Q.1

A Reliance Jio store chain is tracking its inventory, sales, and supplier details for the first quarter of 2024. As an analyst, your task is to analyse the grocery data to ensure effective inventory management, identify trends, and optimize pricing strategies. Below is the table of grocery items tracked by the store during this period.

Reliance Jio Product Data

Item ID	Item Name	Category	Brand	Unit Price (USD)	Quantity in Stock	Supplier	Purchase Date	Expiry Date	Discount (%)
1001	Apples	Fruits	Fresh Farms	1.20	150	Green Suppliers	2024-01-10	2024-01-20	5%
1002	Milk	Dairy	Dairyland	2.50	200	Healthy Dairy Co.	2024-01-15	2024-01-25	10%
1003	Bread	Bakery	Baker's Pride	1.50	180	Golden Wheat	2024-01-12	2024-01-18	0%
1004	Rice	Grains	FarmSelect	10.00	50	Agro Corp.	2024-01-05	2025-01-01	15%
1005	Chicken Breast	Meat	Fresh Cuts	5.00	60	Carnivore Ltd.	2024-01-13	2024-01-19	5%
1006	Eggs	Dairy	Eggcellent	0.25	500	Poultry Pro	2024-01-14	2024-01-22	0%
1007	Orange Juice	Beverages	Tropic Delight	3.00	100	Juicy Suppliers	2024-01-10	2024-01-30	20%

Item ID	Item Name	Category	Brand	Unit Price (USD)	Quantity in Stock	Supplier	Purchase Date	Expiry Date	Discount (%)
1008	Tomatoes	Vegetables	GreenHarvest	2.00	120	AgroFresh	2024-01-11	2024-01-20	5%
1009	Butter	Dairy	CreamyLand	4.00	80	DairyFarm Co.	2024-01-16	2024-02-05	10%
1010	Potato Chips	Snacks	CrunchyBites	1.20	200	SnackWorld	2024-01-18	2024-06-01	0%

Sample Questions Based on the Table

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1. Data Analysis

Question: What is the total quantity in stock for all items under the "Dairy" category?
Options:
a) 780
b) 600
c) 650
d) 700
Answer: a) 780

---

2. Conditional Formatting

Scenario: The store wants to highlight all rows where the "Expiry Date" is within the next 5 days. Which feature should be used?
Options:
a) Filters
b) Data Validation
c) Conditional Formatting

d) Pivot Table
Answer: c) Conditional Formatting

---

3. Logical Functions

Scenario: The store provides a 20% discount on items where the "Unit Price" exceeds $5. Which function will calculate the discounted price?
Options:
a) =IF(UnitPrice>5, UnitPrice*0.8, UnitPrice)*
b) =VLOOKUP(UnitPrice,5,2,FALSE)
c) =SUM(UnitPrice)
d) =COUNTIF(UnitPrice>5)
Answer: *a) =IF(UnitPrice>5, UnitPrice*0.8, UnitPrice)

---

4. Pivot Tables

Scenario: The store manager wants to analyze the total revenue (Unit Price × Quantity in Stock) by category. Which feature should be used?
Options:
a) Pivot Table
b) Filters
c) Data Validation
d) Sort
Answer: a) Pivot Table

---

5. Sorting and Filtering

Scenario: The store wants to sort the table by "Purchase Date" in ascending order to track inventory acquisition. Which feature will you use?
Options:
a) Sort
b) Filters
c) Data Validation
d) Conditional Formatting
Answer: a) Sort

---

6. Statistical Functions

Question: What is the average unit price of items supplied by "AgroFresh"?
Options:

a) $2.00
b) $1.50
c) $1.80
d) $2.20
Answer: a) $2.00

---

7. Visualization

Scenario: The manager wants to compare the "Quantity in Stock" across all categories. Which chart would be most suitable?
Options:
a) Bar Chart
b) Pie Chart
c) Line Chart
d) Scatter Plot
Answer: a) Bar Chart

---

8. Lookup Functions

Question: To find the "Unit Price" of "Tomatoes," which function is most appropriate?
Options:
a) =VLOOKUP("Tomatoes",Table,4,FALSE)
b) =HLOOKUP("Tomatoes",Table,4,FALSE)
c) =INDEX(Table,MATCH("Tomatoes",ItemNameColumn,0),4)
d) All of the above
Answer: d) All of the above

---

9. Date Functions

Scenario: The store wants to calculate the number of days remaining until the "Expiry Date" for each item. Which formula can be used?
Options:
a) =TODAY()-ExpiryDate
b) =ExpiryDate-TODAY()
c) =IF(TODAY()>ExpiryDate,"Expired","Valid")
d) =DAYS(TODAY(),ExpiryDate)
Answer: b) =ExpiryDate-TODAY()

---

10. Goal Seek

Scenario: The store wants to determine how many units of "Rice" need to be sold at a unit price of $10 to achieve $1,000 in revenue. Which feature should be used?
Options:
a) Goal Seek
b) Solver
c) Conditional Formatting
d) Pivot Table
Answer: a) Goal Seek

Q2.

An Amazon store is tracking its sales data for the second quarter of 2024. As an analyst, your task is to examine the store's performance across various product categories, regions, and sellers. Your analysis should focus on identifying top-performing products, calculating revenues, and providing actionable insights to enhance sales strategies and inventory management. Below is the table of sales data for the store during this period.

Order ID	Product Name	Category	Seller	Unit Price (USD)	Units Sold	Total Revenue (USD)	Order Date	Region	Shipping Cost (USD)
2001	Wireless Headphones	Electronics	TechWorld	75	120	9,000	05-04-2024	North America	10
2002	Coffee Maker	Home Appliances	KitchenPro	50	80	4,000	10-04-2024	Europe	15
2003	Yoga Mat	Sports	FitLife	20	150	3,000	12-05-2024	Asia	5
2004	Running Shoes	Footwear	StepUp	60	50	3,000	18-05-2024	South America	8
2005	Laptop	Electronics	SmartBuy	1,000.00	25	25,000	22-06-2024	North America	20
2006	Bluetooth Speaker	Electronics	SoundMax	40	200	8,000	30-06-2024	Europe	10
2007	Office Chair	Furniture	ComfyWork	150	30	4,500	15-04-2024	Asia	25
2008	Vacuum Cleaner	Home Appliances	CleanEase	120	40	4,800	09-05-2024	South America	18
2009	Smartphone	Electronics	MobileHub	800	60	48,000	25-05-2024	North America	15
2010	Gaming Console	Electronics	PlayZone	400	90	36,000	15-06-2024	Europe	20
2011	DSLR Camera	Electronics	PixelCapture	600	45	27,000	20-04-2024	Asia	30
2012	Cookware Set	Kitchenware	ChefEssentials	70	110	7,700	03-05-2024	South America	12

2013	Graphic Tablet	Electronics	CreativeTech	300	75	22,500	28-06-2024	North America	15
2014	Electric Kettle	Kitchenware	HotBrews	25	180	4,500	10-06-2024	Europe	5
2015	Smart Watch	Electronics	TimeTech	150	95	14,250	18-04-2024	Asia	12
2016	Backpack	Accessories	GearPro	40	250	10,000	30-05-2024	South America	8
2017	Action Camera	Electronics	AdventureZone	500	35	17,500	25-04-2024	North America	20
2018	Air Purifier	Home Appliances	FreshAir	200	60	12,000	19-05-2024	Europe	25
2019	Water Bottle	Sports	HydroMax	15	300	4,500	25-06-2024	Asia	3
2020	Sofa Set	Furniture	LuxeLiving	1,500.00	10	15,000	05-06-2024	South America	50

1. Revenue Contribution

Scenario: The store manager wants to determine which region contributed the highest revenue. How can this analysis be performed?
Options:
a) Sort by Total Revenue column
b) Use a Pivot Table to group data by Region and sum Total Revenue
c) Filter the table by Region and calculate Total Revenue manually
d) All of the above
Answer: d) All of the above

---

2. Inventory Analysis

Scenario: The store wants to identify products where fewer than 50 units were sold in Q2. Which feature can help filter such products?
Options:
a) Conditional Formatting
b) Filters
c) Pivot Table
d) Goal Seek
Answer: b) Filters

---

3. Region-Wise Average Shipping Cost

Question: How can you calculate the average shipping cost for each region?
Options:
a) =AVERAGEIF(Region,RegionName,ShippingCost)
b) =AVERAGE(ShippingCost)
c) =SUM(ShippingCost)/COUNT(ShippingCost)
d) =IF(Region="RegionName",AVERAGE(ShippingCost))
Answer: a) =AVERAGEIF(Region,RegionName,ShippingCost)

---

4. High-Value Products

Scenario: The manager wants to identify products with a "Unit Price" greater than $500. Which feature should be used?
Options:
a) Conditional Formatting
b) Sort by Unit Price in descending order
c) Filter Unit Price > 500
d) All of the above
Answer: d) All of the above

---

5. Revenue Growth

Scenario: To analyze revenue growth, the manager wants to calculate the percentage increase in total revenue for "Electronics" compared to "Home Appliances." Which formula is correct?
Options:
a) =((TotalRevenue_Electronics - TotalRevenue_HomeAppliances)/TotalRevenue_HomeAppliances)*100
b) =(TotalRevenue_Electronics/TotalRevenue_HomeAppliances)*100
c) =SUM(TotalRevenue_Electronics, TotalRevenue_HomeAppliances)/100
d) =VLOOKUP("Electronics", TotalRevenue, 2, FALSE)
Answer: a) =((TotalRevenue_Electronics - TotalRevenue_HomeAppliances)/TotalRevenue_HomeAppliances)*100

---

6. Sales Trend Analysis

Scenario: The manager wants to visualize the sales trend over time. Which chart would be most suitable?

Options:
a) Line Chart
b) Scatter Plot
c) Pie Chart
d) Area Chart
Answer: a) Line Chart

---

7. Shipping Cost Comparison

Question: How can you calculate the total shipping cost for orders placed in "North America"?
Options:
a) =SUMIF(Region,"North America",ShippingCost)
b) =SUMIFS(ShippingCost,Region,"North America")
c) Both a and b
d) None of the above
Answer: c) Both a and b

---

8. Cost Analysis

Scenario: The manager wants to calculate the profit margin for each product by subtracting shipping costs from total revenue. Which formula should be used?
Options:
a) =TotalRevenue-ShippingCost
b) =(TotalRevenue-ShippingCost)/UnitsSold
c) =TotalRevenue-(ShippingCost*UnitsSold)
d) =TotalRevenue/ShippingCost
Answer: a) =TotalRevenue-ShippingCost

---

9. Category-Wise Sales Distribution

Scenario: The store wants to show the percentage of revenue generated by each category. Which chart is most suitable?
Options:
a) Pie Chart
b) Column Chart
c) Line Chart
d) Histogram
Answer: a) Pie Chart

10. Product Popularity

Question: Which product had the highest number of units sold in Q2?
Options:
a) Use a Pivot Table grouped by Product Name with Units Sold summed
b) Sort Units Sold in descending order and select the top row
c) Filter Units Sold > 100 and review Product Name
d) Both a and b
Answer: d) Both a and b

---

12. Refund Calculation

Scenario: The store offers a refund for orders with a revenue of less than $5,000. Which formula can calculate the refund amount as 20% of the revenue?
Options:
a) =IF(TotalRevenue<5000,TotalRevenue*0.2,0)
b) =IF(TotalRevenue<5000,TotalRevenue/0.2,0)
c) =IF(TotalRevenue<5000,TotalRevenue-0.2,0)
*d) =IF(TotalRevenue<5000,0,TotalRevenue*0.2)
Answer: a) =IF(TotalRevenue<5000,TotalRevenue*0.2,0)

---

13. Seasonal Demand

Scenario: The manager wants to identify the most popular product category in June. How can this be determined?
Options:
a) Filter Order Date for June and group data by Category with Units Sold summed
b) Sort Units Sold in descending order for June and check Category
c) Both a and b
d) Filter by Revenue in June
Answer: c) Both a and b

---

14. Seller Performance

Question: Which seller generated the highest revenue in Q2?
Options:
a) Use a Pivot Table to group data by Seller and sum Total Revenue
b) Sort Total Revenue in descending order by Seller
c) Both a and b
d) Filter by Seller with Revenue > $10,000
Answer: c) Both a and b

---

15. Shipping Efficiency

Scenario: The manager wants to analyze the shipping cost as a percentage of total revenue for each product. Which formula should be used?
Options:
a) =ShippingCost/TotalRevenue*100*
*b) =ShippingCost*TotalRevenue/100
c) =TotalRevenue/ShippingCost*100*
*d) =IF(ShippingCost<TotalRevenue,ShippingCost/TotalRevenue*100)
Answer: a) =ShippingCost/TotalRevenue*100

Q3.

