STORE SALES 2011

By : Shikha

TABLE OF CONTENTS:

1. INDRODUCTION:

Many industries and businesses continue to emphasize the importance of Excel skills because it remains as an intelligent way to extract actionable insights. Revenue patterns, operations, marketing trends, and more can be analyzed through Excel spreadsheets, but the real advantage is the process. Excel is a tool for data analytics and not always complete solution. Practically every organization uses Excel because of its flexibility and ease of use.

Few advantages of MS-Excel are as follows: Data is raw, unprocessed information, which needs to be stored in a systematic and organised manner. Excel gives the users the ability to set up tables, in which they can organize their data and provide updating keys too. MS-Excel plays a very important role in graphing as it has the ability to produce a variety of different charts, which may be used by different departments to represent statistical data in more visual way. The knowledge of Microsoft Excel is vital in most of the modern organizations for the purpose of proficiency. Many organizations want to keep systematic and up to date records of their products, programs and activities.

One can import data from other spreadsheets and add pictures and other objects through the insert tab, making it easy to put all the data you collected in various files in one place. Microsoft Excel is one of the most important tool because of the key role it plays in many sectors. It is the most used spreadsheet program in many business activities and even personal data organization.

2. SCOPE OF THE ANALYSIS:

A dashboard provides better understanding of data that helps to better and analyze the data more properly. One can easily see individual's progress at any time. It helps us to identify our bottlenecks and monitor individual progress. It does the effective sales tracking giving us access to filtered data. .Visualizing all data at a glance: In this fast paced world, sales dashboard provides us short and crisp data giving us useful insights about performances and major area of improvements.

Promotes transparency inside an organization: As the dashboard is accessible for everyone, it promotes the transparency and creates a more ethical processes within organization. It also helps to track the progress and analyze the results in real world to better analyze the data. A well-designed dashboard provides on-demand access of all of your most important metrics. Access to data – As the name implies, a dashboard gathers multiple data sources, including Excel, into a single interface. That means you can immediately see a detailed overview of your business in one quick glance.

3. SOURCE OF DATASET:

This dataset has been taken from a course of Coursera named "Introduction to Data Analysis using Excel" . This course has been completed by me a month ago and I did my week 1 assignment on this data. This data contains the information about sales of a store .

It has data including customer id ,that customer ordered which item on which date, what is the order quantity and what is the amount of sale. From which province ,that order has been taken place. On which date that order shipped and what was the shipping cost , what was the type of container in which order has been packed. What was the shipping mode whether it was with delivery truck, express air or regular air.This data also shows the product category and sub-category ordered by the customer.

The format of the data was in a .txt file which was a comma delimited file, this file is then downloaded ,read and stored in .xls extension in excel. Below is the ETL process which shows each and every step involved while reading this .txt file.

4. ETL PROCESS:

A. Extraction:

Extraction of this data was very simple.It was downloaded with the help of the link (arrow shows the link)given on coursera –

Introduction to Spreadsheets

TOTAL POINTS 10

1. Download the file "Store Sales 2011.txt" (you may need to right-click and select "save link as...") **Use the data in this file for the remainder of the assignment.** Note that the date in the file is in the mm/dd/yyyy format, so while reading it into Excel please be vary of that.
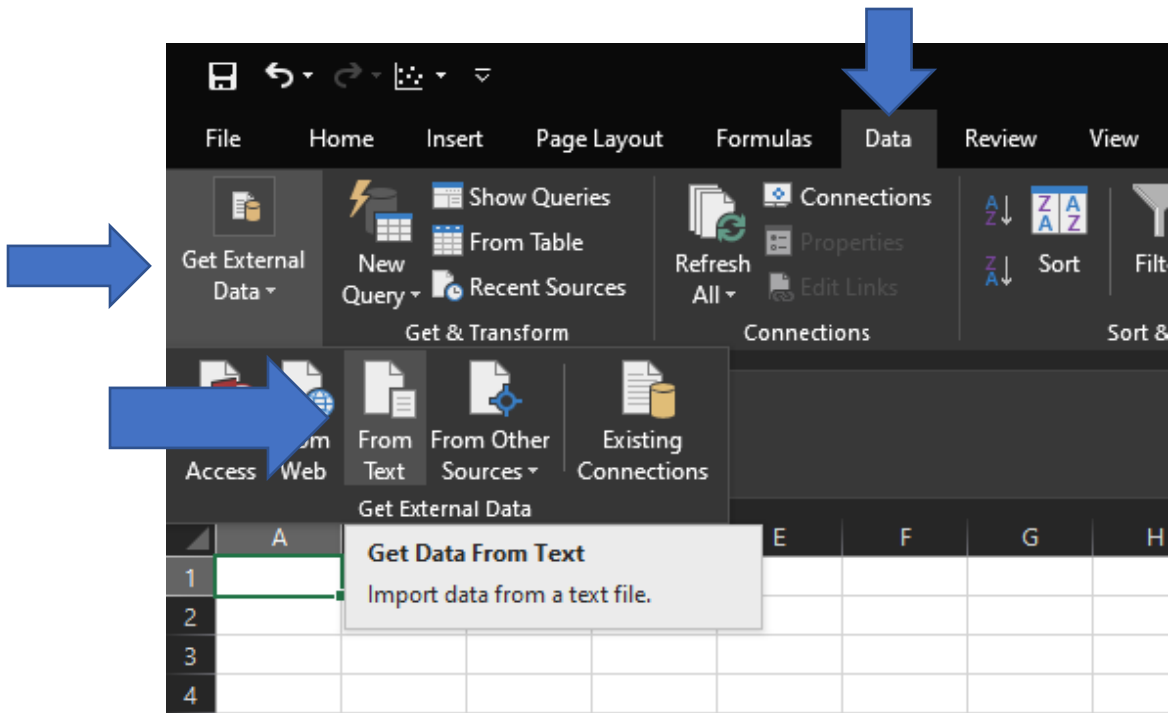
> Store-Sales-2011.txt

