**Chart Types**

1. **Bar & Column charts:** (2 or more categories) used for comparison across categories.
2. **Line chart:** To analyze trends over a period of time.
3. **Pie chart**: Useful for proportions within a whole.
4. **Scatter Plot:** Used to identify relationships between 2 variables.

**Functions Explanation**

1. **SUM:** SUM(column\_name) simply adds the values from a single numeric column.

Example: TotalQuantity = SUM(sales[quantity])

1. **SUMX:** SUMX(Table,Expression) evaluates an expression row by row over a table and then sums the result.

Example: SUMX(sales,sales[quantity]\*sales[price])

1. **AVERAGE:** Averages one numeric column.
2. **AVERAGEX:** Averages calculated results row-wise.
3. **MAXX/MINX:** Row wise maximum/minimum on expressions.
4. **RANKX:**

Table → sales

| Product | Quantity | Price | Discount |
| --- | --- | --- | --- |
| A | 2 | 100 | 0.1 |
| B | 3 | 200 | 0.05 |
| C | 1 | 150 | 0 |

TotalQuantity = SUM(sales[Quantity]) = 6

SUMX(sales,sales[Quantity]\*sales[Price]) = 950

Total after discount = SUMX(sales,sales[Quantity]\*sales[Price]\*(1-sales[Discount]))

Max Revenue after Discount = MAXX(sales, sales[Quantity]\*sales[Price]\*(1-sales[Discount])) = 750

Min Revenue after Discount = MINX(sales, sales[Quantity]\*sales[Price]\*(1-sales[Discount])) = 150

Add a calculated column:

Rank by Revenue after Discount = RANKX(ALL(sales), sales[Quanitty]\*sales[Price]\*(1-sales[Discount]),,DESC)

| Product | Quantity | Price | Discount | Rank |
| --- | --- | --- | --- | --- |
| B | 3 | 200 | 0.05 | 1 |
| A | 2 | 100 | 0.1 | 2 |
| C | 1 | 150 | 0 | 3 |