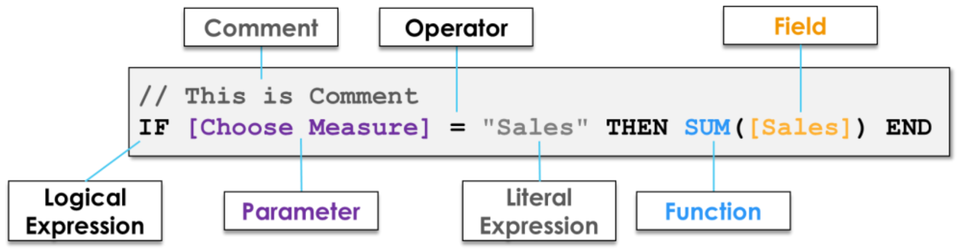
Tableau Functions
CHEAT SHEET

Calculation Components



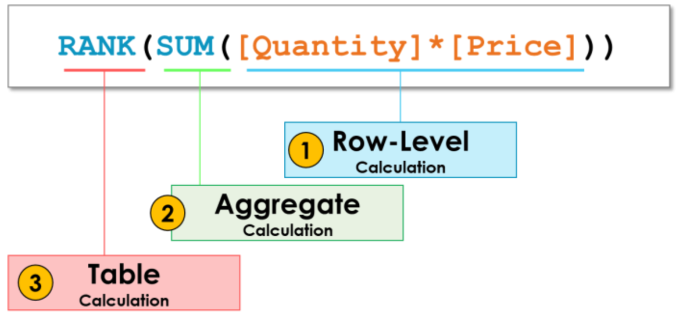
```
// This is Comment
IF [Choose Measure] = "Sales" THEN SUM([Sales]) END
```

Calculation 4 Types

Row-Level-Calculations	Perform calculations at the row level individually. Data will not be aggregated and out of calculation will be stored in data source
Aggregate Calculations	Aggregate the rows at the dimension level used in the VIZ
LOD Calculations	Aggregate the rows at the dimension level used in the calculation to control the level of details
Table Calculation	Performed after the execute of aggregate calculation. The calculations are performed on the data displayed in the visualization

Row-Level Calculation	Aggregate Calculation	LOD Calculation	Table Calculation
`[Quantity]*[Price]`	`SUM([Revenue])`	`{FIXED[Category]:SUM([Revenue])}`	`RANK(SUM([Revenue]))`
Do Not Aggregate Data	Aggregate Data	Aggregate Data	Aggregate Data
Row Level	VIZ Level Of Details	Specific Level Of Details	VIZ Level Of Details
Calculated using Data in Data Source	Calculated using Data in Data Source	Calculated using Data in Data Source	Calculated using Data in VIZ
Pre-Calculated	Calculated in the Fly	Calculated in the Fly	Calculated in the Fly
Simple Calcuations	Simple Calcuations	Complex Calcuations	Complex Calcuations

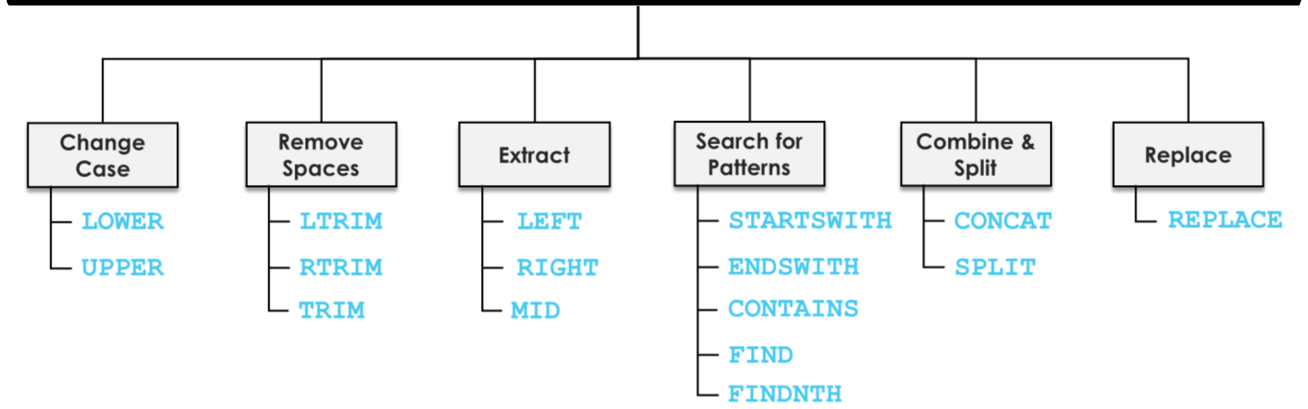
Basic Components of Calculations



Number Functions

`CEILING(1.2) = 2`	Round up numbers
`FLOOR(1.2) = 1`	Round down numbers
`ROUND(1.2) = 1`	Round numbers to nearest integer

