BUILDING LOGICAL STATEMENTS

These are sometimes called Logical statements or Logical expressions or Logical functions.

Logical calculations allow us to determine if a certain condition is true or false (Boolean logic).

For example, you might want to quickly see if profit for each region is above or below a certain threshold.

The logical calculation might look something like this:

SUM(Profit) > 5000

BUILDING LOGICAL STATEMENTS

There are many Logical functions available in Tableau, but we will be going through only 2 functions

IF THEN ELSEIF

CASE

Syntax for IF THEN ELSEIF statement:

IF <expr> THEN <then>
[ELSEIF <expr2>
THEN <then2>...]
[ELSE <else>]
END

Description of IF, THEN & ELSEIF Function:

Tests a series of expressions returning the <then> value for the first true <expr>.
If there is no true <exp> including ELSE, then Null is returned.

BUILDING LOGICAL STATEMENTS

Syntax for CASE statement:

CASE <expression>
WHEN <value1> THEN <return1>
WHEN <value2> THEN <return2> ...
ELSE <default return>
END

BUILDING LOGICAL STATEMENTS

Description of CASE Function:

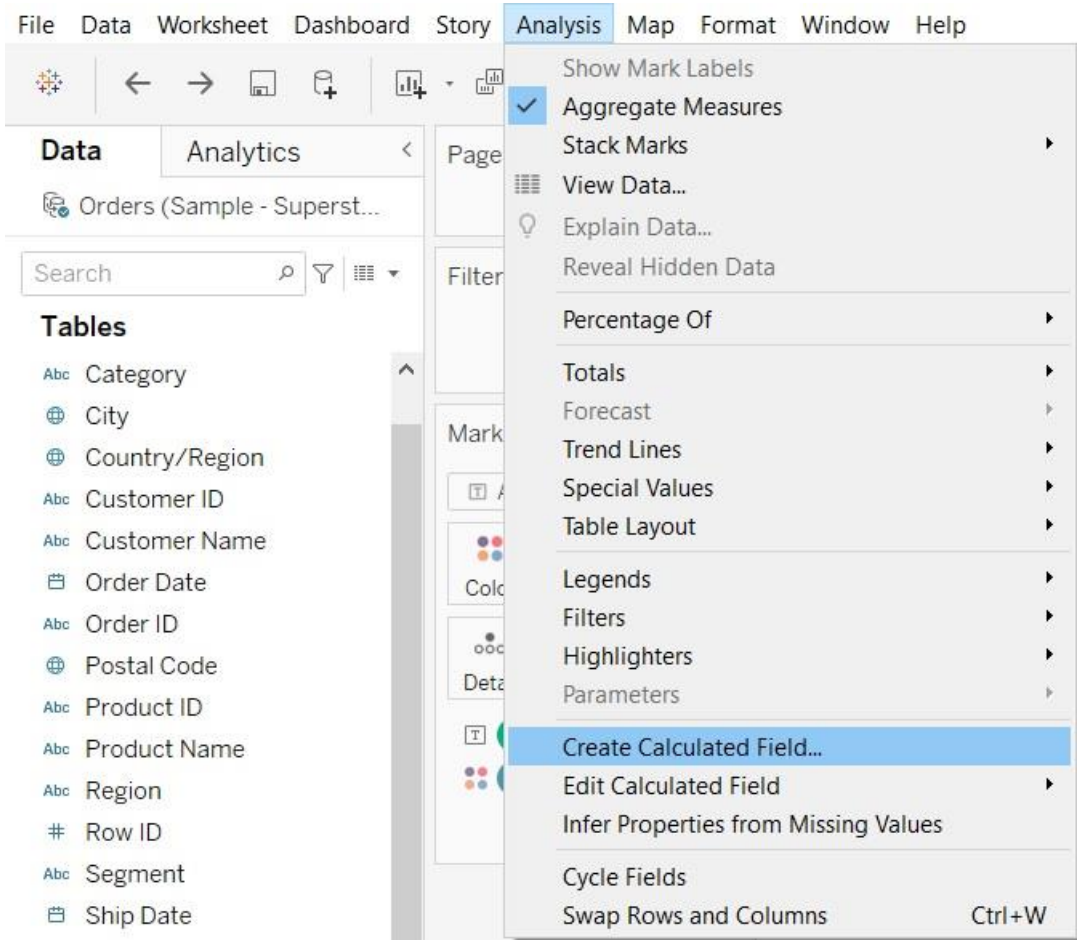
Performs logical tests and returns appropriate values.
The CASE function evaluates expression, compares it to a sequence of values, value1, value2, etc., and returns a result.
When a value that matches expression is encountered, CASE returns the corresponding return value.
If no match is found, the default return expression is used.
If there is no default return and no values match, then Null is returned.