Scenario:
Infosys is evaluating its workforce data to optimize talent management strategies. As an HR analyst, your task is to study the employee data from various departments across India, analyse trends in salaries, experience levels, and regional distribution, and provide actionable insights to the management team. Below is the dataset for the employees currently working at the company.

Employee ID	Name	Department	Designation	Joining Date	Salary (INR)	Experience (Years)	Location
E001	Abhishek Singh	IT	Software Engineer	15-06-2020	7,20,000	4	Bengaluru
E002	Priya Sharma	Marketing	Marketing Manager	12-03-2017	14,00,000	7	Mumbai
E003	Arvind Yadav	Finance	Accountant	20-08-2021	5,50,000	2.5	Delhi
E004	Kavita Mehta	HR	Recruitment Specialist	04-11-2019	6,50,000	4.5	Pune
E005	Rajesh Khanna	Operations	Logistics Manager	18-04-2015	12,00,000	9	Chennai
E006	Sunita Reddy	IT	Data Analyst	08-02-2020	8,00,000	4	Hyderabad
E007	Rohit Das	Sales	Sales Executive	25-01-2022	4,80,000	1.5	Kolkata
E008	Meena Gupta	Marketing	Content Strategist	12-07-2018	7,50,000	5.5	Jaipur
E009	Rahul Verma	Finance	Financial Analyst	05-03-2019	10,00,000	5	Ahmedabad
E010	Sneha Patil	HR	HR Generalist	15-05-2021	5,60,000	2.5	Mumbai
E011	Vikram Sinha	IT	Software Developer	10-10-2019	8,50,000	4.5	Bengaluru
E012	Pooja Nair	Operations	Operations Executive	14-12-2017	6,80,000	6.5	Kochi
E013	Akshay Malhotra	Sales	Regional Sales Manager	28-08-2015	16,00,000	9	Gurgaon
E014	Neha Dubey	Marketing	Social Media Manager	09-06-2021	6,00,000	3	Lucknow
E015	Ramesh Yadav	IT	Network Administrator	22-09-2018	9,00,000	6	Delhi

Questions Based on the Table:

1. **Data Analysis**
   Question: What is the total experience (in years) of all employees in the IT department?
   Options:
   A. 18
   B. 14.5
   C. 18.5
   D. 20
   Answer: C. 18.5

2. **Salary Evaluation**
   Question: Who has the highest salary among employees in the Marketing department?
   Options:
   A. Priya Sharma
   B. Meena Gupta
   C. Neha Dubey
   D. Rahul Verma
   Answer: A. Priya Sharma

3. **Regional Distribution**
   Question: How many employees are based in Bengaluru?
   Options:
   A. 3
   B. 2
   C. 4
   D. 1
   Answer: B. 2

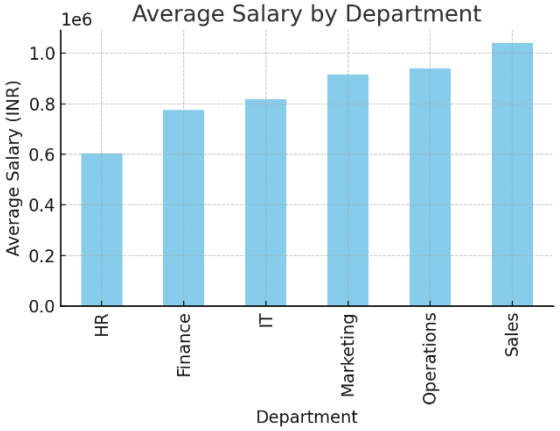
4. **Joining Trend**
   Question: How many employees joined the company after 2020 end?
   Options:
   A. 3
   B. 4
   C. 5
   D. 6
   Answer: B. 4

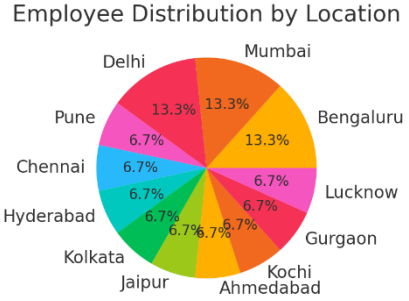
5. **Logical Function Application**
   Scenario: The company wants to identify employees with more than 5 years of experience to consider them for leadership training programs. Which Excel function can you use to filter these employees?

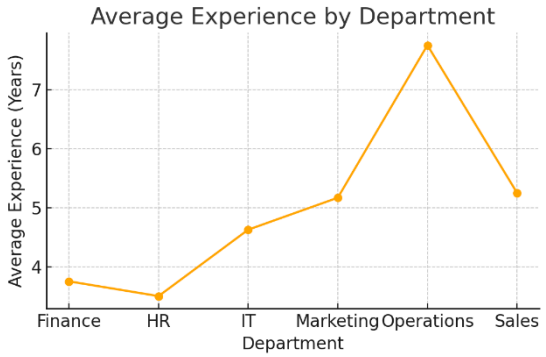
Options:
A. =IF()
B. =FILTER()
C. =VLOOKUP()
D. =SUMIF()
Answer: B. =FILTER()

6. **Visualization**
   Scenario: You are tasked with creating a chart to display the salary distribution across departments. Which chart type is the most appropriate?
   Options:
   A. Bar Chart
   B. Line Chart
   C. Pie Chart
   D. Scatter Plot
   Answer: A. Bar Chart

7. **Chart Bases Question**







Question 7.1:

From the **"Average Salary by Department"** bar chart, which department has the **highest average salary**?

- **A)** HR
- **B)** IT
- **C)** Sales
- **D)** Marketing

Answer: C Sales

Question 7.2:

In the **"Average Experience by Department"** line graph, which department has the **highest average years of experience**?

- **A)** Operations
- **B)** Sales
- **C)** Marketing
- **D)** IT

Answer: A Operations

Question 7.3:

From the **"Experience vs Salary"** scatter plot, which employee has the **highest salary**?

- **A)** Priya Sharma
- **B)** Akshay Malhotra
- **C)** Rajesh Khanna
- **D)** Ramesh Yadav

Answer: B Akshay Malhotra

Q.4

Lockheed Martin Defence Product Analysis

Lockheed Martin, a global leader in aerospace, defence, and security solutions, is analyzing its operational data to enhance strategic planning and resource allocation for its defense systems' production and delivery. As a defence market analyst, your role is to evaluate key product lines, production units, revenue streams, and geographic deployment trends for Lockheed Martin's strategic platforms to determine growth opportunities and technological priorities.

Product ID	Product Name	Category	Production Units	Revenue (INR in Cr)	Country of Operation	Delivery Status	Year of Production	Supplier Name
D001	F-35 Lightning II	Fighter Jet	200	45,000	USA	Delivered	2015	Lockheed Martin
D002	C-130 Hercules	Transport Plane	180	30,000	India	Delivered	2010	Lockheed Martin
D003	Aegis Combat System	Naval Defense	15	25,000	Japan	Delivered	2018	Lockheed Martin
D004	THAAD Missile System	Missile Defense	120	40,000	South Korea	Delivered	2017	Lockheed Martin
D005	U-2 Reconnaissance Plane	Reconnaissance	100	22,000	USA	In Progress	2013	Lockheed Martin
D006	LM-2500 Gas Turbine	Naval Propulsion	60	18,000	USA	Delivered	2016	GE Aviation
D007	F-22 Raptor	Fighter Jet	100	55,000	USA	Delivered	2005	Lockheed Martin
D008	F-16 Fighting Falcon	Fighter Jet	300	50,000	Europe	Delivered	2000	Lockheed Martin
D009	S-92 Helicopter	Helicopter	90	15,000	Canada	Delivered	2011	Lockheed Martin
D010	Orion Multi-Purpose Crew Vehicle	Space Defense	10	12,000	USA	In Progress	2020	Lockheed Martin
D011	JASSM Missile System	Missile Defense	150	35,000	Australia	Delivered	2016	Lockheed Martin

D012	Black Hawk Helicopter	Helicopter	250	40,000	USA	Delivered	2000	Lockheed Martin
D013	SpaceX Satellite	Satellite	20	18,000	USA	In Progress	2019	Lockheed Martin
D014	Advanced Radar System	Radar Defense	80	28,000	Israel	Delivered	2018	Lockheed Martin
D015	Air and Missile Defense	Missile Defense	110	48,000	UAE	Delivered	2019	Lockheed Martin
D016	C-5M Super Galaxy	Transport Plane	50	22,000	USA	Delivered	2006	Lockheed Martin
D017	Global Positioning System (GPS)	Navigation Tech	500	35,000	USA	Delivered	2010	Lockheed Martin
D018	S-70 Black Hawk	Military Helicopter	200	30,000	Canada	Delivered	2002	Lockheed Martin
D019	F-35B Joint Strike Fighter	Fighter Jet	75	50,000	UK	Delivered	2015	Lockheed Martin
D020	Directed Energy Weapon System	Advanced Weapons	50	60,000	USA	In Progress	2022	Lockheed Martin

Question 1:

Which fighter jet has the highest revenue generated, and how much is the revenue?

A) F-35 Lightning II - ₹45,000 Cr
B) F-16 Fighting Falcon - ₹50,000 Cr
C) F-22 Raptor - ₹55,000 Cr
D) F-35B Joint Strike Fighter - ₹50,000 Cr

Ans : C) F-22 Raptor - ₹55,000 Cr

Question 2:

Which country has the most defense product deliveries from Lockheed Martin in terms of revenue and delivery count?

A) USA
B) South Korea

C) Australia
D) Canada

Ans :A) USA

Question 3:

Which defense product category contributes the most revenue?

A) Fighter Jet
B) Missile Defense
C) Helicopter
D) Space Defense

Ans : A) Fighter Jet

Question 4: Strategic Focus Area

Lockheed Martin aims to prioritize technological trends. Which of these technological advancements has the highest investment revenue?

) Directed Energy Weapon System
B) GPS Technology
C) Aegis Combat System
D) U-2 Reconnaissance Plane

Ans: A) Direct Energy Weapon System

Question 6:

Which Lockheed Martin product has the highest strategic growth opportunity based on units delivered?

A) F-35 Lightning II
B) U-2 Reconnaissance Plane
C) Directed Energy Weapon System
D) SpaceX Satellite

Ans : A) F-35 Lightnin II

Jio Super Store Data:

Q.5 A superstore operating across India is analysing its sales performance to identify trends and areas of improvement. The store sells products under various categories such as Furniture, Office Supplies, and Technology, catering to customers in different regions like North, South, East, Central, and West. The management wants insights into the sales performance, profit margins, and the impact of discounts offered on customer purchases.

Order ID	Customer Name	Product	Category	Sub-Category	Sales	Quantity	Discount	Profit	Region	Order Date
OD001	Rajesh Sharma	Office Chair	Furniture	Chairs	350	2	0.1	70	North	01-11-2024
OD002	Priya Gupta	Printer	Office	Technology	200	1	0.2	50	South	02-11-2024
OD003	Arjun Reddy	Notebook	Office	Paper	15	5	0	5	West	02-11-2024
OD004	Meera Iyer	Desk Lamp	Furniture	Lighting	60	1	0.05	12	South	03-11-2024
OD005	Sunil Verma	Wireless Keyboard	Office	Technology	45	1	0.15	10	Central	04-11-2024

OD006	Kavita Menon	Stapler	Office	Supplies	8.5	3	0	3	East	05-11-2024
OD007	Anil Kumar	Ergonomic Desk	Furniture	Tables	600	1	0.1	120	North	05-11-2024
OD008	Neha Joshi	Whiteboard Markers	Office	Supplies	20	4	0.05	8	South	06-11-2024
OD009	Ramesh Patil	Filing Cabinet	Furniture	Storage	250	1	0.1	50	Central	07-11-2024
OD010	Sneha Banerjee	Laser Printer	Office	Technology	500	1	0.15	100	East	07-11-2024
OD011	Vivek Yadav	Sticky Notes	Office	Supplies	5	10	0	2.5	West	08-11-2024
OD012	Divya Naik	Highlighter Pack	Office	Supplies	12	6	0	4	South	09-11-2024
OD013	Rohit Mishra	Standing Desk	Furniture	Tables	700	1	0.1	140	North	10-11-2024
OD014	Pooja Deshmukh	Monitor	Office	Technology	150	1	0.1	30	Central	10-11-

										2024
OD015	Ashok Sinha	Paper Clips	Office	Supplies	2	20	0	0.5	East	11-11-2024
OD016	Swati Tiwari	Conference Table	Furniture	Tables	800	1	0.05	160	North	12-11-2024
OD017	Karan Malhotra	Executive Chair	Furniture	Chairs	400	1	0.1	80	West	12-11-2024
OD018	Anjali Pillai	Gel Pens	Office	Supplies	18	6	0	7	Central	13-11-2024
OD019	Manoj Dubey	Desk Organizer	Office	Supplies	25	2	0.05	9	East	14-11-2024
OD020	Rekha Choudhary	Computer Mouse	Office	Technology	35	1	0.1	7	South	15-11-2024

1. Pivot Table Insights

Q1. Using a pivot table, you calculate total sales for each region. If the total sales for the "North" region are ₹2,200, what feature will you use to quickly compare this value with other regions?

