

Guided NLQ Question Types

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Overview

Each Guided NLQ question must contain at least three elements — a time frame, the type of question, and what you want to ask about (see [Ask a Question with Guided NLQ](#)). The order is flexible, so you can start or end your question with the time period you're interested in, for example. These different segments of a question are blocks as you use them to build your sentence.

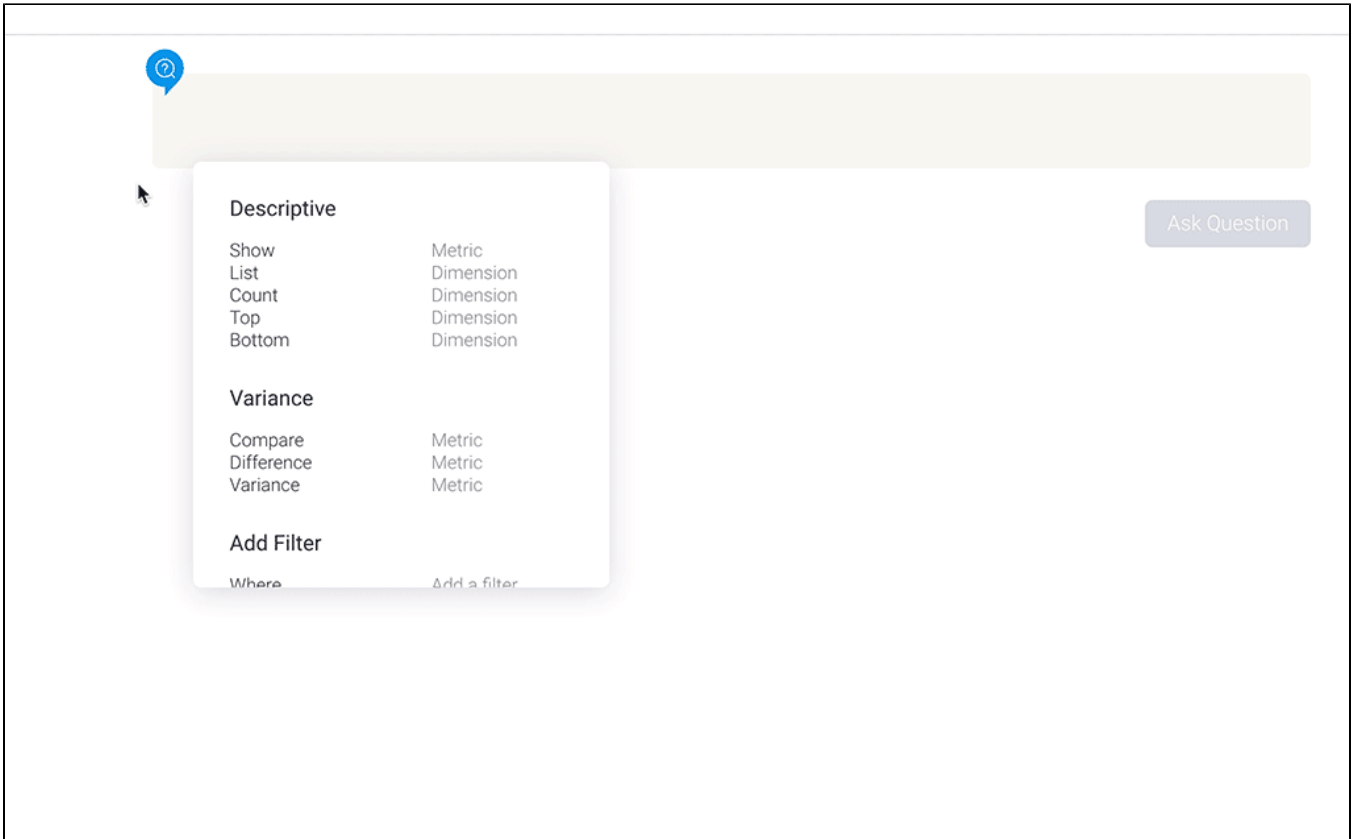
Descriptive blocks

Show

Description: Use **Show** when you're asking about metrics.

Example: I want to show the profit margin for each agency last year.

Use: Show Profit Margin (Sum) by Company Name For Last Year (Start Date)

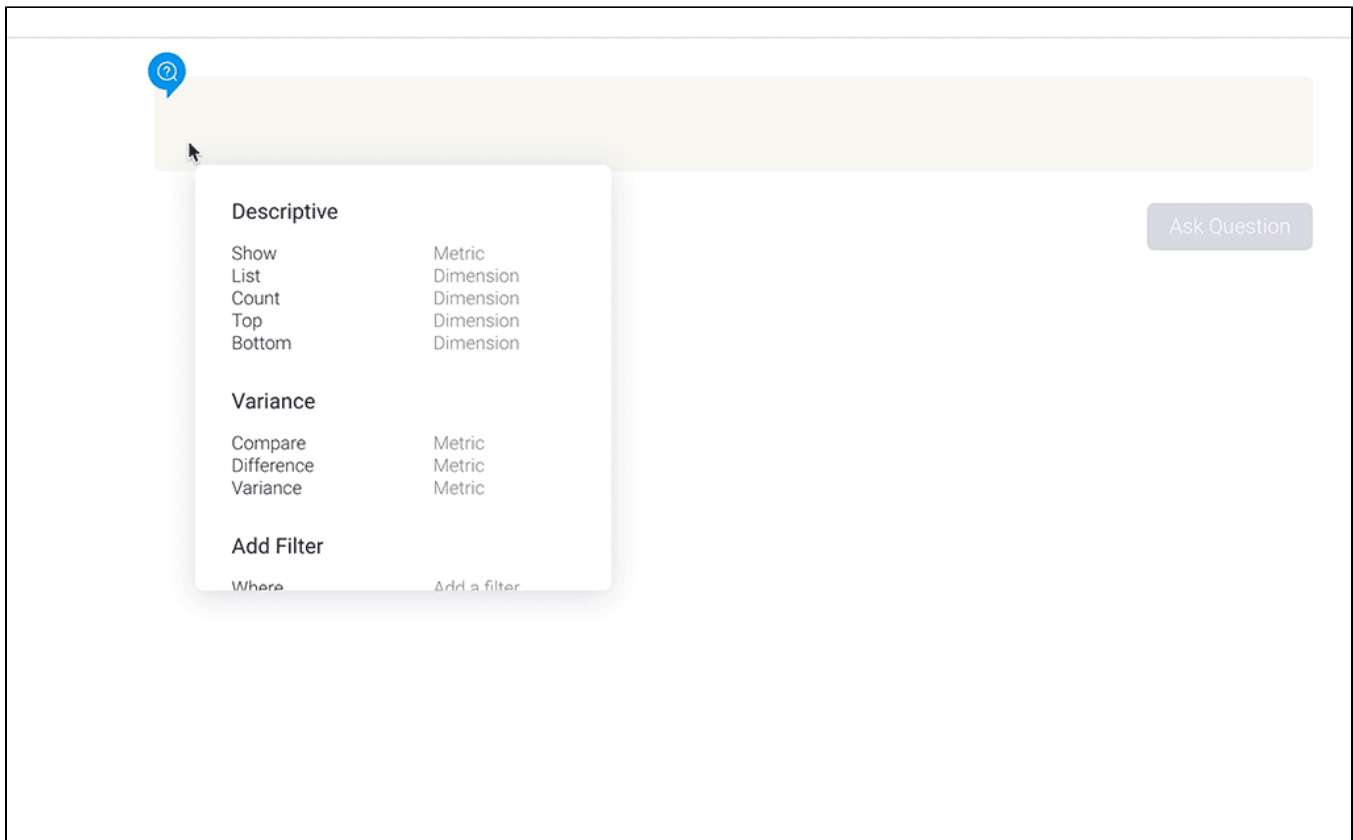


List

Description: Use **List** when you're asking about dimensions.

