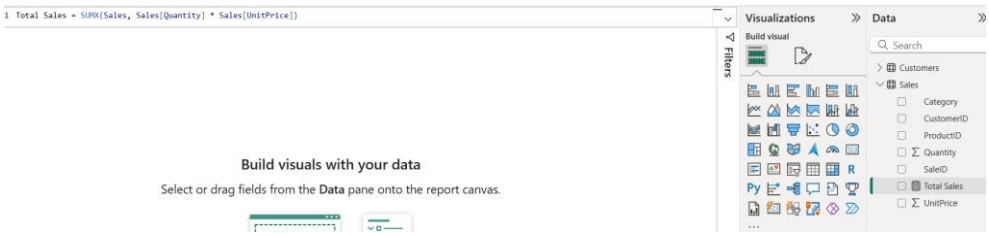
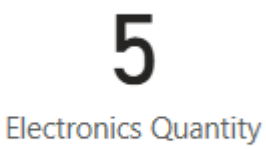
1. What is row context? Give an example in a calculated column.
   Row context occurs when a calculated column processes one row at a time. The formula can access other columns in the same row.
   Example: TotalPrice = Sales[Quantity] * Sales[UnitPrice]
   This creates a new column with the total price for each row.
2. `Total Sales = SUMX(Sales, Sales[Quantity] * Sales[UnitPrice])`



3. Use RELATED to fetch the Name from the Customers table into the Sales table.
   The RELATED function brings a column from a related table into the current table. It only works if there is a relationship between the tables.
   CustomerName = RELATED(Customers[Name])
   This adds a column to the Sales table showing the customer name from the Customers table using the relationship on CustomerID.

SaleID	ProductID	CustomerID	Quantity	UnitPrice	Category	CustomerName
1	P1	C1	2	$100	Electronics	Alice
2	P2	C2	1	$50	Clothing	Bob
3	P1	C1	3	$100	Electronics	Alice

4. It returns the total quantity sold for only the "Electronics" category.



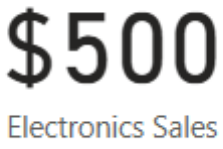
5. Explain the difference between VAR and RETURN in DAX
   English:
   - VAR is used to define a variable — a temporary value or expression that you can reuse.
   - RETURN is used to output the final result of a measure or calculated column.

6. Create a calculated column in Sales called TotalPrice using row context (Quantity * UnitPrice).

   TotalPrice = Sales[Quantity] * Sales[UnitPrice]

Category	Sum of Quantity	Sum of UnitPrice	Total Sales
Clothing	1	$50	$50
Electronics	5	$200	$500
Total	**6**	**$250**	**$550**

7. Write a measure Electronics Sales using CALCULATE to sum sales only for the "Electronics" category.
   Electronics Sales =
   CALCULATE(
   SUMX(Sales, Sales[Quantity] * Sales[UnitPrice]),
   Sales[Category] = "Electronics"
)



8. Use ALL(Sales[Category]) in a measure to show total sales ignoring category filters.

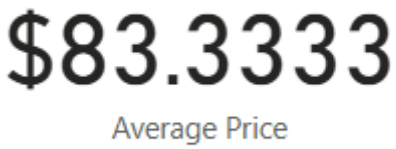
```
Total Sales All Categories =
CALCULATE(
    SUMX(Sales, Sales[Quantity] * Sales[UnitPrice]),
    ALL(Sales[Category])
)
```

9. Fix this error: A calculated column in Sales uses RELATED(Customers[Region]) but returns blanks.

   This error usually happens when there is no relationship between the Sales and Customers tables. The RELATED function only works if the current table has a relationship with the other table. To fix this, go to Model view and make sure Sales[CustomerID] is properly related to Customers[CustomerID].

10. Why does CALCULATE override existing filters?
    CALCULATE changes or adds filters to the current filter context.

11. Write a measure that returns average unitprice of products.
    Average Price = AVERAGE(Sales[UnitPrice])



12. Use VAR to store a temporary table of high-quantity sales (Quantity > 2), then count rows.

```
HighQtyCount =
VAR HighSales = FILTER(Sales, Sales[Quantity] > 2)
RETURN COUNTROWS(HighSales)
```

13. Write a measure % of Category Sales that shows each sale's contribution to its category total.

```
% of Category Sales =
DIVIDE(
    SUMX(Sales, Sales[Quantity] * Sales[UnitPrice]),
    CALCULATE(
        SUMX(Sales, Sales[Quantity] * Sales[UnitPrice]),
        REMOVEFILTERS(Sales[ProductID])
    )
)
```

14. Simulate a "remove filters" button using ALL in a measure.

```
    Total Sales Ignore Filters =

CALCULATE(

   SUMX(Sales, Sales[Quantity] * Sales[UnitPrice]),

   ALL(Sales)

)
```

This simulates a "clear all filters" button — showing total sales regardless of any slicers or filters applied.

15. Troubleshoot: A CALCULATE measure ignores a slicer. What’s the likely cause?

The measure might be using ALL(), which removes the slicer filter.