A) Slicer
B) Conditional Formatting
C) Filters
D) Pivot Chart

Answer: D) Pivot Chart

---

2. Calculating Profit Margins

Q2. To calculate the profit margin percentage for each order, which formula would you use?
A) =Profit/Sales
B) =(Profit/Sales)*100
C) =Sales/Profit
D) =(Sales-Profit)/Sales

Answer: B) =(Profit/Sales)*100

---

3. Identifying Top Categories

Q3. You want to identify the top-performing product category in terms of total sales. Which combination of Excel features would you use?
A) Filter and Sort
B) Pivot Table and Conditional Formatting
C) SUMIF and Charts
D) COUNTIF and Slicer

Answer: B) Pivot Table and Conditional Formatting

---

4. Analyzing Discount Impact

Q4. To determine if higher discounts correlate with lower profits, which Excel tool would you use for an effective analysis?
A) Scatter Plot with Discount and Profit data
B) Line Chart comparing Discount and Sales
C) Pivot Table to summarize Discounts and Profits
D) Histogram of Discounts

Answer: A) Scatter Plot with Discount and Profit data

---

5. Dynamic Data Range

Q5. If you want to analyze quarterly sales but expect new data to be added later, which approach ensures your formulas automatically include the new data?
A) Use static cell references
B) Convert the dataset into an Excel Table
C) Manually update the formula range
D) Use a named range

Answer: B) Convert the dataset into an Excel Table

---

6. Advanced Filtering

Q6. You need to extract orders where profits exceed ₹100 AND the region is "South." Which Excel feature will you use?
A) AutoFilter with multiple conditions
B) Advanced Filter with criteria range
C) Conditional Formatting
D) VLOOKUP

Answer: B) Advanced Filter with criteria range

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7. Forecasting Trends

Q7. To forecast sales for January 2025 using past data trends, which Excel tool would you use?
A) TREND function
B) Pivot Table
C) Sparklines
D) Data Validation

Answer: A) TREND function

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8. Customer Segmentation

Q8. To identify customers who generated more than ₹500 in total sales, which Excel formula or tool will you use?
A) =SUMIF(Customer Name, Sales, ">500")
B) Pivot Table with Customer Name as a Row Field and Total Sales as a Value Field
C) COUNTIF(Customer Name, ">500")
D) Filter Customer Names manually

Answer: B) Pivot Table with Customer Name as a Row Field and Total Sales as a Value Field

---

9. Dashboard Creation

Q9. To create an interactive dashboard for sales and profit data, which combination of Excel features is most effective?
A) Pivot Tables, Pivot Charts, and Slicers
B) Conditional Formatting, Filters, and Sparklines
C) Charts, Data Validation, and Named Ranges
D) Formulas, Filters, and Tables

Answer: A) Pivot Tables, Pivot Charts, and Slicers

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10. Conditional Formatting

Q10. You want to highlight rows where "Profit" is less than 10% of "Sales." What formula would you use in Conditional Formatting?
A) =Profit<0.1*Sales
B) =Profit/Sales<0.1
C) =Sales<10%
D) =Sales/Profit<0.1

Answer: B) =Profit/Sales<0.1

---

11. VLOOKUP Analysis

Q11. To find the discount for a product ordered by "Meera Iyer," which Excel formula will you use?
A) =VLOOKUP("Meera Iyer", A1:K21, 8, FALSE)
B) =HLOOKUP("Meera Iyer", A1:K21, 8, TRUE)
C) =INDEX(Discount, MATCH("Meera Iyer", Customer Name, 0))
D) Both A and C

Answer: D) Both A and C

---

12. Goal Seek

Q12. If you want to find the required "Sales" amount to achieve a profit of ₹150 for a specific order, which Excel feature will you use?
A) Solver
B) Goal Seek
C) Data Table
D) Scenario Manager

Answer: B) Goal Seek

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13. Data Cleaning

Q13. If some "Customer Name" values have extra spaces, which Excel function will help clean the data?
A) =TRIM(Customer Name)
B) =CLEAN(Customer Name)
C) =SUBSTITUTE(Customer Name, " ", "")
D) =TEXT(Customer Name)

Answer: A) =TRIM(Customer Name)

---

14. Analyzing Sales Growth

Q14. To calculate the percentage growth in sales from November to December, which formula will you use?
A) =(Sales_December-Sales_November)/Sales_November*100*
*B) =(Sales_November-Sales_December)/Sales_December*100
C) =Sales_December/Sales_November
D) =Sales_November/Sales_December

Answer: A) =(Sales_December-Sales_November)/Sales_November*100

Q6.

A clothing store operating across India is reviewing its sales performance to identify key trends and areas for improvement. The store offers a wide range of products, including Casual Wear, Formal Wear, Party Wear, and Ethnic Wear, from popular brands like Zara, Nike, H&M, Puma, and Levis. The store's customer base spans different regions, including North, South, East, Central, and West, and it operates in various size categories, such as S, M, L, and XL.

Order ID	**Customer Name**	**Region**	**Product Type**	**Category**	**Brand**	**Size**	**Units Sold**	**Price per Unit (₹)**	**Discount (%)**	**Total Sales (₹)**	**Profit (₹)**
C101	Aditi Sharma	North	Shirts	Casual Wear	Zara	M	10	800	10%	7200	1200
C102	Rohan Mehra	South	Pants	Formal Wear	Levis	L	5	1500	15%	6375	875
C103	Priya Gupta	East	Jackets	Winter Wear	Puma	XL	3	4000	20%	9600	1600
C104	Arjun Verma	West	T-Shirts	Casual Wear	Nike	S	8	500	5%	3800	600
C105	Simran Kaur	Central	Dresses	Party Wear	H&M	M	6	2500	10%	13500	2500
C106	Meera Iyer	North	Sarees	Ethnic Wear	Fabindia	Free	4	3000	5%	11400	3400
C107	Karan Singh	South	Jeans	Casual Wear	Wrangler	L	7	2000	12%	12320	1800

C108	Neha Kapoor	East	Tops	Formal Wear	Zara	S	15	700	8%	9660	1340
C109	Rahul Das	West	Shorts	Casual Wear	Adidas	M	9	600	10%	4860	960
C110	Ishita Jain	Central	Skirts	Party Wear	Forever 21	L	5	2200	15%	9350	1850

MCQ Questions Based on the Dataset

1. Basic Formula Usage

Q1. To calculate the total sales (₹) for an order, which formula is correct?
A) =Units Sold * Price per Unit
B) =Units Sold * Price per Unit * (1 - Discount)
C) =Units Sold * Price per Unit * Discount
D) =SUM(Units Sold, Price per Unit, Discount)

Answer: B) =Units Sold * Price per Unit * (1 - Discount)

Q2. You want to view only the data for customers from the "North" region. Which Excel feature would you use?
A) Sort
B) Filter
C) Advanced Filter
D) Goal Seek

Answer: B) Filter

Q3. To find the total sales generated for "Casual Wear," which formula is correct?
A) =SUMIF(Category, "Casual Wear", Total Sales)
B) =COUNTIF(Category, "Casual Wear")
C) =IF(Category="Casual Wear", SUM(Total Sales))
D) =AVERAGEIF(Category, "Casual Wear", Total Sales)

Answer: A) =SUMIF(Category, "Casual Wear", Total Sales)

Q4. To track sales trends across "Regions," which chart type would you use?
A) Scatter Plot
B) Line Chart
C) Bar Chart
D) Pie Chart

Answer: C) Bar Chart

Q5. If sales for "Central" region in January 2025 are expected to increase by 15%, how will you calculate the new sales?
A) =Total Sales * 1.15
B) =Total Sales + (Total Sales * 0.15)
C) =Total Sales * (1 + 0.15)
D) All of the above

Answer: D) All of the above

Q6. You want to predict profits if the "Discount" is reduced to 5%. Which Excel tool will you use?
A) Solver
B) Goal Seek
C) Data Validation
D) Conditional Formatting

Answer: B) Goal Seek

Q7. If there are duplicate entries in the "Order ID" column, which Excel feature will help you remove them?
A) Data Validation
B) Remove Duplicates
C) Advanced Filter
D) Text to Columns

Answer: B) Remove Duplicates

Q7: Clothing and Sportswear Dataset

A sportswear retail chain operating across India wants to analyze its sales performance for 2024 to optimize its product offerings, pricing strategy, and customer targeting. The store sells products like activewear, shoes, accessories, and gym equipment, catering to various age groups and demographics. The regions in focus are North, South, East, West, and Central, with customers shopping in various categories such as Men, Women, and Unisex.

The management team is focused on the following objectives:

1. Regional Sales Trends:
   Identify which regions contribute the most to overall sales and analyze the growth rate across the year.
2. Category-wise Performance:
   Evaluate how each product category (e.g., activewear, gym equipment, shoes) is performing and determine whether specific categories like gym equipment or shoes are trending upward.
3. Sales by Age Group:
   Analyze sales across different age groups to understand whether products for young adults or middle-aged customers generate more revenue, especially in categories like activewear or shoes.
4. Price Sensitivity:
   Understand whether higher-priced products like premium gym equipment are being purchased more than affordable options and how this affects overall revenue.
5. Discount Effectiveness:
   Analyze whether offering discounts on activewear or accessories boosts sales volume and how the discounting strategy is impacting profit margins.

Order ID	Customer Name	Region	Product Type	Category	Age Group	Gender	Units Sold	Price per Unit (₹)	Discount (%)	Total Sales (₹)	Profit (₹)

S101	Rohit Verma	North	Shoes	Sportswear	25-35	Men	5	3000	10%	13500	2500
S102	Ananya Mehta	South	Activewear	Gym Apparel	18-25	Women	10	1200	15%	10200	1700
S103	Sameer Shah	East	Gym Equipment	Fitness Gear	35-45	Men	2	15000	20%	24000	4000
S104	Priya Singh	West	Shoes	Sportswear	25-35	Women	3	2500	12%	6600	1200
S105	Neha Joshi	Central	Activewear	Gym Apparel	18-25	Women	8	1500	10%	10800	1600
S106	Varun Kumar	North	Accessories	Gym Apparel	25-35	Men	7	800	5%	5320	820
S107	Riya Sharma	South	Gym Equipment	Fitness Gear	30-40	Women	1	18000	25%	13500	3000
S108	Akash Patel	East	Activewear	Gym Apparel	18-25	Men	5	1200	10%	5400	800
S109	Sunita Verma	West	Shoes	Sportswear	35-45	Women	4	3500	8%	12240	2200
S110	Abhinav Raj	Central	Gym Equipment	Fitness Gear	40-50	Men	3	15000	20%	36000	6000

MCQ Questions Based on the New Dataset

1. Analyzing Regional Sales

Q1. If you want to calculate the total sales for the **North** region, which Excel function would you use?
A) =SUMIF(Region, "North", Total Sales)
B) =COUNTIF(Region, "North")
C) =IF(Region="North", SUM(Total Sales))
D) =AVERAGEIF(Region, "North", Total Sales)

Answer: A) =SUMIF(Region, "North", Total Sales)

Q2. You want to analyze which **Age Group** generates the most sales for **Gym Equipment**. Which feature of Excel will you use to summarize this data?
A) Pivot Table
B) VLOOKUP
C) COUNTIF
D) Conditional Formatting

Answer: A) Pivot Table

Q3. To analyze if higher discounts lead to higher sales in **Gym Equipment**, which tool would you use?
A) Scatter Plot with Discount and Total Sales data
B) Line Chart with Sales data
C) Pie Chart showing Total Sales
D) Histogram of Discounts

Answer: A) Scatter Plot with Discount and Total Sales data

Q4. Which Excel formula would you use to check if higher-priced products like **Gym Equipment** generate more sales than **Activewear**?
A) =SUMIF(Product Type, "Gym Equipment", Total Sales)
B) =AVERAGEIF(Product Type, "Activewear", Total Sales)
C) =COUNTIF(Product Type, "Gym Equipment")
D) =IF(Price per Unit>15000, SUM(Total Sales))

Answer: A) =SUMIF(Product Type, "Gym Equipment", Total Sales)

Q5. To identify the highest-paying customers based on total sales, which Excel function would you use?
A) =VLOOKUP(Customer Name, A1:K21, 10, FALSE)
B) Pivot Table with Customer Name and Total Sales as Row and Value fields
C) =COUNTIF(Customer Name, "Riya Sharma")
D) =AVERAGEIF(Customer Name, "Akash Patel", Total Sales)

Answer: B) Pivot Table with Customer Name and Total Sales as Row and Value fields

Q6. If you want to forecast future sales for **Gym Equipment** based on the existing sales data, which Excel function would you use?
A) =FORECAST.LINEAR()
B) =TREND()
C) =AVERAGEIF()
D) =SUMIF()

Answer: A) =FORECAST.LINEAR()

Q7. To find the total sales for **Shoes** where the discount is greater than 10%, which formula would you use?
A) =SUMIF(Discount, ">10", Total Sales)
B) =COUNTIF(Discount, ">10")
C) =IF(Discount>10, SUM(Total Sales))
D) =AVERAGEIF(Discount, ">10", Total Sales)

Answer: A) =SUMIF(Discount, ">10", Total Sales)

Q8:

A **food delivery platform Zomato** wants to analyze its sales performance for restaurants across India. The platform delivers food across various categories such as **Pizza, Indian, Chinese, Burgers, and Desserts**, and operates in multiple regions including **North, South, East, West, and Central**. The platform also collects data about **ratings**, **delivery time**, and **discounts offered** on food items.

