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Hands-on Lab: Putting the FUN in Functions: Table Calculations

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Knowledge

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Select the **Putting the FUN in Functions: An Intro to Table Calculations** lab in the drop-down

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Agenda

Why would I need a table calculation?

What are table calculations?

Exercises

How can I learn more?

Why would I need a table calculation?

Table calcs answer questions like...

- How do I divide two values in my data in Looker?
- How do I add a field to my report without waiting on an analyst?
- What if I need a field just one time, and don’t want to add it permanently to my model?

What are table calculations?

Pretty on-the-fly for a calculation guy

Table calcs are...

- Similar to Excel functions, they perform transformations on **data in the data table**.
- Only able to reference fields included in the report.
- An easy way for everyone to create their own calculations on the fly without the help of an analyst!

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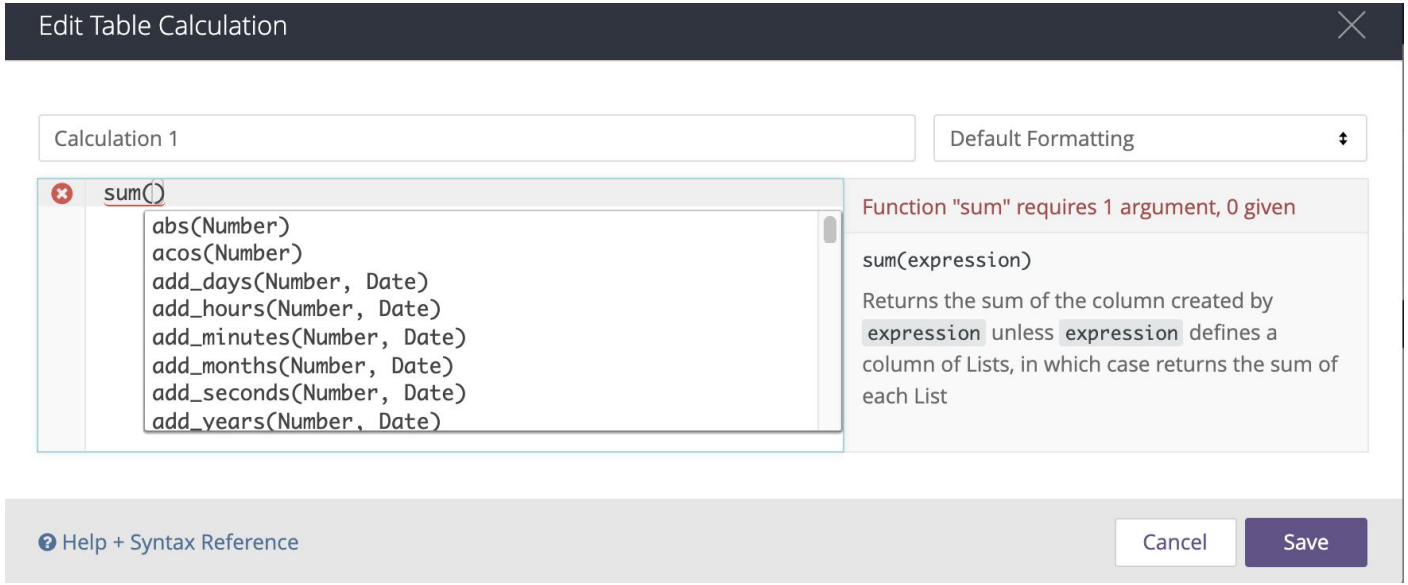
Table calcs are...

