

Start with PowerBI

"From Rookie to Rock"

**DAX**  
Explanation

# CALCULATE Part 3

## Context transition & Iteration



Patou Tips #45

# CALCULATE

## Context transition & Iteration



When you start to go deeper into CALCULATE, you quickly run into the problem of false results. The problem comes from often of a transition context without reiteration.

```
Revenue (bad result) =  
    CALCULATE([Sales]*[Price])
```

| Category | Subcategory | Sales  | Price    | Revenue<br>(bad result) |
|----------|-------------|--------|----------|-------------------------|
| IceCream | Chocolate   | 24 585 | X 3,00 = | 73 755                  |
|          | Lemon       | 17 209 | X 2,50 = | 43 023                  |
|          | Mint        | 14 749 | X 2,50 = | 36 873                  |
|          | Strawberry  | 19 667 | X 2,00 = | 39 334                  |
|          | Vanilla     | 22 126 | X 3,00 = | 66 378                  |
|          | Total       | 98 336 | X 2,60 = | 255 674                 |

} = 259362 ✓  
✗

Each row gives a good result, but the problem comes from the total where the same rule is applied and ultimately gives a bad result.

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2

# CALCULATE

## Context transition & Iteration



**Rule** → **Context Transition** is triggered by a **Row Context**.

```
Revenue (good result SUMX) =  
    CALCULATE(  
        SUMX('Fact_Sales IceCream & Macaron',[Sales]*[Price])  
    )
```

| Category | Subcategory  | Sales         | Price       | Revenue (good result SUMX) |
|----------|--------------|---------------|-------------|----------------------------|
| IceCream | Chocolate    | 24 585        | X 3,00      | = 73 755                   |
|          | Lemon        | 17 209        | X 2,50      | = 43 023                   |
|          | Mint         | 14 749        | X 2,50      | = 36 873                   |
|          | Strawberry   | 19 667        | X 2,00      | = 39 334                   |
|          | Vanilla      | 22 126        | X 3,00      | = 66 378                   |
|          | <b>Total</b> | <b>98 336</b> | <b>2,60</b> | <b>259 362</b>             |

73 755  
+  
43 023  
+  
36 873  
+  
39 334  
+  
66 378  
= 259 362

To get a good result, combine *CALCULATE* with an iteration function such as *SUMX*.

**Explanation:** For each row, *CALCULATE* with *SUMX* applies the **Row Context** ( $[Sales] \times [Price]$ ) to the table (*Fact\_Sales IceCream & Macaron*) and **iterates** through each row until the final total is reached.

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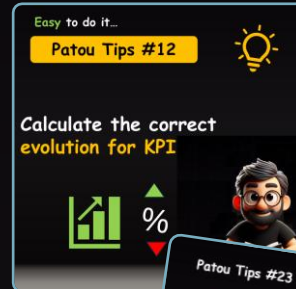


# Learn and practice

Find past issues of "Patou Tips" and download resources to practice on GitHub



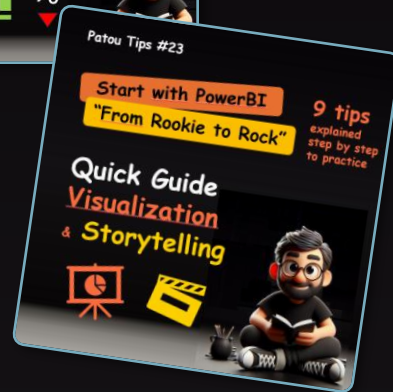
**Patou Tips #5**  
Create a Customized Chart  
(for income statement)



**Patou Tips #12**  
Calculate right evolution for KPI



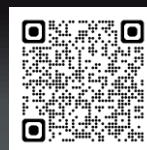
**Patou Tips #6**  
Create Customized Icon



**Patou Tips #23**  
Quick Guide Visualization & Storytelling



**Patou Tips #7**  
Create an Age Pyramid Chart  
(for Human Ressources)



**Resources on GitHub**  
<https://github.com/PatouTips/Patou-Tips>

Don't forget!  
This isn't the truth, it's just my truth!

## Patou Tips



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