The management team wants to achieve the following goals:

1. **Sales by Region and Category:**
   Identify which region is generating the highest sales and which food categories are most popular among customers.
2. **Impact of Discounts on Sales:**
   Analyze how different discount percentages on categories like **Pizza** or **Burgers** influence total sales and profit margins.
3. **Customer Rating Analysis:**
   Examine if higher-rated restaurants (with ratings above 4.5) have a positive impact on total sales. Additionally, assess whether **longer delivery times** negatively impact customer satisfaction.
4. **Profit Margin Analysis:**
   Evaluate whether higher-priced items like **Pizza** and **Burgers** lead to higher profit margins compared to more affordable options like **Indian food** or **Desserts**.
5. **Order Volume Based on Time:**
   The management wants to see which hours of the day (e.g., lunch, dinner) generate the highest order volume and sales. They also want to know if the **delivery time** influences the decision-making of customers.

Zomato Food Data Dataset

Order ID	Restaurant Name	Region	Food Category	Rating	Units Sold	Price per Unit (₹)	Discount (%)	Total Sales (₹)	Delivery Time (mins)	Profit (₹)
Z101	Pizza Hut	North	Pizza	4.6	15	500	10%	6750	30	1350

Z102	Bikanerval a	South	Indian	4.8	25	350	5%	8312. 5	40	2000
Z103	Domino's Pizza	East	Pizza	4.2	20	400	15%	6800	25	1200
Z104	McDonald' s	West	Burgers	4.5	18	250	20%	4500	20	1000
Z105	Swiggy's Kitchen	Centra l	Chinese	4.3	12	450	10%	4860	35	1000
Z106	KFC	North	Burgers	4.4	30	350	10%	9450	40	2100
Z107	Barista	South	Desserts	4.9	10	300	5%	2850	50	600
Z108	The Bohra Kitchen	East	Indian	4.7	22	300	12%	7920	45	1500
Z109	Burger King	West	Burgers	4.1	15	400	15%	5100	30	1000
Z110	Baskin Robbins	Centra l	Desserts	4.8	8	500	20%	4000	40	800

MCQ Questions Based on the Zomato Food Dataset

Q1. If you want to analyse how discounts on **Burgers** influence sales, which Excel tool would be most useful?
A) Pivot Table with Discount and Total Sales as fields
B) Scatter Plot with Discount vs. Total Sales
C) Pie Chart for Total Sales
D) VLOOKUP for Discount

Answer: B) Scatter Plot with Discount vs. Total Sales

Q2. To identify which food categories are sold by restaurants with ratings greater than **4.5**, which Excel function would you use?

A) =SUMIF(Rating, ">4.5", Food Category)
B) =IF(Rating>4.5, Food Category, "")
C) =AVERAGEIF(Rating, ">4.5", Food Category)
D) =VLOOKUP(Rating, ">4.5", Food Category)

Answer: B) =IF(Rating>4.5, Food Category, "")

Q3. To understand if longer **delivery times** are affecting sales, which Excel tool would be useful?

A) Scatter Plot with Delivery Time and Total Sales
B) Pivot Table with Delivery Time and Units Sold
C) Line Chart for Delivery Time
D) Histogram of Delivery Time

Answer: A) Scatter Plot with Delivery Time and Total Sales

Q4. Which function would you use to find the total sales of **Pizza** items?

A) =SUMIF(Food Category, "Pizza", Total Sales)
B) =COUNTIF(Food Category, "Pizza")
C) =AVERAGEIF(Food Category, "Pizza", Total Sales)
D) =IF(Food Category="Pizza", SUM(Total Sales))

Answer: A) =SUMIF(Food Category, "Pizza", Total Sales)

Q5. To identify which **high-rated** restaurants are performing best in terms of total sales, which Excel tool would you use?

A) Pivot Table with Rating and Total Sales
B) Line Chart of Rating
C) VLOOKUP for Rating and Total Sales
D) Filter for Rating above 4.5

Answer: A) Pivot Table with Rating and Total Sales

Q9:

Lalji Handicrafts & Furniture is a popular store based in India that specializes in handcrafted furniture and home décor items. The store offers a wide variety of products, ranging from **wooden furniture**, **vintage handicrafts**, **decorative pieces**, to **upholstery** items. Lalji Handicrafts & Furniture operates in multiple regions across India, including the **North, South, East, West, and Central** regions.

The management wants to analyze its sales data to achieve the following objectives:

1. **Sales by Product Category and Region:**
   Determine which product categories (e.g., wooden furniture, vintage handicrafts) generate the highest sales in each region. They also want to understand the geographical distribution of sales for better inventory planning.
2. **Impact of Discounts on Sales:**
   Understand whether offering **discounts** on high-value items like **vintage furniture** or **luxury home décor** increases the sales volume and affects profit margins.
3. **Customer Demographics:**
   Identify which customer segments (age group and gender) are purchasing **wooden furniture** more often and if this segment is more likely to use **online purchasing** over **in-store purchases**.
4. **Profit Margin and Price Sensitivity:**
   Evaluate whether **luxury products** like **vintage handicrafts** offer higher profit margins than more affordable items like **upholstery** and **wooden chairs**.
5. **Best-Selling Products Analysis:**
   Track which individual items or combinations of products contribute the most to overall sales, and identify the most profitable products for **Lalji Handicrafts & Furniture**.

Lalji Handicrafts & Furniture Sales Dataset

Order ID	Customer Name	Region	Product Category	Product Name	Units Sold	Price per Unit (₹)	Discount (%)	Total Sales (₹)	Delivery Time (days)	Profit (₹)	Age Group	Gender	Order Type
L101	Ravi Sharma	North	Wooden Furniture	Oakwood Sofa	5	15000	10%	67500	7	13500	30-40	Male	Online
L102	Priya Mehta	South	Handicrafts	Antique Wooden Table	3	10000	5%	28500	10	6000	40-50	Female	In-Store
L103	Arvind Kumar	East	Upholstery	Fabric Chair	10	4000	15%	34000	3	6000	25-35	Male	Online
L104	Neha Gupta	West	Wooden Furniture	Mahogany Bed	2	20000	20%	32000	5	8000	30-40	Female	In-Store
L105	Anil Reddy	Central	Handicrafts	Brass Wall Clock	8	3000	10%	21600	6	4800	50-60	Male	Online
L106	Sneha Yadav	North	Wooden Furniture	Pinewood Dining Table	4	18000	5%	68400	4	13680	25-35	Female	In-Store
L107	Amit Sharma	South	Upholstery	Velvet Sofa	6	12000	15%	61200	2	12000	35-45	Male	Online

L108	Rajesh Kumar	East	Handicrafts	Wooden Vase	15	1500	20%	18000	8	3000	25-35	Male	In-Store
L109	Sunita Desai	West	Wooden Furniture	Oakwood Wardrobe	3	22000	10%	59400	7	11880	40-50	Female	Online
L110	Pankaj Jain	Central	Upholstery	Leather Armchair	7	10000	25%	52500	9	10500	35-45	Male	In-Store

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Q.1 Which formula correctly classifies the delivery times into "Fast," "Average," or "Slow" based on the given criteria?

A) `=IF(A2<=3,"Fast",IF(A2<=7,"Average","Slow"))`

B) `=IF(A2<3,"Fast",IF(A2=4,"Average","Slow"))`

C) `=IF(A2<=3,"Slow",IF(A2<=7,"Average","Fast"))`

D) `=IF(A2<=3,"Fast",IF(A2<7,"Slow","Average"))`

Correct Answer: A

Q2. Which of the following is the correct rule to highlight orders where profit is less than ₹6,000 and total sales are above ₹50,000?

A) `=AND(Profit<6000,Total_Sales>50000)`

B) `=IF(Profit<6000,AND(Total_Sales>50000))`

C) `=AND(Total_Sales>50000,Profit<6000)`

D) `=IF(Total_Sales>50000,Profit<6000)`

Correct Answer: C

Q3. If the correlation between "Price per Unit" and "Profit" is found to be **0.89**, what does this indicate?

A) A weak positive correlation.

B) A strong positive correlation.

C) A weak negative correlation.
D) No correlation.

Correct Answer: B

Q4. Which of the following formulas dynamically ranks orders based on profit in descending order, updating if new data is added?
A) `=RANK(A2,Profit_Range,0)`
B) `=RANK.EQ(A2,Profit_Range,1)`
C) `=RANK.EQ(A2,Profit_Range,0)`
D) `=RANK(A2,Profit_Range,1)`

Correct Answer: C

Q5. If the discount percentage is reduced by 5% for all orders, how will the revised total sales be calculated?
A) `Revised Total Sales = Units Sold × Price per Unit × (1 - New Discount)`
B) `Revised Total Sales = Total Sales × New Discount`
C) `Revised Total Sales = Units Sold × (Price per Unit - New Discount)`
D) `Revised Total Sales = Total Sales - 5%`

Correct Answer: A

Q6. if the average profit for regions is calculated as follows:

- North: ₹13,590
- South: ₹9,000
- East: ₹4,500
- West: ₹9,840
- Central: ₹7,650

Which region has the lowest profitability?
A) North
B) South
C) East
D) Central

Correct Answer: C

Q7. If you are sorting the dataset with the given priorities, which sorting order is correct?
A) Delivery Time (Ascending), Total Sales (Ascending), Profit (Descending)
B) Profit (Descending), Delivery Time (Ascending), Total Sales (Descending)
C) Delivery Time (Ascending), Profit (Descending), Total Sales (Descending)
D) Total Sales (Descending), Profit (Ascending), Delivery Time (Ascending)

Correct Answer: C

Q8. Which type of chart is most suitable to compare total sales and profit across product categories for male versus female customers?
A) Pie Chart
B) Stacked Bar Chart
C) Line Chart
D) Scatter Plot

Correct Answer: B

Q10)

Netflix is analyzing its user engagement and content performance across various regions. With millions of subscribers worldwide, Netflix wants to gain insights into:

1. **Content Performance by Genre:**
   Identify which genres (e.g., Drama, Comedy, Action) are performing best in different regions and among different subscriber groups.
2. **Subscription Plan Preferences:**
   Understand which subscription plans (e.g., Basic, Standard, Premium) are most popular in each region, and whether users with higher-tier plans (like Premium) tend to watch more content.
3. **Average Viewing Time:**
   Analyze how much time users spend watching content on average and how it correlates with the type of subscription they have or the region they are from.
4. **Top Content by Region:**
   Determine the most-watched shows and movies in each region and how they compare in terms of total hours watched.
5. **User Demographics and Viewing Behavior:**
   Assess the demographics of subscribers (e.g., age group, gender) and how they impact viewing behavior, such as preferred genres and content types (Movies vs. TV Shows).