Based on Looker expressions (Lexp)



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substring()

sum()

if()

mean()

diff_days()

concat()

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Exercises

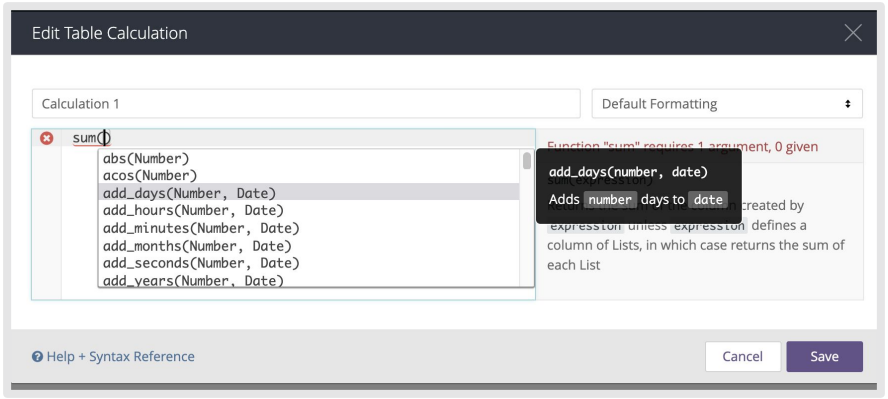
Let’s get our hands in there!

sum()

Things are adding up

What region makes the largest percent of the world's GDP?

- ✓ Use a sum function to find the total world GDP.
- ✓ Divide the GDP of each region by the total to find a percentage.



sum()

Things are adding up

Question: What region makes the largest percent of the world's GDP?

1. Add the fields **Region** and **GDP** to an Explore.
2. Open the calculations modal and type `sum(${education_international_education.total_GDP})` to get the total world GDP.
3. Open the calculations modal and change the calculation to `${education_international_education.total_GDP}/sum(${education_international_education.total_GDP})`
4. Optional: Repeat the process with world population by region, to compare GDP and population percentages.

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if()

If not now, when?

Just how much of the world uses a "dollar" as a form of currency? There are American Dollars, Canadian Dollars, Barbados Dollars…

- ✓ Use `contains()` to single out currencies that have "dollar" in the name.
- ✓ Use a combination of the `sum()` and `if()` functions to sum the number of people who use dollar currencies.

```
if(yesno_expression, value_if_yes,
value_if_no)
```

If `yesno_expression` evaluates to `yes`, returns the `value_if_yes` value. Otherwise, returns the `value_if_no` value

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if()

If not now, when?

What percent of the world's population uses a "dollar" currency?

1. Add the fields for **Currency Unit** and **Population**.
2. Use `contains(${education_country_summary.currency_unit}, "dollar")` to find all of the currency units with "dollar" in the name.
3.
```
if(contains(${education_country_summary.currency_unit},"dollar"),
${education_international_education.total_population},null)
```
4. To get the final percent,
```
sum(if(contains(${education_country_summary.currency_unit},"dollar"),
${education_international_education.total_population},null))/
sum(${education_international_education.total_population})
```
5. Bonus: Change the currency to Euros or Yuan.

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substring()

I'll take the first three characters, please.

Our data looks a little messy with country codes combined and names in the same column. I want just the first three values of each value of the country code.

✓ Use `substring()` to break apart the string values.

```
substring(string, start_position, length)
```

Returns the substring of `string` beginning at `start_position` consisting of `length` characters

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substring()

I'll take the first three characters, please.

I want the first three values of the country code.

1. Add the field for **Country Codes**.
2. Use the function `substring(${education_country_summary.country_codes},0,3)` to grab the first three values of the column.
3. Bonus: How would I go about grabbing the last three values?

