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

Answer:
It returns a **table** of rows from Sales where Amount > 1000.

FILTER() always returns a table, not a single value.

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

dax

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

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

- ALL(Sales) **removes all filters** on the Sales table.
- ALLEXCEPT(Sales, Sales[Region]) **removes all filters EXCEPT Region**, so only Region context is preserved.

✅ **4. Use SWITCH to categorize Amount:**

- "Medium" if 500–1000
- "High" if > 1000
- "Low" otherwise

dax

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

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

Answer:
ALLSELECTED removes visual-level filters but **respects slicers** and external filters.
Useful for showing percentage of totals **within slicer selections**, not total of all data.

✅ **6. Regional Sales %: use ALLEXCEPT to show contribution to region**

dax

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

✅ **7. Dynamic measure using SWITCH to toggle between SUM, AVERAGE, COUNT**

Assume you have a disconnected table named Measure Selector with values like:

- “Sum”
- “Average”
- “Count”

dax

```
Dynamic Measure =
SWITCH(
  SELECTEDVALUE('Measure Selector'[Measure]),
  "Sum", SUM(Sales[Amount]),
  "Average", AVERAGE(Sales[Amount]),
  "Count", COUNT(Sales[Amount])
)
```

✅ **8. Use FILTER inside CALCULATE to exclude "Furniture"**

dax

```
Exclude Furniture Sales =
CALCULATE(
```

SUM(Sales[Amount]),

FILTER(Products, Products[Category] <> "Furniture")

)

Make sure Sales table is related to Products.

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

Answer:
Because ALLSELECTED keeps slicer selections but may **not work properly with visual-level filters inside a matrix or nested rows** — especially if the outer context isn't clear (like drilling down levels).

✅ **10. Measure to ignore region filter:**

dax

Sales Ignore Region =

CALCULATE(

SUM(Sales[Amount]),

ALL(Sales[Region])

)

✅ **11. Optimize this measure:**

Old version:

dax

High Sales =

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

✅ Optimized version:

dax

High Sales =

CALCULATE(SUM(Sales[Amount]), Sales[Amount] > 1000)

DAX engine prefers **boolean expressions** over FILTER when possible — faster!

✅ **12. Top 2 Products by sales using TOPN and FILTER:**

dax

Top 2 Products Sales =

CALCULATE(

```
  SUM(Sales[Amount]),
  TOPN(
    2,
    VALUES(Products[ProductName]),
    CALCULATE(SUM(Sales[Amount])),
    DESC
  )
)
```

✅ **13. Use ALLSELECTED() with no parameters**

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

Keeps slicer filters, **ignores** visual filters like matrix/column headers.

✅ **14. SWITCH measure returns wrong values in matrix? Why?**

Common reason:
SELECTEDVALUE() used inside SWITCH() returns blank if **multiple values** exist — leads to incorrect path in SWITCH.

✅ Solution: Wrap SELECTEDVALUE() with a default:

```
SELECTEDVALUE('Measure Selector'[Measure], "Default")
```

✅ **15. Simulate "Reset Filters" button using ALL**

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