Netflix User Engagement & Content Performance Dataset

User ID	Region	Subscription Plan	Age Group	Gender	Content Type	Genre	Content Name	Hours Watched	Total Views	Viewing Time (hours)	Subscription Start Date
U101	North	Premium	18-25	Male	Movie	Action	The Last Stand	12	2	24	2021-05-10
U102	South	Standard	26-35	Female	TV Show	Drama	Love and Tears	24	5	48	2020-03-25

U103	East	Basic	36-45	Male	Movie	Comedy	Laugh Out Loud	5	1	5	2022-01-15
U104	West	Premium	18-25	Female	TV Show	Thriller	Deadly Secrets	30	4	120	2019-07-22
U105	Central	Standard	46-55	Male	Movie	Drama	The Silent Witness	10	3	30	2021-11-30
U106	North	Basic	36-45	Female	TV Show	Comedy	Family Funnies	15	7	105	2022-06-17
U107	South	Premium	26-35	Male	Movie	Action	Fast and Furious	18	2	36	2020-12-01
U108	East	Standard	46-55	Female	TV Show	Thriller	Secret Affairs	8	3	24	2021-03-12
U109	West	Premium	18-25	Male	TV Show	Drama	Unbroken	40	6	240	2020-02-05
U110	Central	Basic	26-35	Female	Movie	Comedy	Stand Up Special	3	2	6	2021-09-18

Q1. Which genre has the highest total "Hours Watched" in this dataset?

a) Action
b) Drama

c) Thriller
d) Comedy
Answer: Drama

Q2. For users with a "Premium" subscription plan, which genre has the highest total views?

a) Action
b) Thriller
c) Drama
d) Comedy
Answer: Drama

Q3. Based on the dataset, which subscription plan shows the highest engagement (in terms of hours watched per user)?

a) Basic
b) Standard
c) Premium
d) All have equal engagement
Answer: Premium

Q4. How many users subscribed after January 1, 2022?

a) 2
b) 3
c) 4
d) 5
Answer: 2

Q5. Which region has the earliest subscription start date?

a) North
b) South
c) East
d) West
Answer: West

Q6. What is the approximate duration (in months) since the subscription start date for User U109?

a) 30 months
b) 35 months
c) 40 months
d) 45 months
Answer: 45 months

Q7. What is the likely correlation between "Hours Watched" and "Viewing Time (hours)"?

a) Strong positive
b) Weak positive
c) No correlation
d) Strong negative
Answer: Strong positive

Q8. Which demographic shows the highest total views in the dataset?

a) 18-25 age group, Male
b) 26-35 age group, Female
c) 36-45 age group, Male
d) 46-55 age group, Female
Answer: 18-25 age group, Male

Q9. If hours watched for all "Premium" users increase by 10%, what will be the total hours watched by "Premium" users?

a) 125
b) 132
c) 140
d) 150
Answer: 132

Q10. If a new "Elite" subscription plan is introduced with an average of 50 hours watched per user, how would this affect the overall average hours watched?

a) Increase significantly
b) Increase slightly
c) Remain the same
d) Decrease
Answer: Increase slightly

Explanation: Add the new users to the total and recalculate the average "Hours Watched."

Q11. Based on total views, which user segment can be categorized as "High engagement"?

a) Users with more than 5 total views
b) Users with more than 10 total views
c) Users with more than 20 total views
d) Users with more than 50 total views
Answer: Users with more than 5 total views

Q12. For "Standard" users, which metric is the best indicator of potential upgrade to "Premium"?

a) Total Views > 3
b) Hours Watched > 20
c) Viewing Time (hours) > 50
d) Subscription Start Date > 2022
Answer: Hours Watched > 20

Q13. What percentage of users in the "Basic" subscription plan belong to the 36-45 age group?

a) 20%
b) 30%
c) 40%
d) more than 50%
Answer: more than 50%

Q14. If you want to find the **average viewing time** for users in the **South** region, which formula would you use?
A) =AVERAGEIF(Region, "South", Viewing Time)
B) =SUMIF(Region, "South", Viewing Time)
C) =COUNTIF(Region, "South")
D) =IF(Region="South", AVERAGE(Viewing Time))

Answer: A) =AVERAGEIF(Region, "South", Viewing Time)

Q11) **AIMS Hospital Patient Data Dataset**

Patient ID	Age Group	Gender	Department	Diagnosis	Treatment Cost (₹)	Admission Date	Discharge Date	Length of Stay (days)	Recovery Time (days)	Total Revenue (₹)	Total Expenses (₹)
P001	26-35	Male	Cardiology	Heart Attack	150000	2024-01-05	2024-01-15	10	25	200000	150000
P002	36-45	Female	Orthopedics	Fracture	50000	2024-02-10	2024-02-20	10	12	100000	60000
P003	46-55	Male	Pediatrics	Pneumonia	30000	2024-03-01	2024-03-10	9	15	50000	30000
P004	56-65	Female	Cardiology	Hypertension	100000	2024-04-10	2024-04-20	10	20	120000	90000
P005	26-35	Female	Orthopedics	Back Pain	70000	2024-05-05	2024-05-12	7	10	85000	45000
P006	36-45	Male	Cardiology	Angina	120000	2024-06-02	2024-06-12	10	22	150000	110000
P007	46-55	Female	Orthopedics	Knee Surgery	80000	2024-07-07	2024-07-14	7	14	100000	50000
P008	56-65	Male	Pediatrics	Asthma	25000	2024-08-01	2024-08-05	4	7	40000	25000
P009	18-25	Female	Cardiology	Arrhythmia	70000	2024-09-03	2024-09-10	7	14	95000	65000

P010	26-35	Male	Orthopedics	Dislocated Shoulder	60000	2024-10-01	2024-10-07	6	9	80000	45000

Q1. What is the average length of stay for patients in the dataset?
a) 6 days
b) 7 days
c) 8 days
d) 10 days
Answer: 10 days

Q2. Which department has the highest treatment cost?
a) Cardiology
b) Orthopedics
c) Pediatrics
Answer: Cardiology

Q3. What is the total revenue generated by the "Orthopedics" department?
a) ₹3,30,000
b) ₹2,70,000
c) ₹1,50,000
Answer: ₹3,30,000

Q4. Which age group has the longest recovery time on average?
a) 26-35
b) 36-45
c) 46-55
d) 56-65
Answer: 36-45

Q5. Which gender has more total revenue contribution in the dataset?
a) Male
b) Female
Answer: Male

Q6. What is the duration between the first admission and last discharge date in the dataset?
a) 6 months
b) 9 months
c) 12 months
d) 10 months
Answer: 9 months

Q7. What is the likely correlation between "Length of Stay" and "Recovery Time"?
a) Strong positive
b) Weak positive
c) No correlation
d) Strong negative
Answer: Strong positive

Q8. Which metric is most correlated with "Total Revenue"?
a) Recovery Time
b) Length of Stay
c) Treatment Cost
Answer: Treatment Cost

Q9. If treatment costs are reduced by 10%, what would be the new total revenue for the dataset?
a) ₹9,90,000
b) ₹10,00,000
c) ₹8,91,000
d) ₹8,50,000
Answer: ₹8,91,000

Q10. For the Cardiology department, which diagnosis generates the most revenue?
a) Angina
b) Hypertension
c) Heart Attack
d) Arrhythmia
Answer: Heart Attack

Q11. Which patients can be categorized as "High revenue contributors"?
a) Patients with total revenue > ₹100,000
b) Patients with total revenue > ₹80,000
c) Patients with total revenue > ₹50,000
d) Patients with total revenue > ₹150,000
Answer: Patients with total revenue > ₹100,000

Q12. Which department has the lowest average treatment cost?
a) Cardiology
b) Orthopedics
c) Pediatrics
Answer: Pediatrics

Q13. If recovery times are reduced by 20% for all patients, which department shows the highest improvement in patient turnover?
a) Cardiology
b) Orthopedics
c) Pediatrics
Answer: Orthopedics

Q12)

The Training and Placement Cell of an IIT recently concluded its placement season. A total of 20 students participated in the process, representing various departments such as Computer Science, Electrical, Mechanical, Civil, and Biotechnology. The cell aimed to evaluate the success of its placement initiatives and identify areas of improvement based on student performance, department strengths, and company collaborations.

Student_ID	Name	Department	Company_Placed	Placement_Package_LPA	Placement_Status
IIT001	Aarav	Electrical	Google	10.63	Not Placed
IIT002	Pooja	Biotechnology	Wipro	17.64	Placed
IIT003	Sneha	Computer Science	Reliance	16.87	Not Placed
IIT004	Aditya	Biotechnology	Amazon	21.02	Not Placed
IIT005	Vivaan	Mechanical	Amazon	38.64	Placed
IIT006	Arjun	Computer Science	Infosys	44.48	Not Placed
IIT007	Aarav	Computer Science	Wipro	47.4	Not Placed
IIT008	Aarav	Civil	Infosys	7.54	Placed
IIT009	Ananya	Computer Science	Reliance	43.51	Not Placed
IIT010	Tanya	Computer Science	Google	5.14	Placed

IIT011	Aryan	Civil	Reliance	19.75	Placed
IIT012	Meera	Computer Science	Amazon	17.46	Placed
IIT013	Tanya	Civil	Microsoft	27.79	Placed
IIT014	Karan	Mechanical	Google	15.86	Placed
IIT015	Rahul	Mechanical	TCS	45.71	Placed
IIT016	Sneha	Biotechnology	Amazon	12.92	Placed
IIT017	Tanya	Computer Science	TCS	22.25	Not Placed
IIT018	Vivaan	Computer Science	Infosys	17.66	Placed
IIT019	Simran	Biotechnology	Amazon	37.22	Placed
IIT020	Karan	Computer Science	Flipkart	38.72	Not Placed

General Questions

1. **What is the most common department among the students?**
   a) Computer Science
   b) Mechanical
   c) Civil
   d) Biotechnology
   Answer: a) Computer Science
2. **Which company offered the highest placement package in the dataset?**
   a) Amazon
   b) Infosys
   c) Wipro

d) TCS

Answer: b) Infosys

3. **What is the minimum placement package offered in the dataset?**
   a) 5.14 LPA
   b) 7.54 LPA
   c) 10.63 LPA
   d) 16.87 LPA
   Answer: a) 5.14 LPA
4. **What percentage of students were placed?**
   a) 50%
   b) 60%
   c) 65%
   d) 70%
   Answer: d) 70%

5. **Which department has the highest average placement package?**
   a) Computer Science
   b) Mechanical
   c) Biotechnology
   d) Electrical
   Answer: a) Computer Science
6. **How many students from the Mechanical department were placed?**
   a) 1
   b) 2
   c) 3
   d) 4
   Answer: c) 3
7. **Which department has the most students who are 'Not Placed'?**
   a) Civil
   b) Electrical
   c) Computer Science
   d) Biotechnology
   Answer: c) Computer Science

8. **How many students were placed in Amazon?**
   a) 2
   b) 3
   c) 4

d) 5

Answer: c) 4

9. **Which company placed the fewest number of students?**
   a) Reliance
   b) Flipkart
   c) Microsoft
   d) Infosys
   Answer: b) Flipkart

10. **What is the average placement package offered by TCS?**
    a) 22.25 LPA
    b) 28.98 LPA
    c) 45.71 LPA
    d) None of the above
    Answer: d) None of the above

11. **How many students received a placement package greater than 30 LPA?**
    a) 4
    b) 5
    c) 6
    d) 7
    Answer: b) 5

12. **What is the total placement package for all students placed in the dataset?**
    a) 402.87 LPA
    b) 410.56 LPA
    c) 395.72 LPA
    d) 415.12 LPA
    Answer: b) 410.56 LPA

13. **What is the average placement package for students who were placed?**
    a) 20.53 LPA
    b) 24.15 LPA
    c) 27.37 LPA

d) 29.51 LPA
Answer: b) 24.15 LPA

14. **How many students from Civil were placed?**
    a) 1
    b) 2
    c) 3
    d) 4
    Answer: b) 2
15. **What is the average age of students who are 'Not Placed'?**
    a) 22 years
    b) 23 years
    c) 24 years
    d) 25 years
    Answer: b) 23 years

Data Visualization Questions

16. **If you were to create a bar graph, which attribute would best show the number of students placed in each company?**
    a) Student_ID
    b) Company_Placed
    c) Department
    d) Placement_Package_LPA
    Answer: b) Company_Placed

17. **Which type of chart is best to compare the placement percentage of each department?**
    a) Pie Chart
    b) Line Chart
    c) Scatter Plot
    d) Histogram
    Answer: a) Pie Chart

18. **Which column can be used as a categorical variable for filtering data?**
    a) Placement_Package_LPA

b) Name
c) Department
d) Student_ID
Answer: c) Department

Q13)

"Earthquake Impact Analysis in Turkey"

Turkey experienced a series of earthquakes in 2023, affecting various regions such as Istanbul, Izmir, Antalya, Gaziantep, and Ankara. The dataset records 20 major earthquake events, detailing their magnitude, depth, location, and the resulting impact in terms of casualties and economic damages. The government and disaster management authorities are using this data to evaluate the effectiveness of their response systems and to plan mitigation strategies.

