1. **Delivered Orders:**

How many orders with the purchase date 15th March 2017 to 15th April 2017 (both inclusive) have been delivered successfully? Purchase dates are present in the column 'order\_purchase\_timestamp' of the datasheet Orders.

1. 3400
2. **2450**
3. 3652
4. 2345

Hint : Use simple filters on the column order\_status with status "Delivered" and then apply Date Filters on the column order\_purchase\_stamp (right-click-->Date Filters-->Between)

1. **Month of maximum sales:**

You have a column called order\_purchase\_timestamp which is in date/time format. Using this column, create a column called Month that contains the month of order purchase. After you created the month column, find the month that has the highest number of orders?

1. September 2017
2. **November 2017**
3. October 2017
4. August 2017

Hint : Use the function month() to create the column ‘Month’. Create another column say 'Order count' and set it to 1 throughout.Next, use pivot tables and you will see November month has the highest number of orders- 7543

1. **Mean and median days for delivery**

You have columns named order\_purchase\_time stamp, order\_delivered\_cutomer\_date, and order\_estimated\_delivery\_date. These columns represent the order purchase date, the date on which it was delivered to the customer, and the estimated delivery shown during the time of order, respectively. Now, create a column called 'Delivery' that has the number of days taken from the purchase date to the order\_delivered\_cutomer\_date and find the mean and median of the Delivery column.

1. Mean = -1487.3, Median = 9.3
2. Mean = 20, Median = 15.7
3. **Mean = -1580.4, Median = 10.8**
4. Mean = -20, Median = 10.2

Hint: Use the formula G2-D2 to create Delivery. Drag the formula across the column. Use AVERAGE() and MEDIAN() functions on the Delivery column.

1. **Breach in order delivery days:**

Create a column called 'promise' that has the number of days taken from the purchase date to the estimated delivery date. If an order is delivered after the estimated delivery date, it is considered to be a breach. Now, for only the delivered orders, find the month with the maximum percentage of breached orders w.r.t. the total number of orders placed that month. Note: Use the column 'order\_purchase\_timestamp' for getting the month of the order.

1. **November, 14.3%**
2. November, 16.7%
3. October, 15.1%
4. October, 17.2%

Hint: Use the formula G2-D2 to create the column Promise. Create a new column, let’s say breach. Apply the formula =IF(AND(C2="delivered",J2>K2),1,0) . Where J and K are Delivery and Promise columns, respectively. This formula will return the value 1 for the orders of late delivery. Now, make a pivot with the month in rows, sum of breach and sum of order count in values. Create a filter with order\_status and filter out only delivered orders in the pivot table. Calculate the percentage of breached orders by dividing the column sum of the breach with the column sum of order count.

1. **Orders across states :**

Now, let's segregate the columns quarter-wise based on the order purchase date. January to March will be quarter 0, April to June will be quarter 1, July to September will be quarter 2, and October to December will be quarter 3. You have the datasheet 'Customer\_data', that has the customer IDs and the state. Now, with this information find the state that has the highest and the lowest number of orders respectively in quarter 3.

1. Jammu and Kashmir, Karnataka
2. Maharashtra, Gujarat
3. Uttar Pradesh, Rajasthan
4. **Bihar, Maharashtra**

Hint : Use VLOOKUP(B2,'customer data'!A3: B99443,2, FALSE) to get the state to which the customer ID belongs to. Use ROUND((MONTH(D2))/4,0) to the quarter to which the purchase date belongs. Column D contains the order purchase time stamp. Create a pivot table with the state in rows, the quarter in columns, and order count in the values. You will find the number of orders from

Bihar as 7161 and Maharashtra as 5

1. **Category-wise sales :**

You have a datasheet called Product\_sales. The product categories in that sheet are not in English. You have another datasheet called Category\_english that contains the categories translated into English. Now, find the categories that topped each quarter’s sales. The Q1, Q2, Q3 and Q4 in the options represent quarter one, quarter two, quarter three and quarter four respectively.

Note: The amount column in Product\_sales sheet represents the sales amount for the products. The purchase date column is in date format.

1. **Q1: furniture\_decor, Q2: health\_beauty, Q3: bed\_bath\_table, Q4: watches\_gifts**
2. Q1: bed\_bath\_table, Q2: drinks, Q3: fashion\_male\_clothing, Q4: furniture\_decor
3. Q1: computers, Q2: fashion\_male\_clothing, Q3: health\_beauty, Q4: electronics
4. Q1: consoles\_games, Q2: bed\_bath\_table, Q3: drinks, Q4: watches\_gifts

Hint: Use VLOOKUP(F2, Category\_english!$A$1:$B$72,2,0) to get the categories in English. Create a new column in the Product\_sales data that shows the quarter to which the order belongs to using the ROUND and MONTH functions on the Purchase date column. Now, create a pivot table with the quarter in columns, Category English in rows, and the Sum of Amount in values. You can use conditional formatting and paste formatting to get the answer.