After right clicking on the link >"save link as" then choose the location to store the data. As a result, the data gets downloaded in .txt format in the desired location .

B. Transformation & Loading:

1. For transforming the data, open Ms-Excel > Data > Get external data > From text(shown below):

2. Choose that .txt file > Import. Then the following dialog box will open. Select delimited and check "my data has headers " checkbox > Next > choose delimited as comma > Next > Finish.
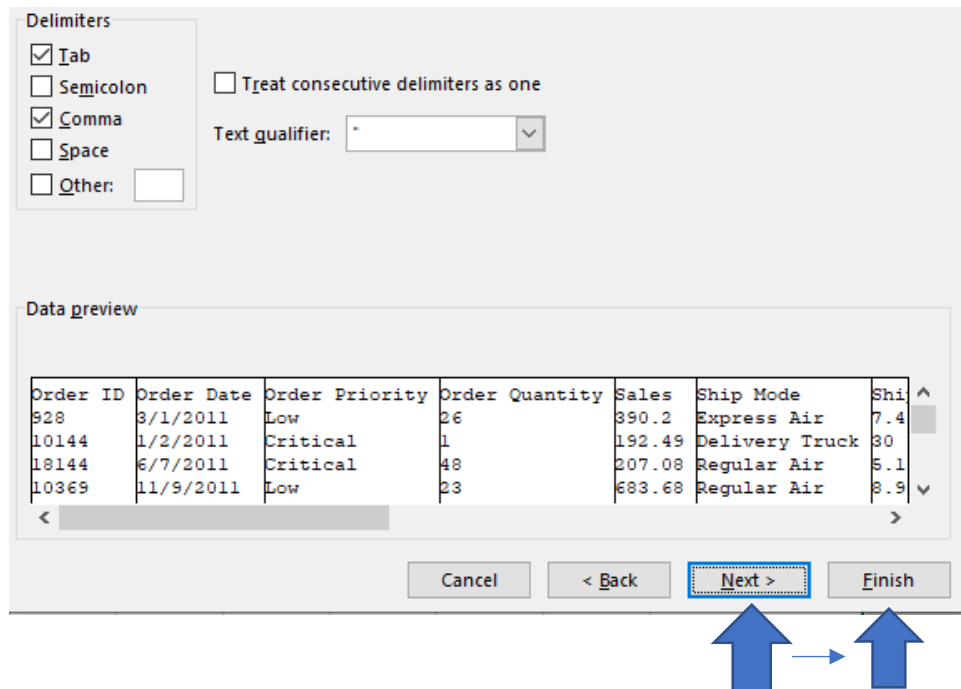
3. Select location and as a result data will be loaded.

5. DATASET ANALYSIS:

5.1 OBJECTIVE 1:

i. INTRODUCTION:

Analysis of data plays a very important role while analyzing the results and if we have a tool like Excel then it becomes easy to find results based on our analysis. The Excel Dashboard is used to display overviews of large data tracks. Excel Dashboards use dashboard elements like tables, charts, and gauges to show the overviews. The dashboards ease the decision-making process by showing the vital parts of the data in the same window.