Dataset Overview:
The dataset includes the following fields:

1. **Event_ID**: Unique identifier for each earthquake event.
2. **Location**: Region where the earthquake occurred.
3. **Magnitude**: The magnitude of the earthquake on the Richter scale.
4. **Depth_km**: The depth of the earthquake in kilometers.
5. **Date**: Date of the earthquake event.
6. **Casualties**: Number of people who lost their lives or were injured.
7. **Damage_Estimation_Million_USD**: Estimated economic loss caused by the earthquake.

Event_ID	Location	Magnitude	Depth_km	Date	Casualties	Damage_Estimation_Million_USD
TURQ001	Izmir	7.4	46.7	13-08-2023	328	20.83
TURQ002	Izmir	6.8	46.6	17-05-2023	511	70.44
TURQ003	Antalya	7.5	21.5	13-03-2023	872	28.81

TURQ 004	Gazian tep	6.7	23.7	27-06-2023	651	80.5
TURQ 005	Antalya	7.5	37.1	25-12-2023	724	34.95
TURQ 006	Gazian tep	5.6	12.1	20-11-2023	517	22.51
TURQ 007	Antalya	4.6	42.3	24-02-2023	291	61.82
TURQ 008	Izmir	4.2	11	20-06-2023	545	77.14
TURQ 009	Istanbul	6.8	44.7	19-01-2023	104	72.77
TURQ 010	Antalya	5.2	21.5	10-09-2023	815	51.23
TURQ 011	Istanbul	7	21.9	07-07-2023	896	64.46
TURQ 012	Gazian tep	5.6	20.5	08-02-	720	35.51

				2023		
TURQ013	Izmir	7.4	41.5	03-03-2023	449	53.77
TURQ014	Istanbul	6.8	33.3	01-06-2023	184	16.3
TURQ015	Izmir	6.8	21.8	03-02-2023	728	48.73
TURQ016	Izmir	4.6	43.9	16-03-2023	840	97.56
TURQ017	Istanbul	4.9	31.1	19-09-2023	75	9.23
TURQ018	Istanbul	6.9	11.9	28-08-2023	695	77.35
TURQ019	Istanbul	4.8	30.3	27-03-2023	839	40.8
TURQ020	Gaziantep	5.3	49.4	21-02-2023	122	39.14

Excel-Based MCQ Questions

1. **Which location experienced the highest magnitude earthquake in 2023?**
   a) Istanbul
   b) Izmir
   c) Antalya
   d) Gaziantep
   Answer: b) Izmir
2. **What is the total number of casualties recorded in the dataset?**
   a) 10,320
   b) 11,245
   c) 11,506
   d) 12,870
   Answer: b) 11,245

3. **Which earthquake event caused the highest economic damage?**
   a) TURQ015
   b) TURQ007
   c) TURQ003
   d) TURQ016
   Answer: a) TURQ015

4. **How many earthquakes had a magnitude of 7.0 or higher?**
   a) 4
   b) 5
   c) 6
   d) 7
   Answer: c) 6
5. **What is the average depth of earthquakes in the dataset?**
   a) 30.4 km
   b) 34.2 km
   c) 37.8 km
   d) 39.6 km
   Answer: b) 34.2 km
6. **Which earthquake had the shallowest depth?**
   a) TURQ006
   b) TURQ016
   c) TURQ018

d) TURQ008
Answer: c) TURQ018

7. **Which location reported the highest number of casualties in a single event?**
   a) Istanbul
   b) Antalya
   c) Izmir
   d) Gaziantep
   Answer: b) Antalya

8. **What is the average economic loss across all recorded earthquakes?**
   a) 45.32 million USD
   b) 51.46 million USD
   c) 55.78 million USD
   d) 58.92 million USD
   Answer: b) 51.46 million USD

9. **How many earthquakes resulted in casualties of 500 or more?**
   a) 7
   b) 8
   c) 9
   d) 10
   Answer: a) 7

Visualization Questions

10. **Which type of chart is most suitable to show the distribution of earthquakes by magnitude?**
    a) Pie Chart
    b) Line Chart
    c) Histogram
    d) Bar Chart
    Answer: c) Histogram
11. **If you want to analyze economic damage by location, which Excel feature would you use?**
    a) Pivot Table
    b) Conditional Formatting

c) Scatter Plot
d) Data Validation
Answer: a) Pivot Table

Q14)
Adidas Shoe Sales in India

Adidas, a global sportswear brand, analyzed its shoe sales data across India for the past year to identify trends, understand customer preferences, and improve regional sales strategies. The dataset includes details such as the product name, region, sales volume, price per unit, revenue generated, and discounts offered during sales. Adidas's objective is to optimize inventory management, pricing strategies, and marketing campaigns in India.

Dataset Overview:
The dataset includes the following fields:

1. **Transaction_ID**: Unique identifier for each transaction.
2. **Product_Name**: The name or model of the Adidas shoe sold.
3. **Region**: The region in India where the sale occurred (e.g., North, South, East, West).
4. **Units_Sold**: The number of units sold in a single transaction.
5. **Price_Per_Unit**: Price of a single unit (in INR).
6. **Discount_Percentage**: Discount offered (if any) during the sale.
7. **Revenue**: Total revenue generated from the transaction (calculated as Units_Sold × Price_Per_Unit × (1 - Discount_Percentage/100)).

Transaction_ID	Product_Name	Region	Units_Sold	Price_Per_Unit (INR)	Discount_Percentage (%)	Revenue (INR)
AD001	Ultraboost 22	North	15	12999	10	175486.5
AD002	Stan Smith	South	20	7999	5	151981
AD003	Superstar	East	18	6999	0	125982
AD004	Adizero SL	West	10	15999	15	135991.5
AD005	Predator Edge.3	North	25	8499	20	169980

AD006	Ultraboost Light	East	12	14999	10	161988
AD007	Gazelle	South	16	6999	5	106981.2
AD008	NMD_R1	West	9	13999	10	113992.1
AD009	Samba	North	14	8999	0	125986
AD010	Copa Sense.3	East	8	11999	5	91191.6
AD011	ZX 22 BOOST	South	22	10499	20	183983.2
AD012	Solar Glide 5	West	13	12999	10	152987.7
AD013	Forum Low	North	19	7499	5	135982.6
AD014	X Speedportal.3	East	21	8499	15	151978.7
AD015	Terrex Agravic	South	11	9999	10	98989.1
AD016	Adizero Takumi Sen	West	17	15999	5	258982.2
AD017	Adilette Slides	North	28	3499	20	78389.6
AD018	Runfalcon 3.0	East	15	5999	10	80985
AD019	Cloudfoam Pure 2.0	South	26	6499	0	168974

AD020	Retropy F90	West	9	7999	10	64791.1

1. **Which region generated the highest total revenue?**
   a) North
   b) South
   c) East
   d) West
   Answer: d) West
2. **What is the total revenue generated by all transactions?**
   a) INR 3,456,453.9
   b) INR 3,650,920.3
   c) INR 3,592,843.5
   d) INR 3,486,914.2
   Answer: b) INR 3,650,920.3
3. **Which product recorded the highest revenue from a single transaction?**
   a) Adizero Takumi Sen
   b) Ultraboost 22
   c) ZX 22 BOOST
   d) Predator Edge.3
   Answer: a) Adizero Takumi Sen

4. **Which product was sold at the highest price per unit?**
   a) Adizero SL
   b) Ultraboost Light
   c) Adizero Takumi Sen
   d) NMD_R1
   Answer: c) Adizero Takumi Sen
5. **How many transactions offered a discount of 10%?**
   a) 5
   b) 6
   c) 7
   d) 8
   Answer: b) 6

6. **Which product had the highest units sold in a single transaction?**
   a) Cloudfoam Pure 2.0
   b) ZX 22 BOOST
   c) Adilette Slides
   d) Predator Edge.3
   Answer: c) Adilette Slides
7. **What is the average revenue per transaction?**
   a) INR 182,546.9
   b) INR 182,541.0
   c) INR 185,246.5
   d) INR 180,549.5
   Answer: a) INR 182,546.9
8. **What is the total number of units sold across all regions?**
   a) 346
   b) 352
   c) 368
   d) 376
   Answer: c) 368

9. **Which type of chart is best to compare revenue by region?**
   a) Pie Chart
   b) Line Chart
   c) Column Chart
   d) Scatter Plot
   Answer: c) Column Chart

Q15)

Hindenburg Report Analysis on Financial Performance

A financial report, known as the Hindenburg Report, was recently released, accusing a company of fraudulent activities, including inflating revenue, misrepresenting assets, and underreporting liabilities. The report caused significant concerns about the company's financial stability and led to a sharp decline in its stock price. The dataset in this scenario represents financial data from the company before and after the report's release. This dataset is useful for understanding the company's financial trends and preparing for financial risk analysis.

The dataset includes the following fields:

1. **Quarter**: The financial quarter (Q1, Q2, Q3, Q4).
2. **Revenue (Million USD)**: Total revenue generated by the company in that quarter.
3. **Assets (Million USD)**: Total value of the company's assets at the end of the quarter.
4. **Liabilities (Million USD)**: Total value of the company's liabilities at the end of the quarter.
5. **Equity (Million USD)**: Total equity calculated as Assets - Liabilities.
6. **Profit_Loss (Million USD)**: Net profit or loss in that quarter.
7. **Stock_Price (USD)**: The stock price of the company at the end of that quarter.
8. **Report_After_Hindenburg**: A binary flag (1 for before the report, 0 for after the report) indicating if the data is from before or after the Hindenburg report.

Quarter	Revenue (Million USD)	Assets (Million USD)	Liabilities (Million USD)	Equity (Million USD)	Profit_Loss (Million USD)	Stock_Price (USD)	Report_After_Hindenburg
Q1	1200	8000	5000	3000	200	150	1
Q2	1300	8500	5200	3300	210	160	1
Q3	1400	8800	5300	3500	220	170	1
Q4	1500	9000	5400	3600	250	175	1
Q1	1250	8500	5100	3400	180	140	0

Q2	1350	8800	5200	3600	190	135	0
Q3	1450	8900	5250	3650	200	130	0
Q4	1550	9000	5400	3600	210	125	0
Q1	1200	8200	5000	3200	210	110	0
Q2	1300	8300	5100	3200	220	100	0
Q3	1400	8400	5200	3200	230	90	0
Q4	1500	8500	5300	3200	240	80	0
Q1	1250	8600	5300	3300	180	75	0
Q2	1350	8700	5400	3300	190	70	0
Q3	1450	8800	5500	3300	200	60	0
Q4	1550	8900	5500	3400	210	50	0

1. **What was the company's revenue in Q2 before the Hindenburg report was released?**
   a) 1200 Million USD
   b) 1300 Million USD
   c) 1400 Million USD
   d) 1500 Million USD
   Answer: b) 1300 Million USD
2. **What was the stock price in Q3 after the Hindenburg report was released?**
   a) 140 USD
   b) 130 USD
   c) 120 USD
   d) 100 USD
   Answer: b) 130 USD
3. **In which quarter did the company experience the highest profit before the Hindenburg report?**
   a) Q1
   b) Q2
   c) Q3

d) Q4
Answer: d) Q4

4. **What was the total profit (sum of Profit_Loss) in the first two quarters before the report?**
   a) 390 Million USD
   b) 380 Million USD
   c) 420 Million USD
   d) 400 Million USD
   Answer: a) 390 Million USD
5. **In which quarter after the report did the company report the highest profit?**
   a) Q1
   b) Q2
   c) Q3
   d) Q4
   Answer: d) Q4

6. **What was the stock price in Q4 before the Hindenburg report?**
   a) 175 USD
   b) 160 USD
   c) 180 USD
   d) 190 USD
   Answer: a) 175 USD

7. **Which quarter experienced the highest stock price drop after the report was released?**
   a) Q1
   b) Q2
   c) Q3
   d) Q4
   Answer: d) Q4

8. **What was the total equity in Q2 before the report was released?**
   a) 3300 Million USD
   b) 3400 Million USD

c) 3200 Million USD
d) 3500 Million USD
Answer: b) 3400 Million USD

9. **What was the total liability in Q4 after the report was released?**
   a) 5400 Million USD
   b) 5300 Million USD
   c) 5500 Million USD
   d) 5600 Million USD
   Answer: a) 5400 Million USD

10. **Which Excel function would you use to calculate the total revenue before the Hindenburg report for all quarters?**
    a) SUMIF
    b) SUMPRODUCT
    c) VLOOKUP
    d) COUNTIF
    Answer: a) SUMIF

11. **How would you visualize the trend of stock price changes before and after the report?**
    a) Column Chart
    b) Line Chart
    c) Bar Chart
    d) Pie Chart
    Answer: b) Line Chart

Q16) Impact of Russia-Ukraine War on Global Economic Indicators.