String Functions



`LOWER("Paris") = "paris"`	Converts all characters to lowercase
`UPPER("Paris") = "PARIS"`	Converts all characters to uppercase
`LTRIM(" Paris ") = "PARIS "`	Removes any leading spaces
`RTRIM(" Paris ") = " PARIS"`	Removes any trailing spaces
`TRIM(" Paris ") = "PARIS"`	Removes both leading & trailing spaces
`LEFT("Paris",2) = "Pa"`	Extracts the left-most number of characters in string
`RIGHT("Paris",2) = "is"`	Extracts the right-most number of characters in string
`MID("Paris",2,2) = "ar"`	Extracts specified number of characters in string, starting at specified position
`CONTAINS("Paris","ar") = true`	Returns true if the given string contains a specified substring
`STARTSWITH("Paris","Pa") = true`	Returns true if string starts with substring.
`ENDSWITH("Paris","ar") = true`	Returns true if the given string ends with the specified substring
`FIND("Baraa","a") = 2`	Returns the position of substring in string
`FINDNTH("Baraa","a",2) = 4`	Returns the position of the nth occurrence of substring within the specified string
`SPLIT("a-b","-",2) = b`	Returns a substring from a string based on specified delimiter and
`REPLACE("a-b","-","+") = b`	Replaces occurrences of a specified substring with another substring within a string

Date Functions

`DATEPART('month',#2025-08-20#) = 8`	Extracts a specific part of date as an integer
`DATENAME('month',#2025-08-20#) = "August"`	Extracts a specific part of date as a string
`MONTH(#2025-08-20#) = 8`	Extracts the month of a given date as an integer
`YEAR(#2025-08-20#) = 2025`	Extracts the year of a given date as an integer
`DAY(#2025-08-20#) = 25`	Extracts the day of a given date as an integer
`DATETRUNC('month',#2025-08-20#) = 2025-08-01`	Truncates a date or time to a specified level of precision
`DATEADD('month',3,#2025-08-20#) = 2025-11-20`	Adds an increment to specified date and returns
`DATEDIFF('month',#2025-11-25#,#2026-02-01#) = 3`	Returns the difference between two dates
`TODAY() = 2024-08-20`	Returns the current date
`NOW() = 2024-08-20 1:08:21 PM`	Returns the current date and time

NULL Functions

`ZN(NULL) = 0`	Converts *NULL* to Zero
`IFNULL(NULL,1) = 1`	Converts *NULL* to the specified value
`ISNULL(NULL) = true`	Return true if value is *NULL*, and false otherwise

Logical Calculations

Logical Conditions

```
IF [Sales] >1200 THEN "High"
END
```

Classifies Sales as "High" if greater than 1200, and *NULL* otherwise

```
IF [Sales] >1200 THEN "High"
ELSE "LOW"
END
```

Classifies Sales as "High" if greater than 1200, and "Low" otherwise

```
IF [Sales] >1200 THEN "High"
ELSEIF [Sales] >500 THEN "Medium"
ELSE "LOW"
END
```

Classifies Sales as "High" if greater than 1200, "Medium" if between 500 and 1200, and "Low" otherwise

```
IIF ([Sales] >1200,"High","Low")
```

Classifies Sales as "High" if greater than 1200, and "Low" otherwise

```
CASE [Country]
WHEN "Germany" THEN"DE"
WHEN "USA" THEN "US"
ELSE "n/a"
END
```

Assigns country codes "DE" for Germany, "US" for USA, and "n/a" for other countries

Logical Operators

```
IF [Sales] > 1200 OR [Country] = "Germany" THEN "High"
END
```

Classifies Sales as "High" if greater than 1200 or if the country is Germany, and *NULL* otherwise

```
IF [Sales] > 1200 OR [Country] = "Germany" THEN "High"
END
```

Classifies Sales as "High" if greater than 1200 and if the country is Germany, and *NULL* otherwise

Aggregate Calculations

`SUM([Sales])`	Returns the total sum of all values
`AVG([Sales])`	Returns the average of all values
`MAX([Sales])`	Returns the maximum values
`MIN([Sales])`	Returns the minimum value
`COUNT([ID])`	Counts the number of values
`COUNTD([ID])`	Counts the number of unique values
`ATTR([Customer])`	If all values are same, then it returns single value, otherweise Asterisk *

LOD Calculations

`{ FIXED[Category] : SUM([Sales]) }`	Sums the sales using only category, ignoring other dimensions in the view
`{ EXCLUDE[Category] : SUM([Sales]) }`	Sums the sales using view dimensions and excluding category if present in the view
`{ INCLUDE[Customer] : SUM([Sales]) }`	Sums the sales using not only view dimensions but also includes the dimenion customer

Table Calculations

`FIRST()`	Returns the number of rows from current row to first row in partition
`LAST()`	Returns the number of rows from current row to last row in partition
`INDEX()`	Returns the index of the current row in the partition
`RANK(SUM([Sales]),`	Ranks the total sales in descending order, assigning a rank to each row
`RUNNING_SUM(SUM([Sales]))`	Calculates the running sum of the total sales, providing a cumulative sum as moving