Data analysis, therefore, is a necessity for making well-informed and efficient decisions. Data analysis is what helps organizations determine their positions in the market relative to competitors. It is, in fact, data analysis that enables us to gauge the satisfaction level of the customers and their needs in order to come up with new products and services that provide greater satisfaction to them. Therefore, it is an understatement to say that data analysis is important for the success of businesses.

In this objective, we have found the top five provinces in which the sales were the highest, top five sub- products which are ordered most, most used shipping mode, top product category and top customer segment.

ii. GENERAL DESCRIPTION:

I have used a pivot table to build a list of unique values. Because pivot tables summarize data, they can be used to find unique values in a table column. This is a good way to quickly see all the values that appear in a field and also find types, and other inconsistencies. Pivot tables are one of Excel's most powerful features. A pivot table allows you to extract the significance from a large, detailed data set.

There are so many advantages of using pivot table like they are easy to use, we can summarize our data easily, it also helps in quick decision making.

iii.   SPECIFIC REQUIREMENTS:

We have used pivot table for finding unique values of provinces , sub products and find out the top customer segment, shipping mode , product category by sorting the data and using value filters and finding their respective count of ordered quantities.

iv.   ANALYSIS RESULTS:

TOP 5 SUB-PRODUCTS

SUB-PRODUCTS	COUNT
Binders and Binder Accessories	223
Computer Peripherals	171
Office Furnishings	189
Paper	309
Telephones and Communication	212

TOP 5 PROVINCE (ORDERED MOST QUANTITIES)

PROVINCE	COUNT
Alberta	209
British Columbia	251
Manitoba	194
Ontario	431
Saskatchewan	218

TOP CUSTOMER SEGMENT

CUSTOMER SEGMENT	COUNT
Corporate	722

TOP PRODUCT CATEGORY

PRODUCT CATEGORY	COUNT
Office Supplies	1116

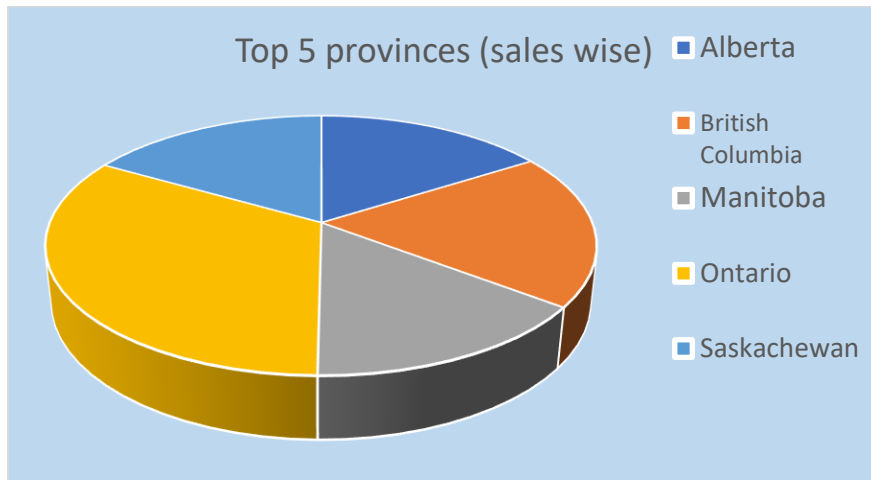## MOST USED SHIPPING MODE

SHIP MODE	COUNT
Regular Air	1469

v.   Visualization:

5.2 OBJECTIVE 2:

i. INTRODUCTION:

Pie Charts have been known as the most fun chart to convey data. It is simple to draw, and the information can be easily conveyed through it. These charts break the whole data into parts to make even the most complex data simpler to grasp. As the name suggests, the chart is in the form of a big pie that represent the whole data, which is divided into many parts or slices. Each part of the pie represents a subcategory of the whole data. They help show the proportion and percentage of each category that constitutes the data, as each slice is proportional to the quantity of data it represents. Pie Charts are mostly used when dealing with grouped data or data which is categorized.

Advantages of Pie charts are they are a good way to represent large data in a simple graphical manner. These charts are way simpler than other forms of charts. In this objective , I have given star ratings based on the difference of order date and ship date then visualize this data in pie chart.

ii. GENERAL DESCRIPTION:

I have given 5 star rating to those orders in which the diiference between the order date and ship date is either zero or less than equals to two , 4 star ratings to those in which the difference is either three days or four, 3 star ratings to those in which the difference is greater than equals to five & less than seven , 2 star to those in which the difference is either seven days or eight and at last 1 star to those in which the difference is more than eight days.