Example: I want to show the rating of all camps for last month.

Use: List Camp Names by Camp Rating (Average) For Last Month (Invoiced Date)

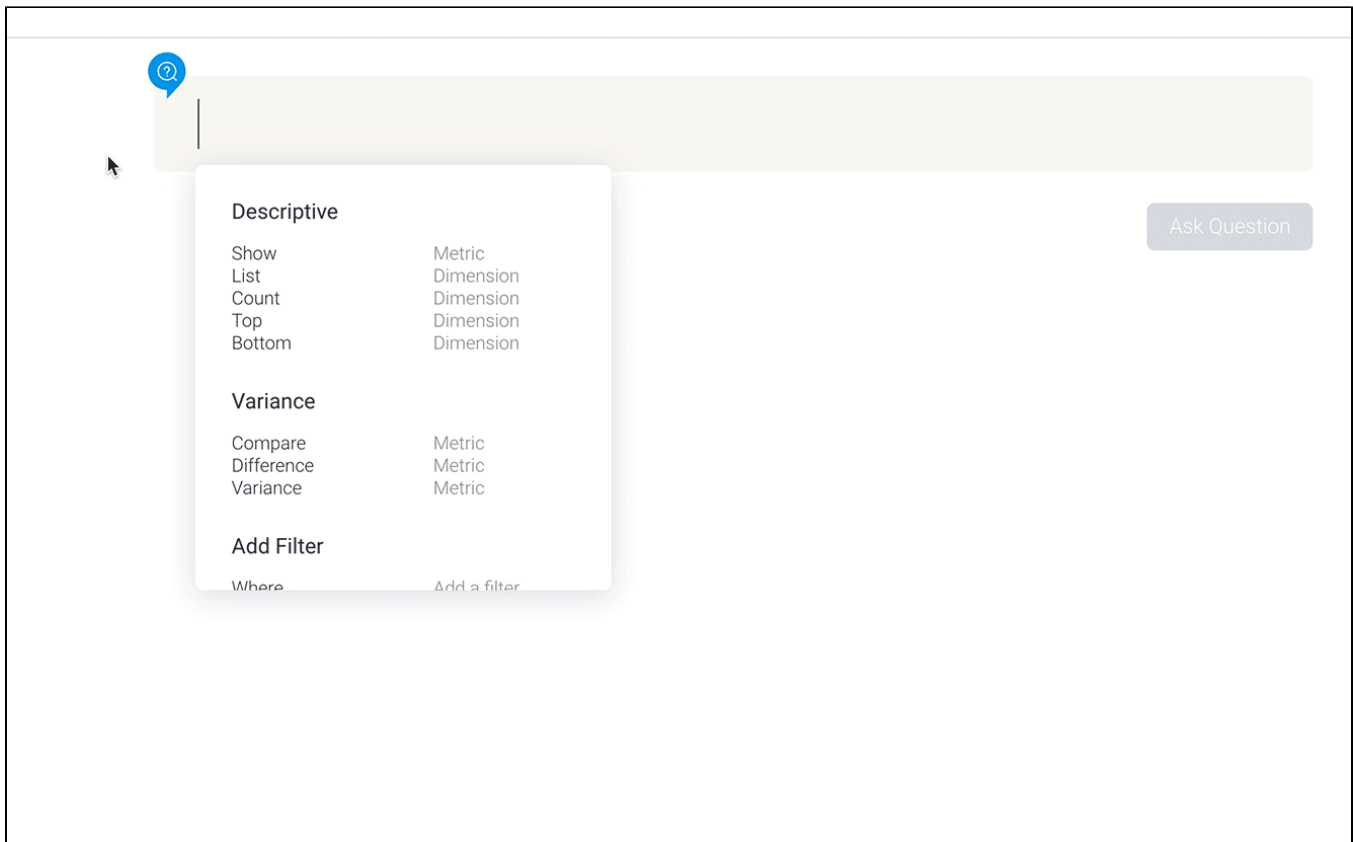


Count

Description: Use **Count** when you want to count unique values, such as products or customer names.

Example: I want to count how many camps there are in each region with no time constraints.