CASE is often easier to use than IIF or IF THEN ELSE.

Typically, an IF function can be used to perform a sequence of arbitrary tests, and a CASE function can be used to search for a match to an expression.
But a CASE function can always be rewritten as an IF function , although the CASE function will generally be more concise.

STEPS TO CREATE IF THEN ELSEIF CALCULATION

Step 1: Select **Analysis** > **Create Calculated Field**



STEPS TO CREATE IF THEN ELSEIF CALCULATION

Step 2: Calculation Editor will open

STEPS TO CREATE IF THEN ELSEIF CALCULATION

Step 3: Name the calculated field, **IF THEN ELSEIF Cond**.

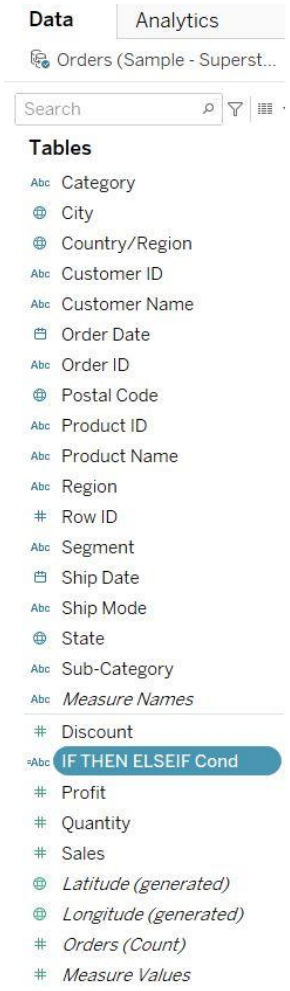
Enter the below mentioned formula

Confirm that a **"The calculation is valid"** message is seen

When finished, Click **OK**

STEPS TO CREATE IF THEN ELSEIF CALCULATION

Step 4: The new calculated field appears under Measures in the Data pane. Just like other fields, we can use it in one or more visualizations.



STEPS TO CREATE IF THEN ELSEIF CALCULATION

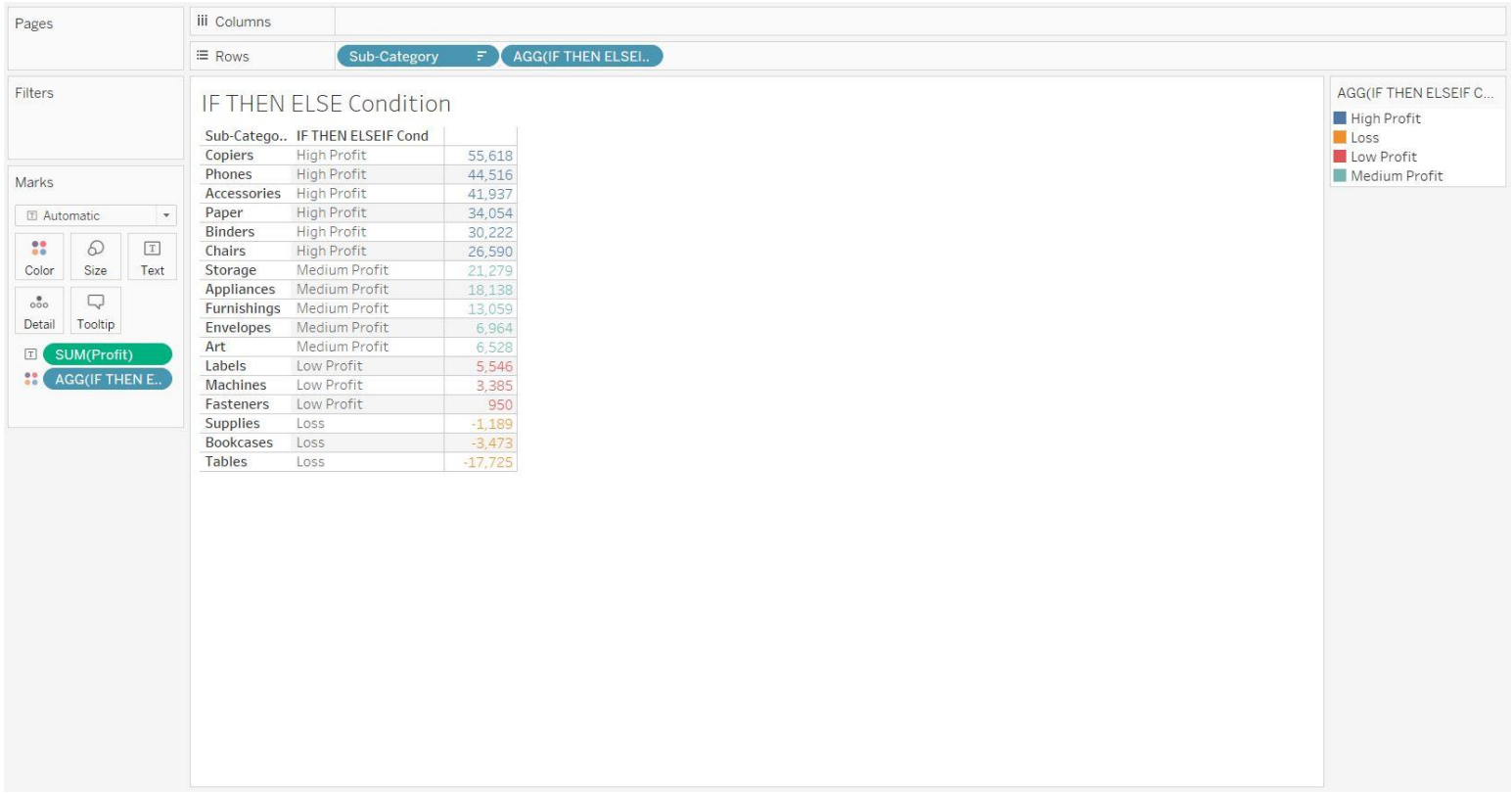
Step 5: To confirm if the calculated condition is working correctly create the below mentioned Viz

