D	E
1	name	category_parent	goal	pledged	Goal Met (1/0)?
2	Charcoal Chimney Starter	Technology	1000	2000	1
3	Producer Box	Technology	2000	3000	1
4	The most reliable smartwatch for under \$100	Technology	3000	2000	0
5	Akira's Flying Wheelchair	Publishing	10000	11000	1
6	The Power of With.	Publishing	5000	4000	0

Here is a blank Pivot Table built from this data set:

	A	B	C	D
	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">Count of category_parent</div> <div style="text-align: center;">Sum of Goal Met (1/0)?</div> <div style="text-align: center;">Average of Goal Met (1/0)?</div> </div>			
9	category_parent	category_parent	(1/0)?	(1/0)?
10	Publishing			
11	Technology			
12	Grand Total			

What value goes in each cell in the Pivot Table?

B10?

B11?

B12?

C10?

C11?

C12?

D10?

D11?

D12?

Logical Formulas – Challenge Materials

A lot of the Pivot Table operations *can also be done with* logical formulas like COUNTIFS, SUMIFS, and AVERAGEIFS. This handout shows how those formulas work.

Here is the small Kickstarter data again:

	A	B	C	D	E	F
3	name	category_parent	goal	pledged	Goal Met (1/0)?	Amount Collected
4	Charcoal Chimni	Technology	1000	2000	1	2000
5	Producer Box	Technology	2000	3000	1	3000
6	The most reliabl	Technology	3000	2000	0	0
7	Akira's Flying W	Publishing	10000	11000	1	11000
8	The Power of W	Publishing	5000	4000	0	0

COUNTIF and COUNTIFS

To count the number of projects with Technology as the category_parent:

- =COUNTIF(B:B, "Technology")
- What would be the value calculated by this formula? _____

To count the number of projects with Technology as the category_parent that met their goal:

- =COUNTIFS(B:B, "Technology", E:E, 1)
- What would be the value calculated by this formula? _____

SUMIFS and AVERAGEIFS

To add up the amount collected by the Technology projects that met their goal:

- =SUMIFS(D:D, B:B, "Technology", E:E, 1)
Read this as "add up the values in column D for which the corresponding row in column B says Technology and the corresponding row in column E has a 1."
- Value? _____

To average the amount collected by all the Technology projects (including a 0 for the ones that did not meet their goal):

- =AVERAGEIFS(F:F, B:B, "Technology")
Read this as "average the values in column F for which the corresponding row in column B says Technology"
- Value? _____

Next Step

In some situations, these logical functions (the ones with IF or IFS in them) give you more flexibility than a Pivot Table.

The course web page has an Excel file that shows some of these formulas in action. See the link on the page that says "[IFS functions examples.](#)" Check out the formulas in rows 13 and 14 and the formula in cell F25.