Use: Count Camp Names by Camp Region For All Time

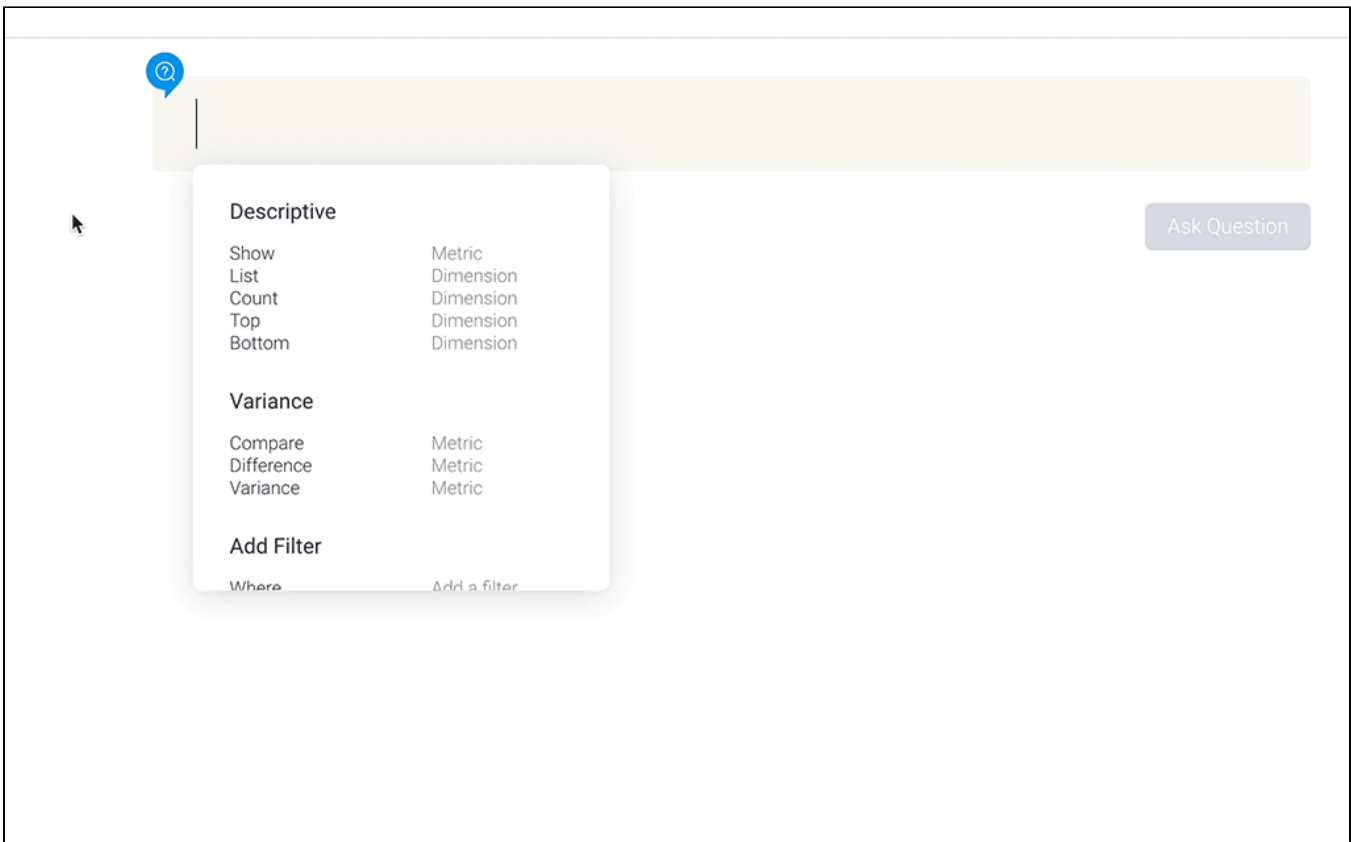


Top

Description: Use **Top** when you're looking for the highest ranked of something stored in your data.

Example: I want to find the 10 best-performing camps for profit margins for last year.

Use: Top 10 by value Camp Names by Profit Margin For Last Year (Start Date)

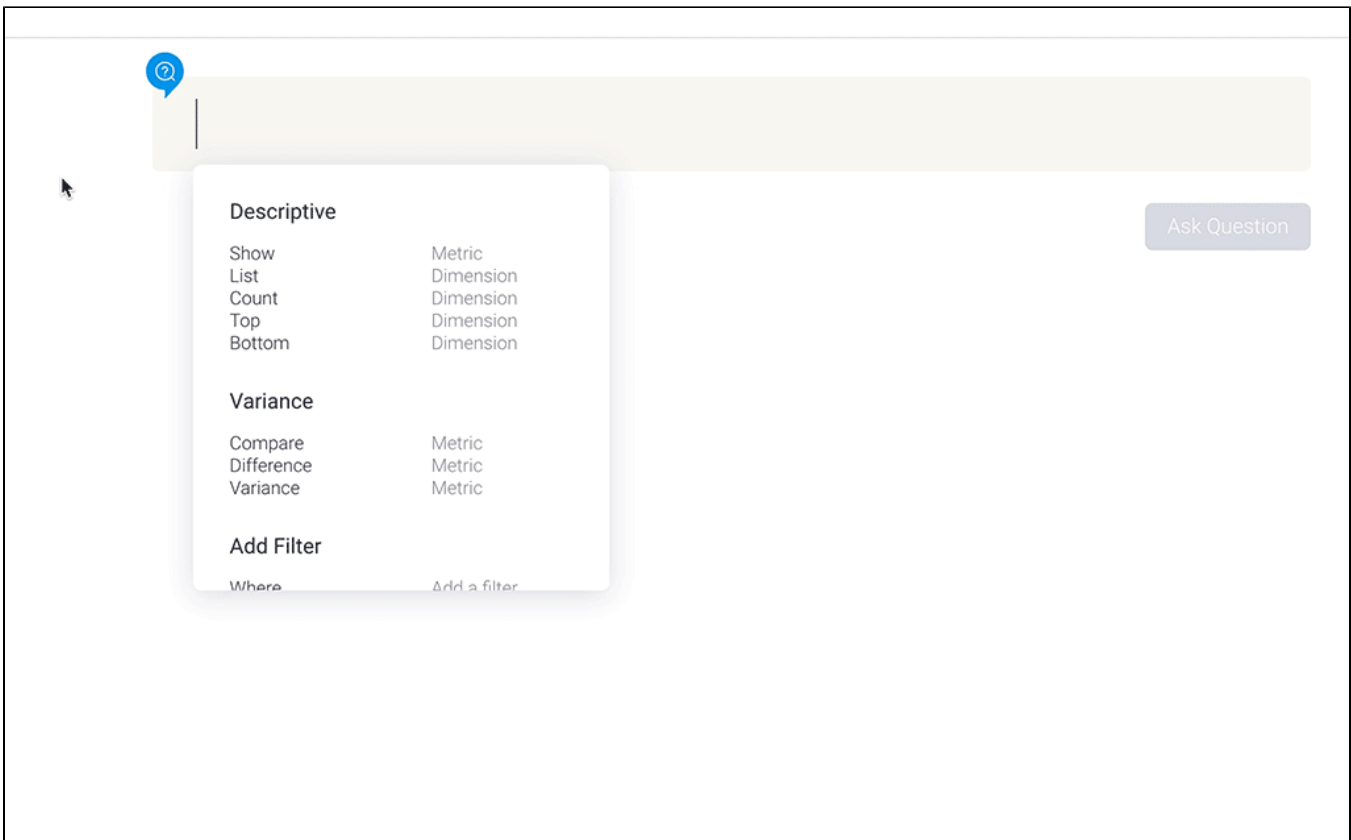


Bottom

Description: Use **Bottom** when you're looking for the lowest ranked of something stored in your data.

Example: I want to find the five camps with the lowest profit margin for this year so far.

Use: Bottom 5 by value Camp Names by Profit Margin For This Year to Date (Start Date)



Crosstab

Description: Use **Crosstab** report to view metric data sliced by dimensions appearing in rows and columns.

Example: I want to view a metric such as Invoiced Amount, by Regions appearing in rows and Dates appearing as columns.

Use: Crosstab Camp Regions (Row) by Invoiced Date (Column Header) in Day and Invoiced Amount (Sum)

Exploring **Ski Team** ▾

Select focus area **None** ▾

I'm not really sure what to ask ? ✕

?