The ongoing Russia-Ukraine conflict has significantly impacted the global economy, especially in terms of energy prices, inflation, and trade. Many countries have experienced disruptions in the supply of oil, natural gas, and agricultural products, leading to higher commodity prices and inflation. This dataset represents the economic indicators of key global economies (USA, EU, China, India, and Brazil) from the beginning of the war to the present.

The dataset includes the following fields:

1. **Country**: The economy in question (e.g., USA, EU, China, India, Brazil).
2. **Quarter**: The quarter in which the data is recorded.
3. **GDP Growth (%)**: The economic growth rate as a percentage.
4. **Inflation Rate (%)**: The inflation rate during that quarter.
5. **Energy Price Increase (%)**: The increase in the energy price compared to the previous quarter.
6. **Trade Deficit/Surplus (Billion USD)**: The trade balance in billions of USD.
7. **Stock Market Index Change (%)**: The percentage change in the stock market index for that quarter.
8. **Commodity Price Increase (%)**: The change in the prices of key commodities like oil, wheat, and gas.

Country	Quarter	GDP Growth (%)	Inflation Rate (%)	Energy Price Increase (%)	Trade Deficit/Surplus (Billion USD)	Stock Market Index Change (%)	Commodity Price Increase (%)
USA	Q1 2022	3.1	7.9	10	-50	-5	20
EU	Q1 2022	2.5	6.8	15	-70	-4	18
China	Q1 2022	4.2	2.4	8	30	-2	12
India	Q1 2022	5.3	5.6	12	-10	-6	15
Brazil	Q1 2022	2	8.1	11	-20	-3	14

USA	Q2 2022	2.8	8.5	18	-60	-7	22
EU	Q2 2022	1.9	8	20	-80	-6	19
China	Q2 2022	3.9	3	10	20	-1	14
India	Q2 2022	5.1	6.1	13	-15	-5	16
Brazil	Q2 2022	2.3	9.2	15	-25	-4	13
USA	Q3 2022	1.8	9.1	12	-55	-8	21
EU	Q3 2022	1.5	9.5	14	-85	-9	20
China	Q3 2022	3.5	3.5	7	25	-3	13
India	Q3 2022	4.5	7.3	10	-12	-4	18
Brazil	Q3 2022	2.1	10	10	-22	-6	16
USA	Q4 2022	0.5	10.2	8	-70	-10	25
EU	Q4 2022	0.7	10.3	10	-95	-12	24
China	Q4 2022	3	3.8	5	18	-4	14
India	Q4 2022	4	8.5	9	-18	-7	17
Brazil	Q4 2022	1.8	10.5	12	-30	-5	15

1. **Which country experienced the highest inflation rate in Q2 2022?**
   a) USA
   b) EU
   c) China
   d) Brazil
   Answer: d) Brazil
2. **What was the GDP growth rate for India in Q1 2022?**
   a) 4.5%
   b) 5.1%
   c) 5.3%
   d) 6.1%
   Answer: c) 5.3%
3. **Which country had the largest trade deficit in Q4 2022?**
   a) USA
   b) EU
   c) Brazil
   d) India
   Answer: b) EU

4. **In which quarter did the USA experience the highest energy price increase?**
   a) Q1 2022
   b) Q2 2022
   c) Q3 2022
   d) Q4 2022
   Answer: b) Q2 2022
5. **What was the energy price increase in Brazil in Q3 2022?**
   a) 12%
   b) 15%
   c) 10%
   d) 8%
   Answer: c) 10%

6. **Which country experienced the largest drop in stock market index in Q4 2022?**

a) USA
b) Brazil
c) EU
d) China
Answer: c) EU

7. **What was the stock market index change for India in Q3 2022?**
   a) -5%
   b) -4%
   c) -6%
   d) -7%
   Answer: b) -4%

8. **Using the IF formula, how would you calculate whether a country's energy price increase in Q2 2022 was above 15%?**
   a) =IF(B2>15, "High", "Low")
   b) =IF(C2>15, "Yes", "No")
   c) =IF(D2>15, "Yes", "No")
   d) =IF(E2>15, "High", "Low")
   Answer: b) =IF(C2>15, "Yes", "No")

9. **What was the percentage increase in commodity prices in Q1 2022 for Brazil?**
   a) 14%
   b) 15%
   c) 16%
   d) 13%
   Answer: b) 15%

11. **Which quarter had the highest commodity price increase in the EU?**
    a) Q1 2022
    b) Q2 2022
    c) Q3 2022
    d) Q4 2022
    Answer: d) Q4 2022

Q.17)

Scenario: Impact of Tourism Trends on Local Economy

Description:

The local economy of a popular tourist destination is often greatly influenced by tourism. This scenario explores how changes in tourism numbers, tourist spending, and local job creation affect the economic growth of the area. The dataset includes information on monthly tourist arrivals, revenue generated by tourism, and the number of new jobs created in tourism-related sectors. The goal is to analyze trends, forecast future tourism impacts, and evaluate how different factors (such as seasonality or local events) affect the overall economy.

The dataset contains the following fields:

1. **Month**: The month in which data is recorded (e.g., January, February).
2. **Tourist Arrivals (Thousands)**: The number of tourists visiting the destination in thousands.
3. **Tourist Spending (Million USD)**: The amount spent by tourists in the local economy, in millions of USD.
4. **Tourism-Related Job Creation (Thousands)**: The number of jobs created in sectors related to tourism (e.g., hospitality, transport).
5. **Hotel Occupancy Rate (%)**: The percentage of hotel rooms occupied by tourists.
6. **Local Economy Growth (%)**: The growth rate of the local economy as a result of tourism activity.
7. **Local Events Impact (Index)**: An index indicating the impact of local events (e.g., festivals, conferences) on tourism (1 = low, 5 = high).

Month	Tourist Arrivals (Thousands)	Tourist Spending (Million USD)	Tourism-Related Job Creation (Thousands)	Hotel Occupancy Rate (%)	Local Economy Growth (%)	Local Events Impact (Index)
January	120	250	2.5	75	5	2
February	110	220	2.3	70	4.5	3
March	140	280	3.1	80	6	4

April	160	350	3.5	85	7	5
May	170	380	3.8	88	7.2	5
June	200	450	4.2	90	8	4
July	220	500	4.5	95	8.5	5
August	210	480	4.3	92	8.2	3
September	180	420	3.8	80	7.5	3
October	150	300	3	75	6.8	2
November	130	270	2.7	70	6.2	2
December	160	400	3.6	85	7.5	4

1. **Which month experienced the highest number of tourist arrivals?**
   a) March
   b) May
   c) July
   d) June
   Answer: c) July
2. **In which month did the local economy grow by 8.5%?**
   a) May
   b) June
   c) July
   d) August
   Answer: c) July
3. **What was the tourist spending in February?**
   a) 250 Million USD
   b) 220 Million USD
   c) 380 Million USD
   d) 450 Million USD
   Answer: b) 220 Million USD

4. **What was the average number of jobs created in tourism-related sectors in Q2 2022 (April, May, June)?**
   a) 3.5 Thousand
   b) 4.0 Thousand
   c) 4.3 Thousand
   d) 4.5 Thousand
   Answer: a) 3.5 Thousand
5. **Which month had the highest tourism-related job creation?**
   a) July
   b) June
   c) May
   d) April
   Answer: a) July
6. **Which of the following months saw a decline in the local economy growth rate compared to the previous month?**
   a) September
   b) June
   c) March
   d) October
   Answer: d) October
7. **Which month had the highest hotel occupancy rate?**
   a) July
   b) June
   c) May
   d) April
   Answer: a) July
8. **What was the local event impact index in March?**
   a) 5
   b) 4
   c) 3
   d) 2
   Answer: b) 4
9. **How would you calculate the total tourist spending for Q1 2022 (January, February, and March) in Excel?**
   a) =SUM(B2:B4)
   b) =AVERAGE(B2:B4)
   c) =SUMIF(A2:A4, "Q1", B2:B4)
   d) =COUNTIF(A2:A4, "Q1")
   Answer: a) =SUM(B2:B4)

10. **Which formula in Excel would be most useful to forecast tourist arrivals for the next quarter, based on the data from the previous months?**
    a) FORECAST.LINEAR
    b) SUMIF
    c) AVERAGEIFS
    d) STDEV
    Answer: a) FORECAST.LINEAR
11. **To calculate the percentage change in local economy growth from July to August, which formula would you use in Excel?**
    a) =(C8-C7)/C7
    b) =(C8-C7)/C8
    c) =C8-C7
    d) =(C7-C8)/C7
    Answer: a) =(C8-C7)/C7

12. **What impact did the local events in July have on the local economy?**
    a) Low impact
    b) Moderate impact
    c) High impact
    d) No impact
    Answer: c) High impact
13. **How can you analyze the correlation between tourist spending and job creation using Excel?**
    a) By using VLOOKUP
    b) By creating a scatter plot and calculating the correlation coefficient
    c) By using conditional formatting
    d) By creating a pie chart
    Answer: b) By creating a scatter plot and calculating the correlation coefficient
14. **What was the percentage change in the hotel occupancy rate from May to June?**
    a) 2.5%
    b) 3.5%
    c) 5%
    d) 4%
    Answer: b) 3.5%

Q.18) **Inox Movie Theatre Revenue and Visitor Analysis**

Description:

Inox, a popular movie theatre chain, aims to analyze how different factors such as movie release schedules, promotions, ticket prices, and seasonal trends affect the theatre's revenue and number of visitors. The dataset includes information about movie releases, ticket sales, promotions, and monthly revenue for different branches of Inox theatres. The goal is to evaluate the impact of these factors on theatre performance, predict future revenue, and understand visitor trends.

The dataset contains the following fields:

1. **Month**: The month in which the data was recorded (e.g., January, February).
2. **Branch**: The specific branch of Inox (e.g., Branch 1, Branch 2).
3. **Total Visitors (Thousands)**: The number of visitors to the theatre in thousands.
4. **Revenue (Million INR)**: The total revenue generated in that month (in Million INR).
5. **Average Ticket Price (INR)**: The average price of a movie ticket in INR.
6. **Movies Released (Count)**: The number of movies released in that month.
7. **Promotion Discount (Percentage)**: The percentage of discount offered on movie tickets in that month.
8. **Weekends/Weekdays Ratio**: The ratio of visitors on weekends versus weekdays.
9. **Season (Peak/Off-Peak)**: Whether the month falls in a peak season (e.g., summer or holiday season) or an off-peak period.
10. **Customer Satisfaction Score (1-5)**: A score indicating customer satisfaction with movie quality, service, and experience.