I have then represents this data using a pie chart and also used it in dashboard. I have created pie chart with the count of the star ratings. Its easy to visualize the data with the help of a pie chart

iii. FORMULA and FUNCTIONS USED:

1. FOR FINDING THE DIFFERENCE IN ORDER DATE AND SHIP DATE:

In this I have used built-in function of excel – DATE() , YEAR() , MONTH() , DAY() which returns the date, year , month , day respectively when passed date as an argument in each.

E	F	G	H	I

`=DATE(YEAR($N2),MONTH($N2),DAY($N2))-DATE(YEAR($B2),MONTH($B2),DAY($B2))`

2. FOR GIVEN STAR RATINGS:

I have used " nested if " in the formula and applied conditions based on the criteria discussed in general description above.

`=IF(OR(P2=0,P2<=2),"*****",IF(OR(P2=3,P2=4),"****",IF(AND(P2>=5,P2<7),"***",IF(OR(P2=7,P2=8),"**",IF(P2>8,"*","-")))))`

	L	M	N	O	P	Q
tegory	Product Sub-Categor	Product Contair	Ship Date	ORD_DEL	DIFF_ORDnSHIF	RATINGS
	Office Furnishings	Small Box	3/3/2011	YES	2	*****

iv. ANALYSIS RESULTS:

RATINGS	COUNT
*	22
**	60
***	85
****	174
*****	1661

v. VISUALIZATION:
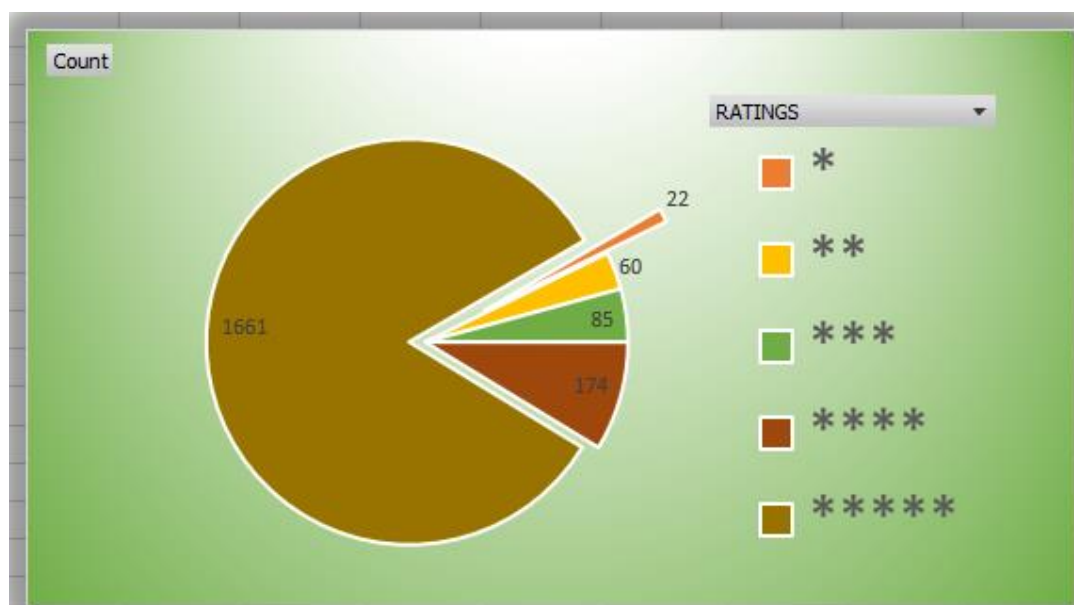
5.3 OBJECTIVE 3:

i. INTRODUCTION:

Excel pivot table is a powerful way to summarize large amounts of data and create summary reports. To make your reports more user-friendly and interactive, add visual filters, slicers, to them. Slicers in Excel are graphic filters for tables, pivot tables and pivot charts. Due to their visual qualities, slicers fit especially well with dashboards and summary reports, but you can use them anywhere to make filtering data faster and easier.

Timelines are extremely important in project management because they help to visualize time-related metrics, synchronize tasks, set deadlines and define potential delays. The diagrams are useful for managers who want to get a high-level look at their tasks or view any time-related metrics. A line graph is a kind of graph that contains two or more individual data points connected by lines. These individual data points represent a series of information, which usually explains the relationship between the two axes (i.e. the x and y-axis) on the graph.