Ask Question

[top](#)

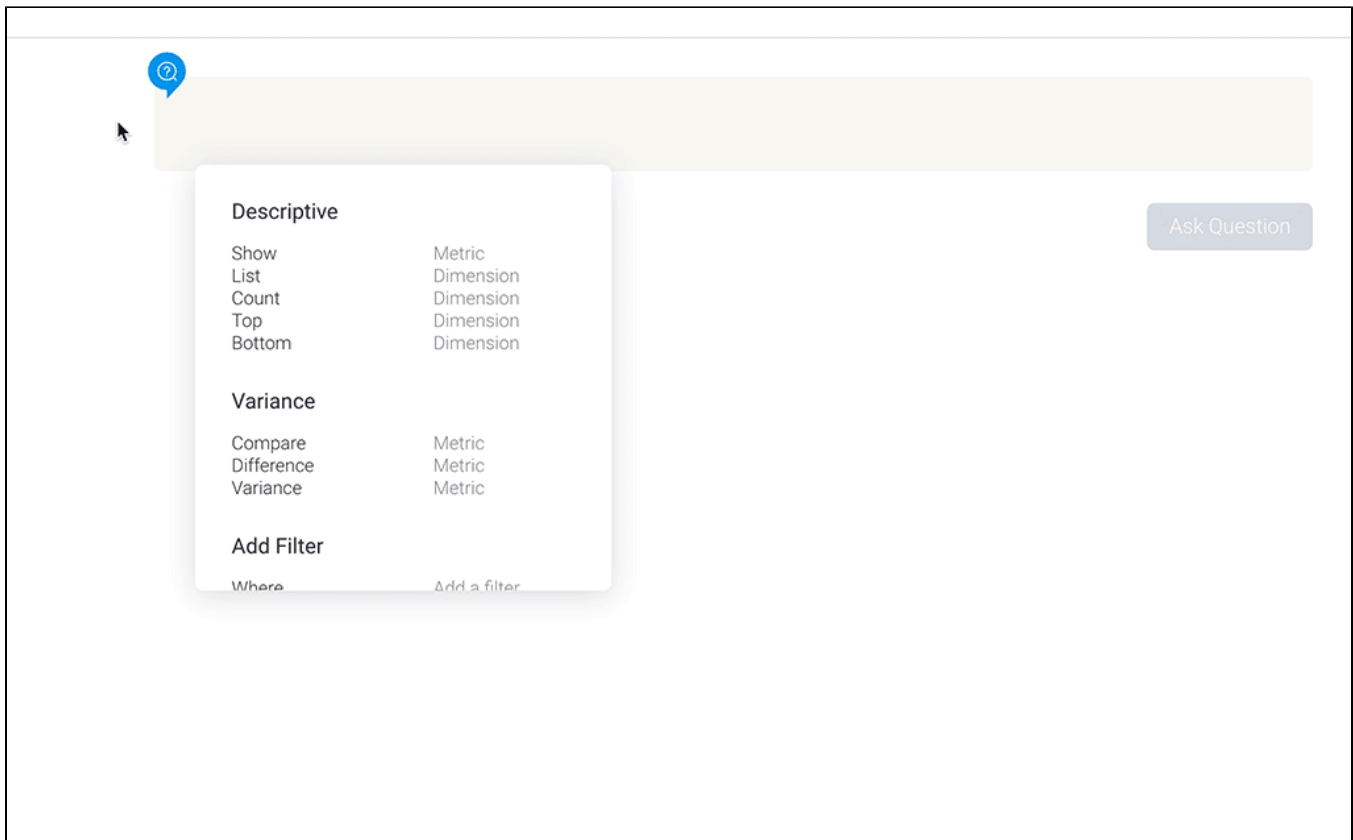
Variance blocks

Compare

Description: Use **Compare** when you'd like to understand the value of one set of information versus another set.

Example: I want to compare sales this year with sales last year.

Use: Compare Profit Margin (Sum) between Last Year (Start Date) and This Year to Date

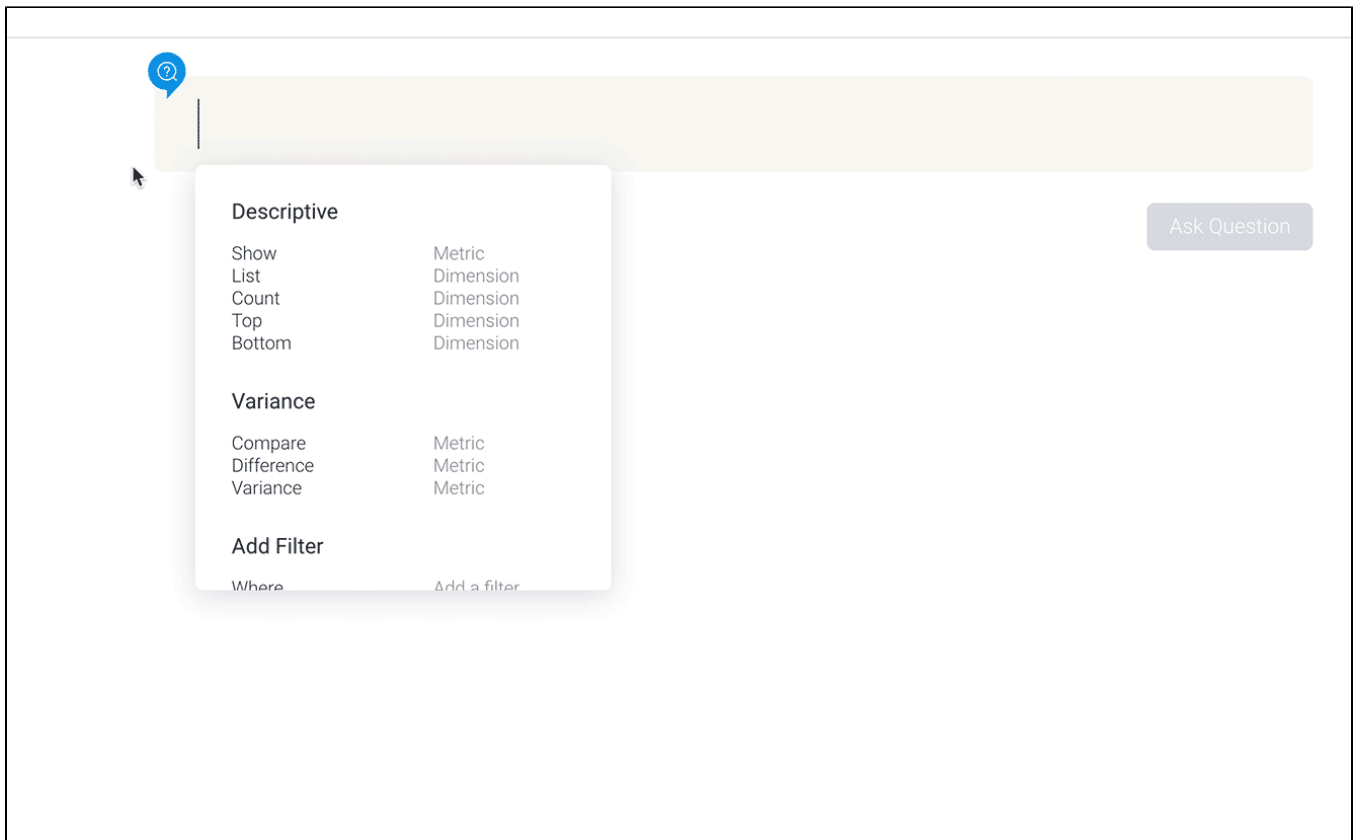


Difference

Description: Use **Difference** when you'd like to see the gap between two sets of information.

Example: I want to see the difference between last year's costs and this year's costs.