Rows Shelf: Sub-Category, IF THEN ELSEIF Cond **(New Calculated Field)**

Label of Marks Card: Profit

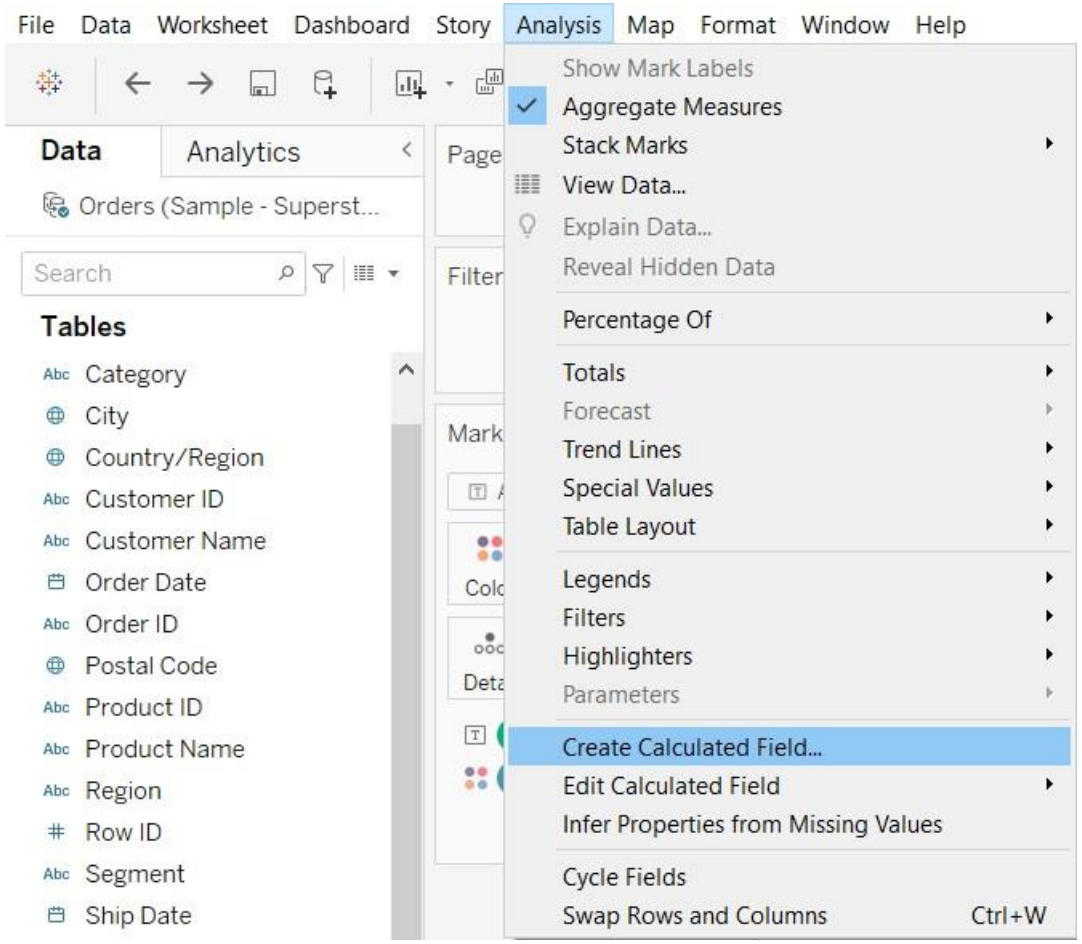
Color of Marks Card: IF THEN ELSEIF Cond **(New Calculated Field)**