In this objective , I have done year wise analysis of shipping modes.

ii. GENERAL DESCRIPTION:

There are three shipping modes ,those are regular air, delivery truck and express air. I have calculated the total cost of each shipping modes using pivot table followed by years (2011 , 2012) then followed by months. I have used a slicer for years and timeline for months which make this analysis more attractive.

iii. : SPECIFIC REQUIREMENT:

I have used a line graph to represent the year wise analysis of shipping modes using pivot tables. I have used a slicer and a timeline for the same.

iv. ANALYSIS RESULTS:

We can analyze from the data that the sum of shipping cost for mode delivery truck is more than other shipping modes though the most used shipping mode is regular air. The sum of shipping cost falls gradually from 2011 to 2012.

v. VISUALIZATION:

Order Date

All Periods   MONTHS ▾

2011

| JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |

◄ ▮▮▮▮▮▮▮▮▮▮▮▮ ►

Years

| 2011 |
| 2012 |

Ship Date

All Periods   MONTHS ▾

2011

| JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |

◄ ▮▮▮▮▮▮▮▮▮▮▮▮ ►

5.4 OBJECTIVE 4:

i. INTRODUCTION:

A monthly sales report is used to monitor, evaluate, analyze, and determine sales trends on a monthly basis. It includes more long-term measurement of KPIs such as sales cycle length, conversion report, monthly performance report, among many others. A sales report for sales executives should incorporate management, development, monitoring, and analysis of opportunities.

A sales performance report sample focused on opportunities and details on various metrics. A monthly sales report is an important part of assessing how a sales team is functioning and where it can improve. A good company will have a good product, but without a sales team to attract new clients this product will struggle to generate revenue. A sales report allows a manager to avoid spending all their time micromanaging a team, and instead focus their efforts on areas of the business where they can achieve maximum value.

By generating a monthly sales report it is possible to track trends and work from data rather than individual instances or actions. This data-driven approach provides a more holistic view of the company's internal processes and provides an overview of each individual team member's actions.

ii. GENERAL DESCRIPTION:

There are three product categories i.e. furniture, office supplies and technology which have monthly sales which can be shown easily with the help of slicer and as a result we can easily see the monthly sales category wise.
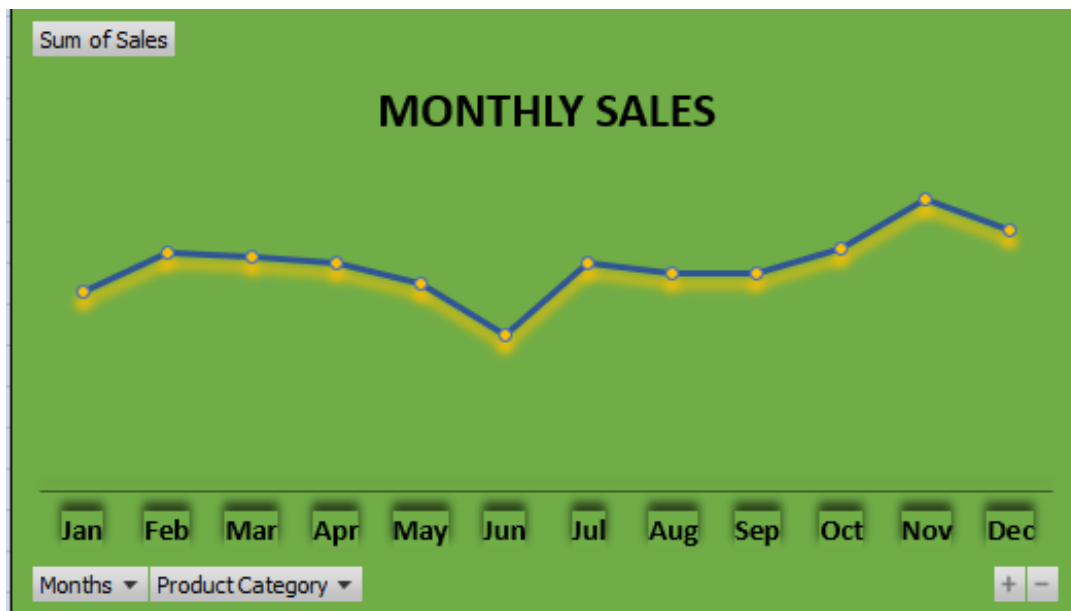
iii. SPECIFIC REQUIREMENT:

I have used a slicer to show monthly wise sales with respect of product category.