Use: Difference Cost of Camp (Sum) between Last Year (Start Date) and This Year to Date

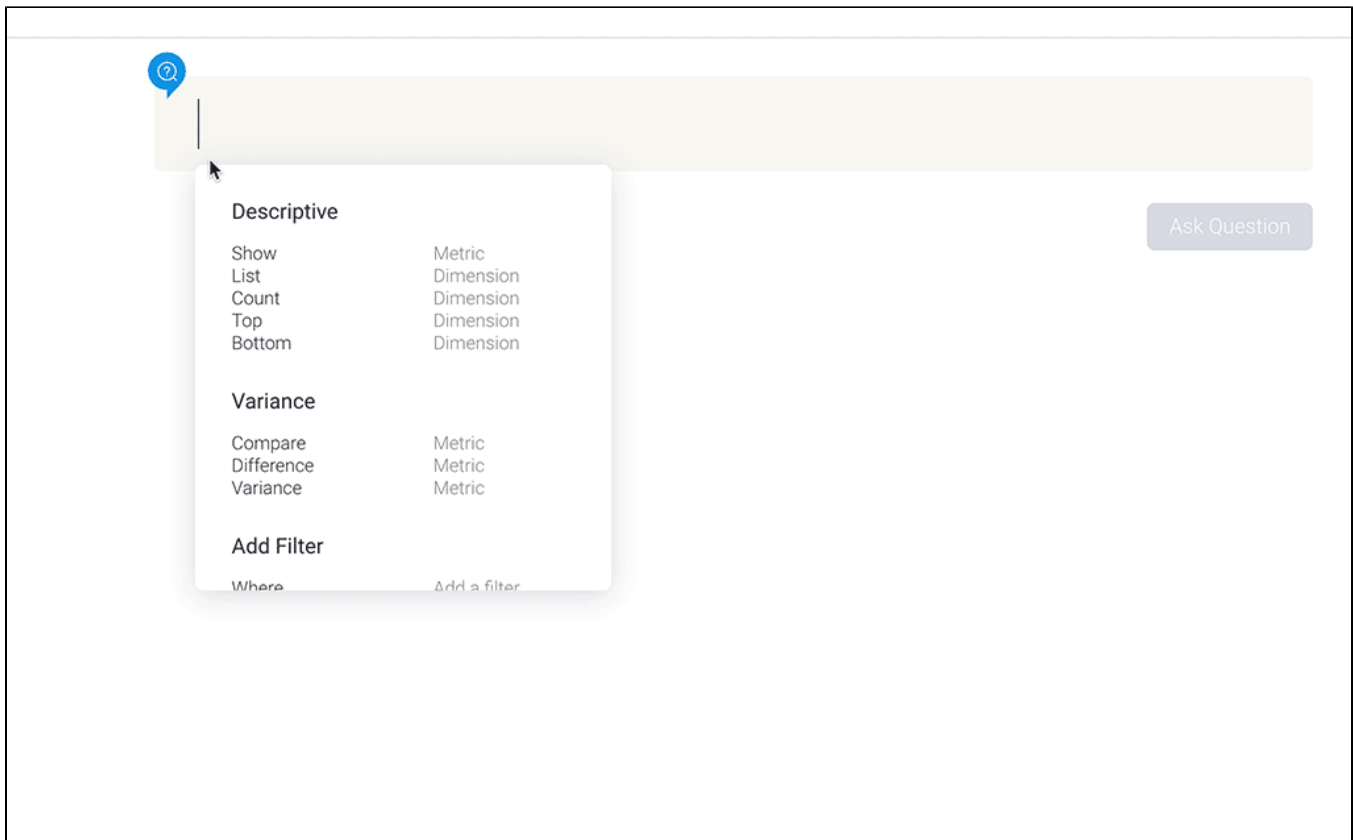


Variance

Description: Use **Variance** to calculate percentage difference between two sets of information.

Example: I want to see how much my costs have changed between this year and last year as a percentage.

Use: Variance in Cost of Camp (Sum) between Last Year (Start Date) and This Year to Date



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Date periods

For

Description: Use **For** to select a date field from your data, a predefined time period (such as last quarter or today), a manually chosen date from the date picker, or a date you type manually (such as July 2020 or Jul 2021). The question's results will include data only from the dates you've chosen.

Between

Description: Use **Between** to manually select a 'from' date and a 'to' date from the date picker. Your question's results will include data from those two dates and the dates in between only.

Before

Description: Use **Before** if you want to display results before a certain date, via the date picker. Your question's results will include data from the date you've chosen and any earlier dates only.

After

Description: Use **After** if you want to display results after a certain date, via the date picker. Your question's results will include data from the date you've chosen and any later dates only.

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More question elements

And

Use: List Company Names and Invoiced Date (None) For Last Year (Invoiced Date)

What is the average number of items per order?

Descriptive

Show	Metric
List	Dimension
Count	Dimension
Top	Dimension
Bottom	Dimension

Variance

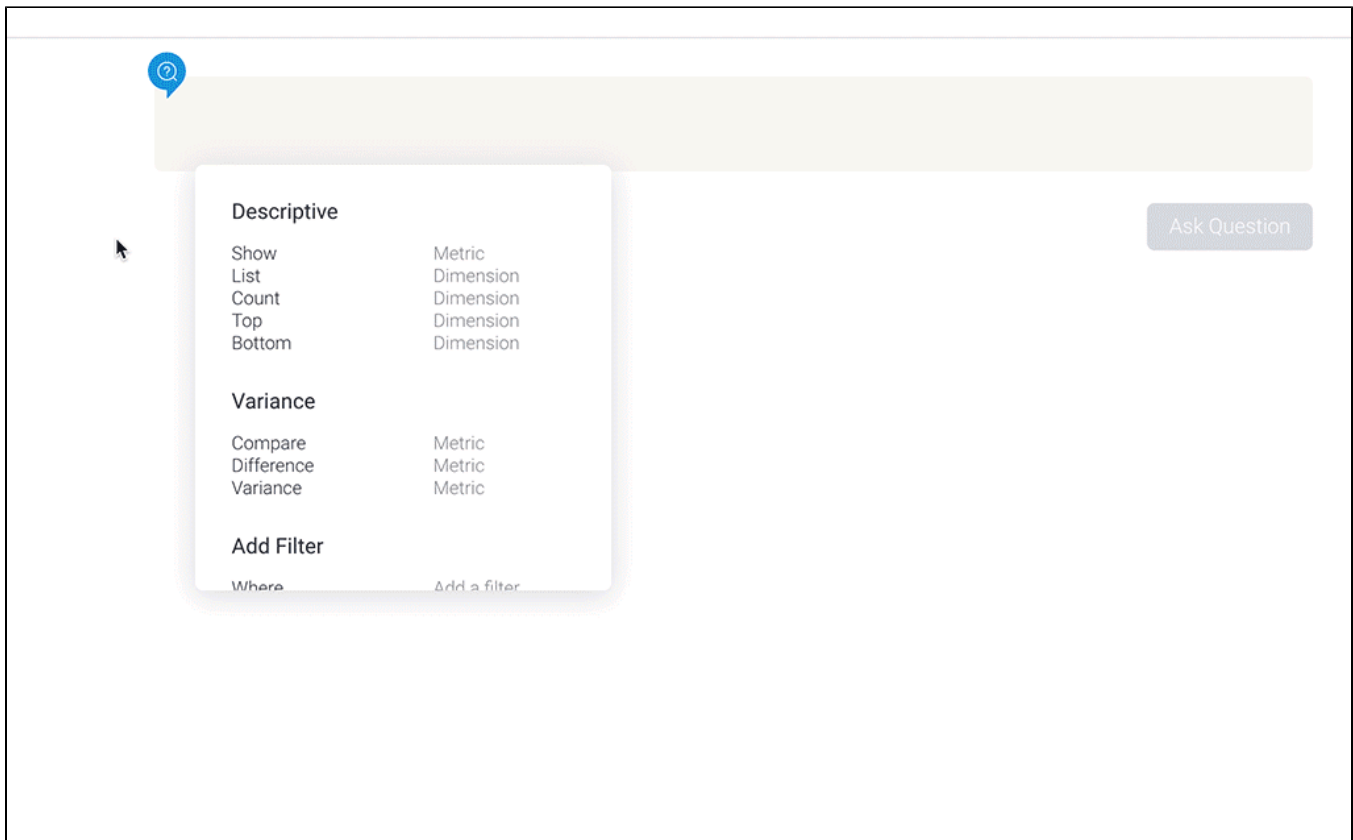
Compare	Metric
Difference	Metric
Variance	Metric