If a string is n *characters long, we want* `(${field_name}, n - 2, 3)`

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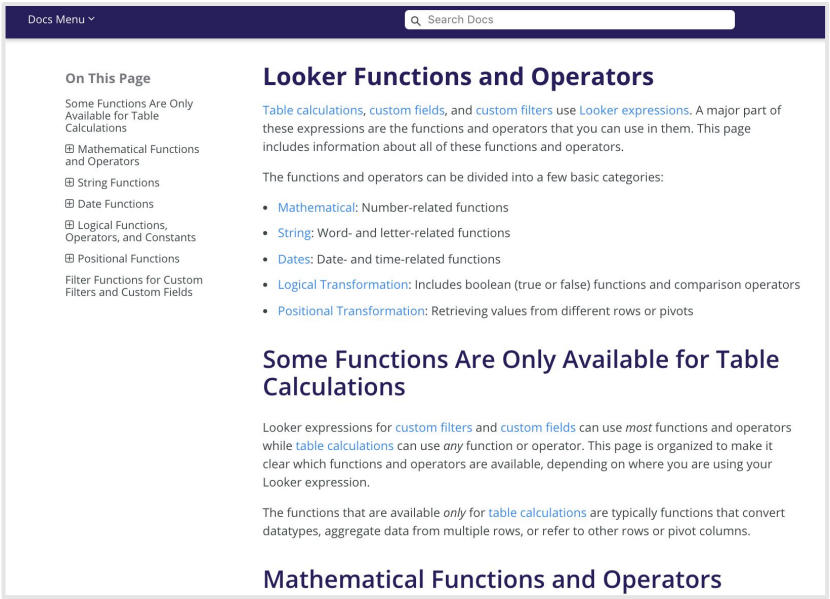
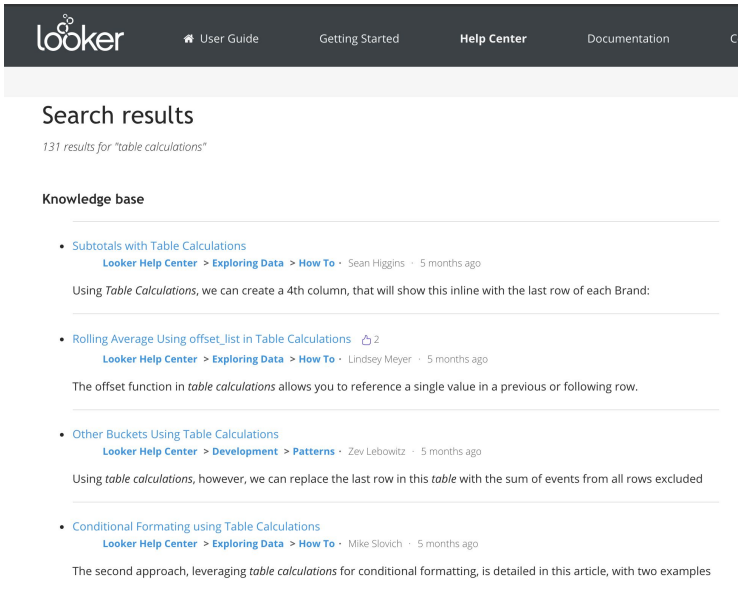
How can I learn more?

Sky’s the limit

Resources for more table calculations!



Looker Functions and Operators documentation



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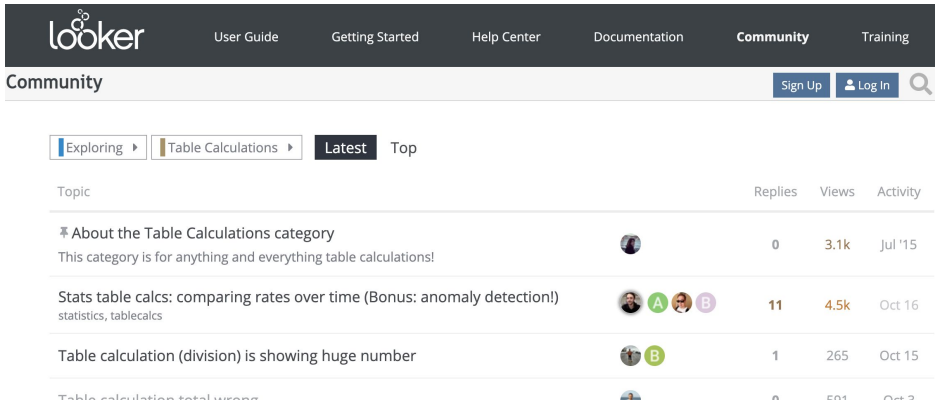
Resources for more table calculations!



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Questions?


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