iv. ANALYSIS RESULTS:

We can easily analyze from the data that monthly sale was high in the month of November.

v. VISUALIZATION:

Product Category

Furniture

Office Supplies

Technology

5.5 OBJECTIVE 5:

i. INTRODUCTION:

Bar graphs are the pictorial representation of data (generally grouped), in the form of vertical or horizontal rectangular bars, where the length of bars are proportional to the measure of data. They are also known as bar charts. Bar graphs are one of the means of data handling in statistics. The collection, presentation, analysis, organization, and interpretation of observations is much easier with a bar graph. The statistical data can be represented by various methods such as tables, bar graphs, pie charts, histograms, frequency polygons, etc.

ii. GENERAL DESCRIPTION:

In this objective we are analyzing whether the orders are placed and shipped in the same year or not. And we are also analyzing the same product category wise.

iii. FORMULA USED:

=IF(YEAR($B1992)=YEAR($N1992),"YES","NO")
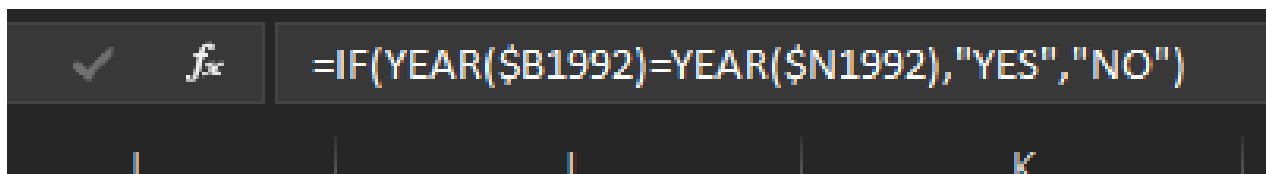
iv. ANALYSIS RESULTS:

We can analyze from the data that there are 1992 orders that are placed and shipped in the same year and 10 orders which are not . But if we see product category wise then the result is:

Row Labels	Count of Sales
NO	10
Furniture	2
Office Supplies	5
Technology	3
YES	1992
Furniture	415
Office Supplies	1111
Technology	466
Grand Total	2002

v. VISUALIZATION:

Count of Sales

IS ORDER PLACED AND SHIPPED IN SAME YEAR?

YES — 1992

NO — 10

5.6 OBJECTIVE 6 :

INTRODUCTION:

In this objective , I have used different formulas to calculate different things with few conditions applied on it though it is easy with the help of pivot table but few analysis are easy with the help of formulas.

FORMULA 1:

i. STATEMENT:

1. SUM OF SALES WHERE PRODUCT CONTAINER IS "WRAP BAG" AND SHIP MODE IS "REGULAR AIR"

ii. FORMULA USED:

```
=SUMIFS(Sheet1!E2:E2003,Sheet1!M2:M2003,"Wrap Bag", Sheet1!G2:G2003,"Regular Air")
```

iii. RESULT:

Sum of the sales is Rs.62934 with the condition above.

FORMULA 2:

i. STATEMENT:

> ### 2. COUNT OF ORDERS WHERE SHIPPING MODE IS "DELIVERY TRUCK" AND ORDER PRIORITY IS "HIGH"

ii. FORMULA USED:

```
=COUNTIFS(Sheet1!G2:G2003,"Delivery Truck",Sheet1!C2:C2003,"High")
```

iii. RESULT:

There are 53 orders whose shipping mode is delivery truck and order priority is high.

FORMULA 3:

i. STATEMENT:

> ### 3. SUM OF SALES WHERE ORDER PRIORITY IS NOT SPECIFIED AND PRODUCT CATEGORY IS "OFFICE SUPPLIES"

24

ii. FORMULA USED:

```
=SUMIFS(Sheet1!E2:E2003,Sheet1!C2:C2003,"Not Specified",Sheet1!K2:K2003,"Office Supplies")
```

iii. RESULT:

Sum of sales is 125622.33 where order priority is not specified and category is office supplies.

FORMULA 4:

i. STATEMENT:

MAX ORDERD QUANTITY AND COUNT HOW MANY NUMBER OF ORDERS ARE THERE WITH THAT QUANTITY.

ii. FORMULA USED:

```
=MAX(Sheet1!D2:D2003)
```

RESULT: Maximum ordered quantity is 50.

```
=COUNTIF(Sheet1!D2:D2003,50)
```

RESULT: There are 44 orders who have ordered quantity 50.

COMPLETE DASHBOARD:

thank you!