Add Filter

Where	Add a filter
When	
How often	
How many	
How much	

Ask Question

Use: Show Cost of Camp (Sum) by Month (Start Date) For All Time

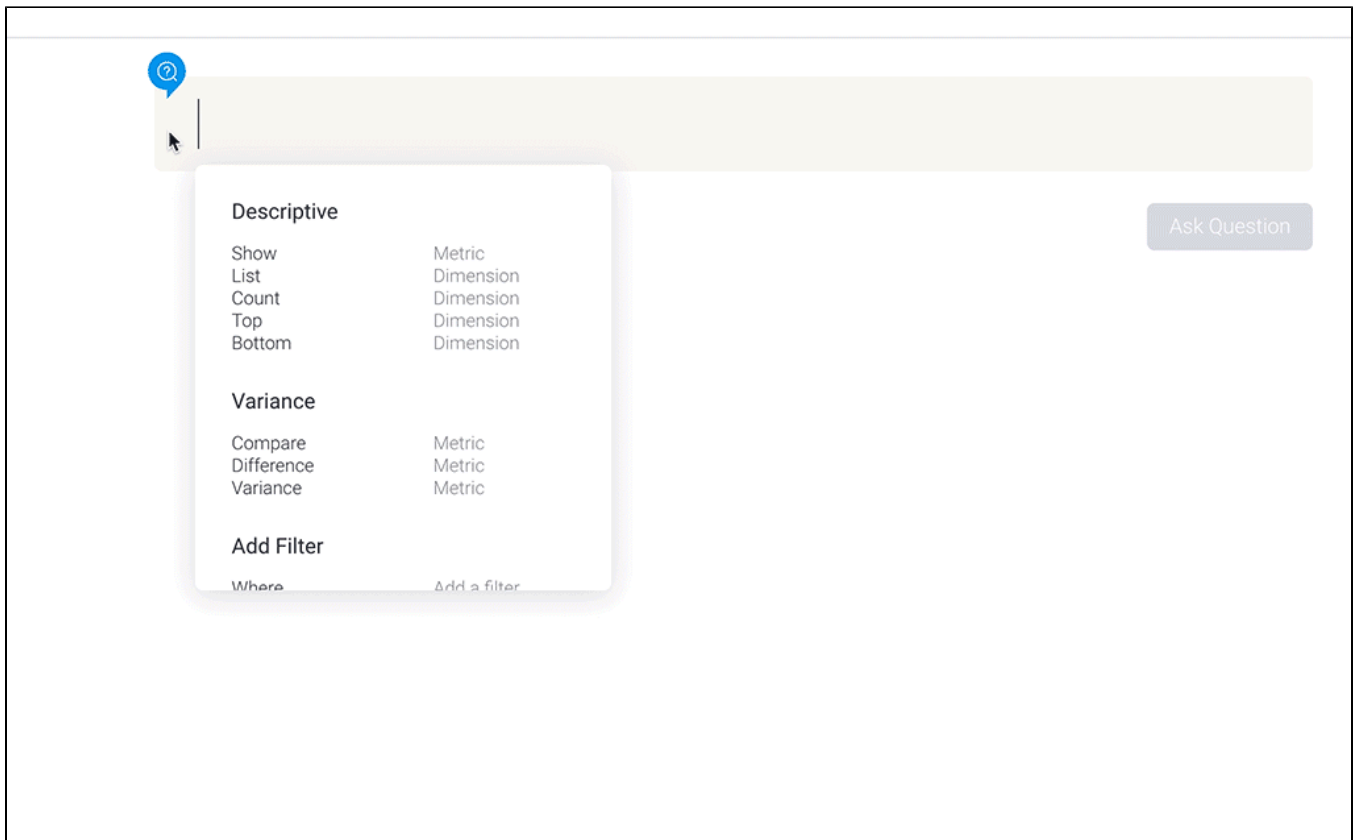


Highlight

Description: Use **Highlight** to draw attention to certain elements of your results, such as outliers, averages, trends, step changes and more. More than one highlight can be applied, and highlight options may change to suit your question's content.

Example: I want to see which agencies have profits of more than \$400,000 this year so far.

Use: Show Profit Margin (Sum) by Company Name highlight values greater than 400,000 For This Year To Date (Start Date)