Sort descending by SUM of Profit



STEPS TO CREATE CASE CALCULATION

Step 1: Select **Analysis** > **Create Calculated Field**



STEPS TO CREATE CASE CALCULATION

Step 2: Calculation Editor will open

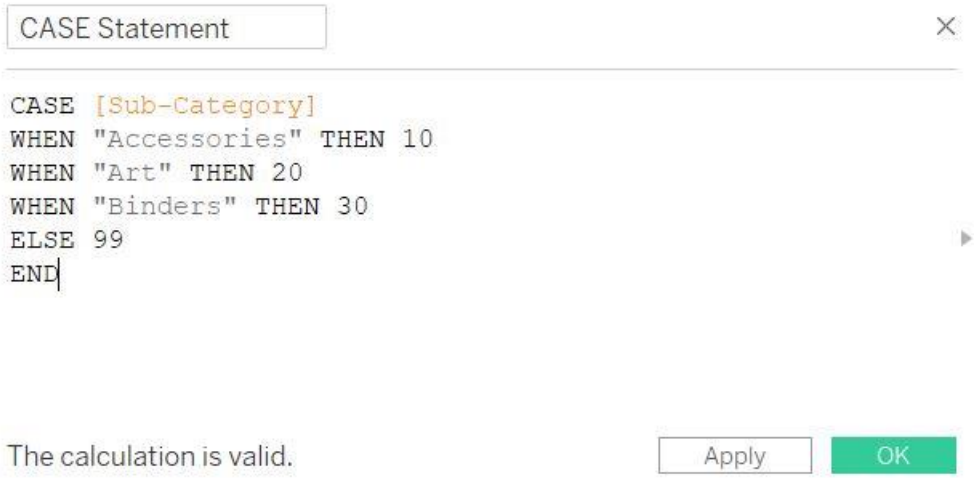
STEPS TO CREATE CASE CALCULATION

Step 3: Name the calculated field, **CASE Statement**.

Enter the below mentioned formula

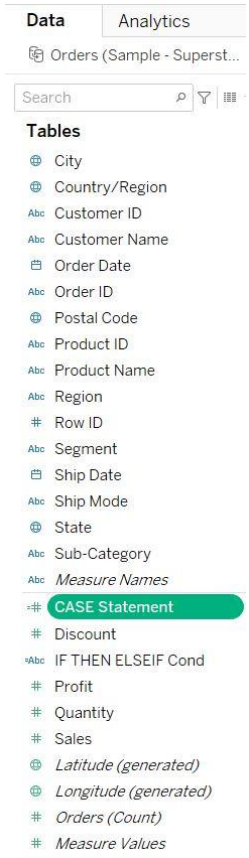
Confirm that a **"The calculation is valid"** message is seen

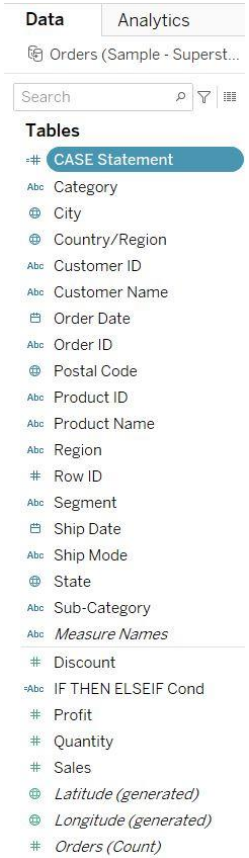
When finished, Click **OK**



STEPS TO CREATE CASE CALCULATION

Step 4: The new calculated field appears under Measures in the Data pane. Move the field to Dimensions section since we need to use it along with Categorical data e.g.: **Sub-Category**





STEPS TO CREATE CASE CALCULATION

Step 5: To confirm if the calculated condition is working correctly create the below mentioned Viz

Rows Shelf: Sub-Category

Label of Marks Card: Case Statement **(New Calculated Field)**