Month	Branch	Total Visitors (Thousands)	Revenue (Million INR)	Average Ticket Price (I	Movies Released (Count)	Promotion Discount (%)	Weekends/ Weekdays Ratio	Season	Customer Satisfaction Score

				NR)					
January	Branch 1	80	30	350	5	10	1.5	Off-Peak	4
January	Branch 2	90	35	375	4	8	1.6	Off-Peak	3.9
February	Branch 1	110	40	380	6	12	1.8	Off-Peak	4.1
February	Branch 2	120	42	390	6	15	2	Off-Peak	4.3
March	Branch 1	150	50	400	7	20	2.1	Peak	4.5

March	Branch 2	160	55	420	8	18	2.2	Peak	4.7
April	Branch 1	180	60	420	8	25	2.3	Peak	4.6
April	Branch 2	190	65	430	9	22	2.5	Peak	4.8
May	Branch 1	160	55	410	6	18	2	Peak	4.3
May	Branch 2	150	52	405	5	15	1.8	Peak	4

June	Branch 1	110	45	400	4	10	1.5	Off-Peak	3.8
June	Branch 2	120	47	395	5	12	1.6	Off-Peak	3.9
July	Branch 1	180	65	450	9	30	2.4	Peak	4.9
July	Branch 2	170	62	440	8	28	2.3	Peak	4.7
August	Branch 1	150	55	420	7	20	2.1	Peak	4.4

August	Branch2	140	50	415	6	18	2	Peak	4.2
September	Branch1	120	40	400	5	10	1.7	Off-Peak	3.7
September	Branch2	130	45	410	6	12	1.8	Off-Peak	3.8
October	Branch1	140	48	405	6	12	1.9	Off-Peak	4
October	Branch2	150	52	410	7	14	2	Off-Peak	4.1

General Analysis and Trend Identification

1. **Which month saw the highest total visitors in Branch 2?**
   a) January
   b) April
   c) July
   d) March
   Answer: b) April
2. **Which branch had a higher average ticket price in May?**
   a) Branch 1
   b) Branch 2
   Answer: a) Branch 1
3. **In which month was the highest revenue generated by Branch 2?**
   a) January
   b) April
   c) July
   d) March
   Answer: c) July
4. **What was the average ticket price in June for Branch 1?**
   a) 410 INR
   b) 420 INR
   c) 400 INR
   d) 405 INR
   Answer: c) 400 INR
5. **What was the highest promotion discount offered across all months?**
   a) 10%
   b) 12%
   c) 18%
   d) 30%
   Answer: d) 30%
6. **In which month did Branch 1 have the highest Weekends/Weekdays ratio?**
   a) May
   b) July
   c) March
   d) August
   Answer: b) July

7. **Which branch had the highest customer satisfaction score in July?**
   a) Branch 1

b) Branch 2

Answer: a) Branch 1

8. **In which month did the customer satisfaction score drop the most compared to the previous month?**
   a) February
   b) June
   c) September
   d) October
   Answer: c) September
9. **To calculate the total revenue for Branch 1 in Q2 2022 (April, May, June), which formula would you use in Excel?**
   a) =SUM(D7:D9)
   b) =AVERAGE(D7:D9)
   c) =SUMIF(B7:B9, "Branch 1", D7:D9)
   d) =COUNTIF(D7:D9, "Branch 1")
   Answer: a) =SUM(D7:D9)
10. **Which Excel formula would be most appropriate for forecasting the revenue for Branch 2 in the next month based on historical data?**
    a) FORECAST.LINEAR
    b) AVERAGEIF
    c) SUMIF
    d) COUNTIF
    Answer: a) FORECAST.LINEAR
11. **What was the percentage increase in revenue from March to April for Branch 1?**
    a) 10%
    b) 20%
    c) 25%
    d) 30%
    Answer: b) 20%

12. **How did the season impact visitor numbers for Branch 1 in the months of March and April?**
    a) March had more visitors due to peak season
    b) April had more visitors due to off-peak season
    c) There was no significant change between March and April
    d) April had fewer visitors due to peak season
    Answer: a) March had more visitors due to peak season

13. **How can you use Excel to identify the branch with the most significant increase in visitor numbers during the summer months?**
    a) By calculating the percentage change in visitors between January and July for each branch
    b) By using a VLOOKUP to find summer months and sorting visitors
    c) By plotting a line graph of visitors per month
    d) By calculating the average visitors across all months
    Answer: a) By calculating the percentage change in visitors between January and July for each branch

Q19)

McDonald's Revenue and Customer Analysis

Description:

McDonald's aims to analyze how various factors, such as new product launches, promotional discounts, seasonality, and store locations, affect its monthly revenue and the number of customers visiting its outlets. The dataset includes information about the number of visitors, product launches, promotional campaigns, and sales revenue at McDonald's restaurants across different regions. The objective is to evaluate trends, understand seasonality effects, and determine the impact of promotions on overall sales.

The dataset contains the following fields:

1. **Month**: The month in which the data is recorded (e.g., January, February).
2. **Store Location**: The location of the McDonald's outlet (e.g., North, South, East, West).
3. **Total Visitors (Thousands)**: The number of visitors to the restaurant in thousands.
4. **Revenue (Million INR)**: The total revenue generated in that month (in Million INR).
5. **Product Launches (Count)**: The number of new products launched in that month.
6. **Promotion Discount (%)**: The percentage of discount offered on products in that month.
7. **Season (Peak/Off-Peak)**: Whether the month falls in a peak season (e.g., holiday period) or an off-peak period.
8. **Customer Satisfaction Score (1-5)**: A score indicating customer satisfaction based on food quality, service, and overall experience.

Month	Store Location	Total Visitors (Thousands)	Revenue (Million INR)	Product Launches (Count)	Promotion Discount (%)	Season	Customer Satisfaction Score

January	North	120	30	1	10	Off-Peak	4.1
January	South	110	28	0	5	Off-Peak	3.9
February	North	140	35	2	15	Off-Peak	4.3
February	South	130	33	1	12	Off-Peak	4.2
March	North	160	45	3	20	Peak	4.6
March	South	150	40	2	18	Peak	4.5
April	North	180	55	3	25	Peak	4.8
April	South	170	50	2	22	Peak	4.7
May	North	140	40	1	10	Off-Peak	4.2
May	South	130	37	0	8	Off-Peak	4
June	North	160	50	2	18	Peak	4.4
June	South	150	45	1	12	Peak	4.3
July	North	200	60	4	30	Peak	4.9
July	South	190	55	3	28	Peak	4.8
August	North	180	55	3	25	Peak	4.7
August	South	170	50	2	20	Peak	4.6
September	North	130	38	1	10	Off-Peak	4
September	South	120	35	0	5	Off-Peak	3.8

October	North	140	42	2	12	Off-Peak	4.2
October	South	130	40	1	10	Off-Peak	4.1

1. **Which store location had the highest revenue in July?**
   a) North
   b) South
   Answer: a) North
2. **In which month did the North store generate the highest revenue?**
   a) April
   b) March
   c) May
   d) July
   Answer: d) July
3. **What was the total number of visitors in the South store in June?**
   a) 160 Thousand
   b) 150 Thousand
   c) 140 Thousand
   d) 130 Thousand
   Answer: b) 150 Thousand

4. **Which month had the highest number of product launches at the North store?**
   a) March
   b) April
   c) May
   d) July
   Answer: d) July
5. **What was the highest promotion discount offered in the dataset?**
   a) 20%
   b) 25%
   c) 30%
   d) 15%
   Answer: c) 30%
6. **Which store had more product launches in April?**
   a) North

b) South
Answer: a) North

7. **Which month had the highest customer satisfaction score in the North store?**
   a) March
   b) July
   c) August
   d) June
   Answer: b) July

8. **In which month did the South store have the lowest customer satisfaction score?**
   a) January
   b) May
   c) September
   d) October
   Answer: c) September

9. **How would you calculate the total revenue for the North store in Q1 2022 (January, February, and March)?**
   a) =SUM(D2:D4)
   b) =AVERAGE(D2:D4)
   c) =SUMIF(B2:B4, "North", D2:D4)
   d) =COUNTIF(D2:D4, "North")
   Answer: a) =SUM(D2:D4)

10. **Which Excel function is most appropriate to predict the revenue for the next month based on historical data?**
    a) FORECAST.LINEAR
    b) AVERAGEIF
    c) VLOOKUP
    d) CONCATENATE
    Answer: a) FORECAST.LINEAR

11. **What was the percentage change in total visitors at the North store from March to April?**
    a) 10%
    b) 12.5%
    c) 20%
    d) 25%
    Answer: b) 12.5%

12. **How did the season affect the customer satisfaction score for the North store between Off-Peak and Peak months?**
    a) Satisfaction was higher in Off-Peak months
    b) Satisfaction was higher in Peak months
    c) No change between Off-Peak and Peak months
    d) Satisfaction was lower in both seasons
    Answer: b) Satisfaction was higher in Peak months

13. **What is the average promotion discount given in the first half of the year (January to June)?**
    a) 10%
    b) 15%
    c) 18%
    d) 20%
    Answer: c) 18%

14. **To calculate the total visitors for the North store across all months, which formula would you use in Excel?**
    a) =SUM(C2:C21)
    b) =AVERAGE(C2:C21)
    c) =SUMIF(B2:B21, "North", C2:C21)
    d) =COUNTIF(C2:C21, "North")
    Answer: c) =SUMIF(B2:B21, "North", C2:C21)

Q20)

Scenario: Coca-Cola's Regional Sales and Customer Preferences Analysis

Description: Coca-Cola seeks to understand the impact of regional preferences, promotional activities, and seasonal factors on its monthly sales across different regions. The dataset includes sales data for Coca-Cola in multiple regions, along with details about seasonal events, promotions, and customer preferences. The goal is to analyze how these factors influence the overall sales volume and customer behavior.

Dataset: Coca-Cola Regional Sales Analysis

Month	Region	Total Sales (Units in Thousands)	Revenue (Million INR)	Seasonal Event (Yes/No)	Promotion Discount (%)	Customer Satisfaction (1-5)	Product Variant (Cola/Zero/Other)
January	North	100	20	No	5	4	Cola
January	South	120	24	No	7	3.9	Zero
February	North	150	30	Yes	10	4.3	Cola
February	South	130	26	Yes	12	4	Cola
March	North	180	36	Yes	15	4.5	Zero
March	South	170	34	Yes	10	4.2	Other
April	North	200	40	No	8	4.7	Cola
April	South	210	42	No	5	4.6	Cola
May	North	250	50	Yes	20	4.8	Cola

May	South	240	48	Yes	18	4.7	Zero
June	North	220	44	Yes	15	4.6	Zero
June	South	210	42	Yes	12	4.5	Cola
July	North	300	60	Yes	25	4.9	Other
July	South	280	56	Yes	22	4.8	Zero
August	North	270	54	No	10	4.7	Cola
August	South	260	52	No	8	4.6	Cola
September	North	230	46	No	7	4.2	Cola
September	South	220	44	No	5	4.1	Zero
October	North	240	48	Yes	15	4.4	Other
October	South	230	46	Yes	10	4.3	Zero

1. **Which region had the highest total sales in July?**
   a) North
   b) South
   Answer: a) North

2. **In which month did the North region have the lowest sales?**
   a) January
   b) February
   c) March
   d) September
   Answer: d) September

3. **What was the total revenue from Coca-Cola sales in the South region in March?**
   a) 30 Million INR
   b) 34 Million INR
   c) 40 Million INR
   d) 42 Million INR
   Answer: b) 34 Million INR

4. **How did the promotion discount impact Coca-Cola sales in the North region in February?**
   a) Increased sales significantly
   b) No impact on sales
   c) Slight increase in sales
   d) Decreased sales
   Answer: a) Increased sales significantly

5. **What was the promotion discount offered in July for the South region?**
   a) 25%
   b) 22%
   c) 18%
   d) 15%
   Answer: b) 22%

6. **Which month in the dataset showed the highest customer satisfaction score in the North region?**
   a) May
   b) March
   c) July
   d) January
   Answer: c) July

7. **Which product variant had the highest number of sales in the South region in May?**
   a) Cola

b) Zero
c) Other
Answer: b) Zero

8. **What was the customer satisfaction score for Coca-Cola sales in the North region in June?**
   a) 4.0
   b) 4.5
   c) 4.6
   d) 4.2
   Answer: b) 4.6

9. **Which product variant had the highest sales in the North region during the peak season (March-May)?**
   a) Cola
   b) Zero
   c) Other
   Answer: a) Cola

10. **Which season (Peak/Off-Peak) saw the highest sales growth in the North region in April?**
    a) Peak
    b) Off-Peak
    Answer: a) Peak

11. **What was the percentage change in sales for the South region from January to May?**
    a) 15%
    b) 25%
    c) 50%
    d) 100%
    Answer: b) 25%

13. **What is the total number of Coca-Cola units sold in the North region from January to June?**
    a) =SUM(C2:C7)
    b) =AVERAGE(C2:C7)
    c) =COUNTIF(C2:C7, "North")
    d) =SUMIF(B2:B7, "North", C2:C7)
    Answer: d) =SUMIF(B2:B7, "North", C2:C7)
14. **How would you calculate the average customer satisfaction score for the South region over the months of January to March?**
    a) =AVERAGE(E2:E4)
    b) =SUMIF(D2:D4, "South", E2:E4)
    c) =AVERAGEIF(B2:B4, "South", E2:E4)
    d) =COUNTIF(E2:E4, "South")
    Answer: c) =AVERAGEIF(B2:B4, "South", E2:E4)

15. **Which Excel function is most appropriate to predict the sales for the next month based on historical sales data?**
    a) FORECAST.LINEAR
    b) AVERAGE
    c) VLOOKUP
    d) SUMIF
    Answer: a) FORECAST.LINEAR

16. **What is the total sales (in units) for Coca-Cola in the South region during the off-peak months (January, February, September)?**
    a) 390 Thousand
    b) 450 Thousand
    c) 460 Thousand
    d) 500 Thousand
    Answer: a) 390 Thousand