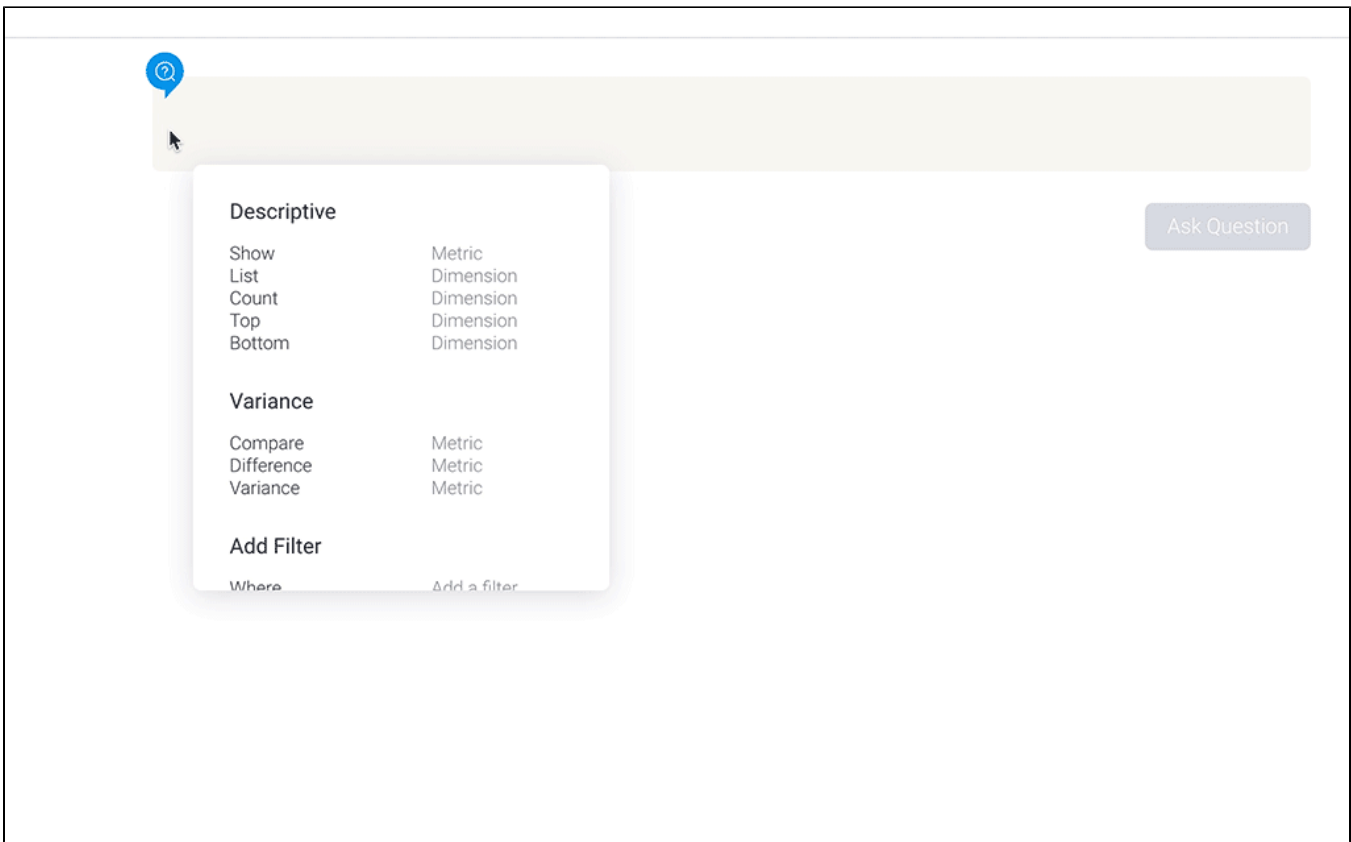


With (More/Less/Both/No/Growth/Decline)

Description: Use **With** to construct complex questions to refine your results through comparisons. **With** is only available with certain question types, such as List and Count.

Example: I want to see which agencies produced higher profits in Europe than America .

Use: List Company Names with more Profit Margin (Average) in Camp Regions Europe than North America For Last Year (Invoiced Date)

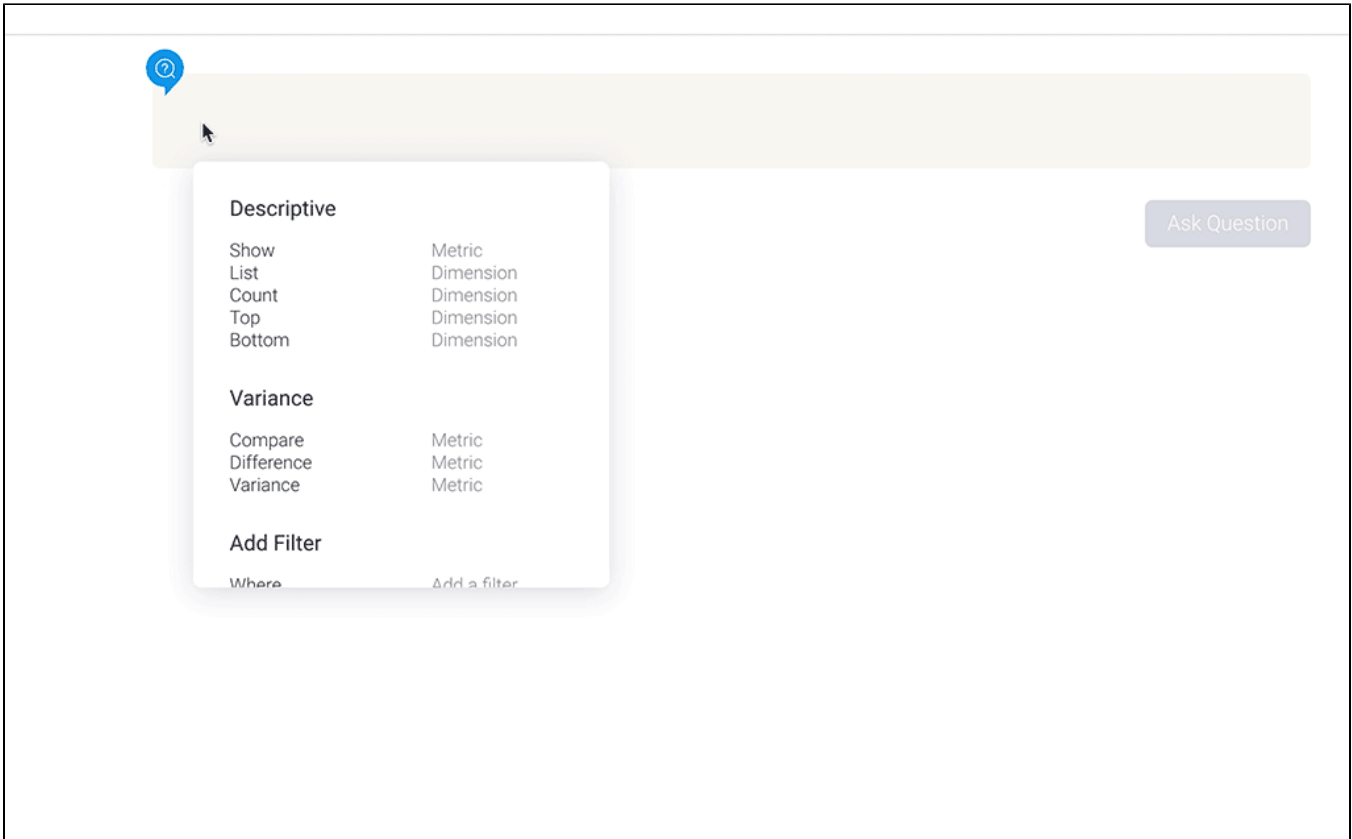


Where

Description: Use **Where** to refine your results by filtering out anything that isn't relevant. You can also start your question with **Where**.

Example: I want to see who broke their clavicles at camps in 2020.

Use: List First Names and Last Names Where Broken Bone Group is Clavicle For 2020 (Start Date)



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Calculations

When asking questions about metrics (number fields), you can make use of a number of calculations. Calculations can be performed with Show, Count (which counts a dimension field and outputs the result as a metric), Compare, Difference and Variance.

Calculation	Description
Divided by (/)	Divide metric 1 by metric 2.
Multiplied by (*)	Multiply metric 1 by metric 2.
Minus (-)	Subtract metric 2 from metric 1.
Plus (+)	Add metric 1 to metric 2.

