

+++ title = "About transformations" weight = 10 aliases = ["/docs/sources/panels/transform-data/about-transformation/"] +++

About transformations

Transformations process the result set of a query before it's passed on for visualization. Using transformations, you can:

- Rename fields
- Join time series data
- Perform mathematical operations across queries
- Use the output of one transformation as the input to another transformation

For users that rely on multiple views of the same dataset, transformations offer an efficient method of creating and maintaining numerous dashboards.

You can also use the output of one transformation as the input to another transformation, which results in a performance gain.

Sometimes the system cannot graph transformed data. When that happens, click the `Table view` toggle above the visualization to switch to a table view of the data. This can help you understand the final result of your transformations.

Transformation types

Grafana provides a number of ways that you can transform data. For a complete list of transformations, refer to [\[Reference: Transformation functions\]](#) ([< relref "../reference-transformation-functions.md" >](#)).

Order of transformations

When there are multiple transformations, Grafana applies them in the order they are listed. Each transformation creates a result set that then passes on to the next transformation in the processing pipeline.

The order in which Grafana applies transformations directly impacts the results. For example, if you use a Reduce transformation to condense all the results of one column into a single value, then you can only apply transformations to that single value.