

# Deep-dive into Tableau

## Part 8 – LOD

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# LOD Overview

- Level of Detail (LOD) expressions provide a way to easily compute aggregations that are not at the level of detail of the visualization
- LOD are used to run complex queries involving many dimensions at the data source level instead of bringing all the data to Tableau interface
- Using LOD expressions, a user can compute different levels of aggregations that are not at the level of detail of the visualization.
- **Un aggregated expression:**  
$$[\text{Sales}]/[\text{Profit}]=[\text{Profit ratio}] \text{ per row level}$$
- **Aggregated expression:**  
$$\text{Sum}(\text{Sales})/\text{Sum}(\text{profit})= \text{AGG}(\text{Profit Ratio})$$

# Types of LOD

There are three main types of LOD expressions.

## 1. **FIXED LOD :**

This expression computes values using the specified dimensions without reference to any other dimensions in the view.

## 2. **INCLUDE LOD:**

This level of detail expressions compute values using the specified dimensions in addition to whatever dimensions are in the view.

## 3. **EXCLUDE LOD :**

These levels of detail expressions subtract dimensions from the view level of detail.

# Limitations for Level of Detail Expressions

- Level of detail expressions that calculated floating-point data can behave unreliably while used in visualization.
- LOD only works on Viz. ,are not shown on the Data Source page
- In data blending, linking field of primary data source should be present in view while using LOD from secondary data source.

# Use Case

- **Include LOD:**

1. Compare the average customer sales across different product segments.
2. Compute avg sales per sub category and display avg of underlying values and avg of subcategory

- **Fixed LOD:**

1. Compute summarized count of profitable subcategory.
2. Display region and sub category wise sales ,compute category wise sale details on tooltip for complete visualization.

- **Exclude LOD:**

1. Compare avg sub category sales value per subcategory ,calculate its difference.
2. Display Category, subcategory wise sales, compute sales using category

Thank You