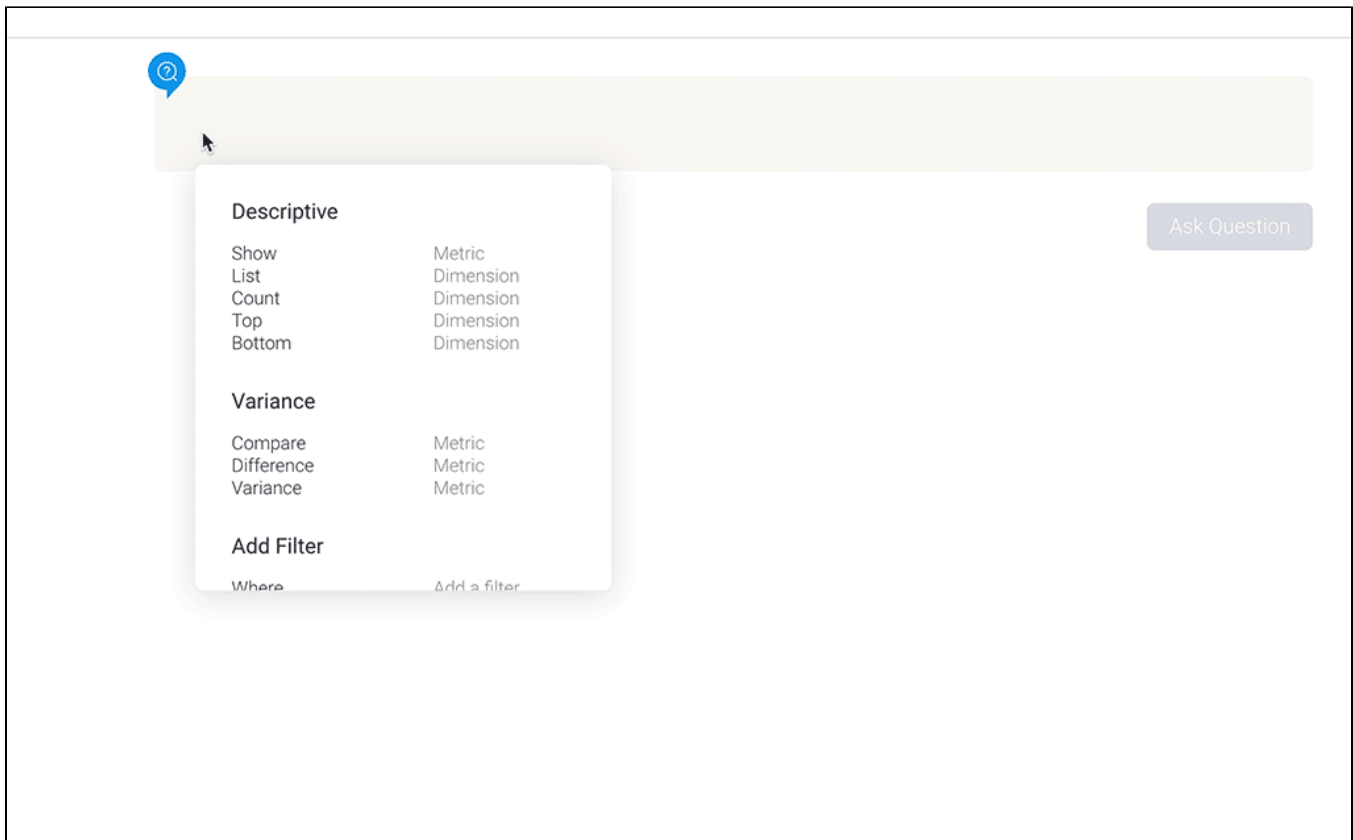
Useful tips

- Only two metric fields can be used with a calculation.
For example, $m1 + m2$, but not $m1 + m2 + m3$, and not $m1 + 20$.
- Each metric may take its own aggregation.
For example, $m1 \text{ (sum)} + m2 \text{ (avg)}$.

Description: Use calculations such as Divided by (/) when you want to perform arithmetic on the values in your question.

Example: I want to see the average revenue per athlete last year.

Use: Show Invoiced (Pref Currency) (Sum) divided by Athlete Counter (Sum) For Last Year (Start Date)



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Advanced functions

Advanced functions are only available in mathematically logical situations. For example, it's impossible to compare two metrics as a top 10. See the descriptions below for further information on how each advanced function works.

As Percentage of (%)

Description: Use **As Percentage of (%)** to calculate a metric as a percentage of either its total, its maximum value, or another metric field. Display the results by a dimension or date.

Example: I want to see the monthly invoiced totals for 2018, represented as percentages.

Use: Show Invoiced Amount (Sum) as percentage of total by Month (Invoiced Date) For 2018 (Invoiced Date)

As Running Total

Description: Use **As Running Total** to calculate a metric as a running total — either as an accumulative percentage or the total value. Display the results by a dimension or date.

Example: I want to see the running total of annual invoice amounts for all time.

Use: For All Time Show Invoiced Amount (Sum) as running total of value by Invoiced Date in Year

For Top

Description: Use **For Top** to output the top n (choose your number) — either by value ranking or percentage — of a dimension or a date, using the metric value to order the output. This block can be used with Show and Count. When output as a percentage, this function may display additional amounts, depending on the percentages of the data returned. For example, a question asking to show the top 1% of something could display more than 1% simply because the top 1% is the same as the top 3%. Similarly, if the top 10% produces three results, accounting for 6%, 3% and 4%, it will display the top 13% (all three results) rather than the top 9% (only two results).

Example: I want to see the top three highest performing demographics according to the invoiced amount for all time.

Use: For All Time Show Invoiced Amount (Sum) for top 3 by value Demographic

For Bottom

Description: Use **For Bottom** to output the bottom n (choose your number) — either by ranking or percentage — of a dimension or a date, using the metric value to order the output. This block can be used with Show and Count. When output as a percentage, This function may display additional amounts, depending on the percentages of the data returned. For example, a question asking to show 50% of something would display a result of 53% if the final row is at 49% and carries 4% weight.

Example: I want to display the bottom 10% of camps with the lowest profit margin in 2020.

Use: For 2020 Show Profit Margin (Sum) for bottom 10 percent of Camp Name by Camp Name

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Operators

Questions with filters can use operators to reduce the final results. Operators can help to pinpoint certain results or exclude particular values. Available operators include:

- Between
- Different from
- Equal to
- Greater than
- Greater than or equal to
- In list
- Is not null (is not empty)
- Is null (is empty)
- Less than
- Less than or equal to
- Not between
- Not in list

Description: Use operators to refine the results of your question even further and will only be displayed when suitable for the question being asked.

Example: I want to see a list of last year's camps where the average age was under 22.

Use: List Camp Names where Age at Camp (Average) Less than 22 For Last Year (Start Date)

Descriptive

Show

Metric

List

Dimension

Count

Dimension

Top

Dimension

Bottom

Dimension

Variance

Compare

Metric

Difference

Metric

Variance

Metric

Add Filter

Where

Add a filter