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### 1. What does **FILTER(Sales, Sales[Amount] > 1000)** return?

- It returns a **table** that includes only the rows in the **Sales** table where **Amount > 1000**.
- This does **not** calculate anything—it's just a filtered table.

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### 2. Write a measure **High Sales** that sums **Amount** where **Amount > 1000** using **FILTER**.

```
High Sales =  
CALCULATE(  
    SUM(Sales[Amount]),  
    FILTER(Sales, Sales[Amount] > 1000)  
)
```

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### 3. How does **ALLEXCEPT(Sales, Sales[Region])** differ from **ALL(Sales)**?

- **ALL(Sales)** removes **all filters** from the **Sales** table.
- **ALLEXCEPT(Sales, Sales[Region])** removes all filters **except** the filter on **Sales[Region]**.

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### 4. Use **SWITCH** to categorize Amounts:

```
Amount Category =  
SWITCH(  
    TRUE(),  
    Sales[Amount] > 1000, "High",  
    Sales[Amount] >= 500 && Sales[Amount] <= 1000, "Medium",  
    "Low"  
)
```

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## 5. What is the purpose of **ALLSELECTED**?

- **ALLSELECTED** keeps  **slicer** and **higher-level** filters but ignores **visual-level filters**.
  - Great for calculating things like “% of selected total”.
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## 6. Write Regional Sales % measure (contribution to region total):

Regional Sales % =

```
DIVIDE(  
    SUM(Sales[Amount]),  
    CALCULATE(SUM(Sales[Amount]), ALLEXCEPT(Sales, Sales[Region]))  
)
```

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## 7. Create a dynamic measure with **SWITCH** for SUM, AVERAGE, and COUNT:

Measure Toggle =

```
SWITCH(  
    SELECTEDVALUE(MeasureSelector[Measure]),  
    "SUM", SUM(Sales[Amount]),  
    "AVERAGE", AVERAGE(Sales[Amount]),  
    "COUNT", COUNT(Sales[Amount])  
)
```

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## 8. Use **FILTER** in **CALCULATE** to exclude Furniture:

Non-Furniture Sales =

```
CALCULATE(  
    SUM(Sales[Amount]),  
    FILTER(Products, Products[Category] <> "Furniture")  
)
```

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## 9. Why might **ALLSELECTED** behave unexpectedly in a pivot?

- It considers **slicers and outer visuals**, but not **matrix-level filters**.
  - If used in a matrix, it may not match your expectation if multiple fields or groups are used.
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## 10. Measure that ignores Region filters:

Total Sales (Ignore Region) =  
CALCULATE(  
    SUM(Sales[Amount]),  
    ALL(Sales[Region])  
)

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### 11. Optimize **High Sales** measure using a Boolean condition:

High Sales Optimized =  
CALCULATE(  
    SUM(Sales[Amount]),  
    Sales[Amount] > 1000  
)

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### 12. Measure for Top 2 Products using **TOPN** and **FILTER**:

Top 2 Product Sales =  
CALCULATE(  
    SUM(Sales[Amount]),  
    FILTER(  
        TOPN(2, SUMMARIZE(Sales, Products[ProductName], "Total", SUM(Sales[Amount])),  
        [Total], DESC),  
        TRUE  
    )  
)

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### 13. Use **ALLSELECTED( )** with no parameters:

Selected Total Sales =  
CALCULATE(  
    SUM(Sales[Amount]),  
    ALLSELECTED()  
)

- Respects slicers but not visual filters.
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### 14. Debug: **SWITCH** returns incorrect values in matrix?

- Likely due to **unexpected context** from matrix rows/columns.

- Use `SELECTEDVALUE()` carefully and check for multiple values.

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## 15. Simulate “Reset Filters” button using `ALL`:

```
Reset Sales =  
CALCULATE(  
    SUM(Sales[Amount]),  
    ALL(Sales)  
)
```