

Solutions-

1. IF Function:

- Determine if employees are earning above or below \$50,000. Use the IF function to display "Above" or "Below".

USING-

=IF(\$F2>50000,"Above 50000","Below 50000")

2. IFS Function:

- Assign a performance rating based on the number of project hours: "Excellent" for 50 or more hours, "Good" for 40-49 hours, "Average" for 30-39 hours, and "Poor" for below 30 hours.

USING-

=IFS(\$J2>=50,"EXCELLENT",\$J2>=40,"GOOD",\$J2>=30,"AVERAGE",\$J2<30,"POOR")

3. AND Function:

- Check if employees from the HR department and North region have sales above \$15,000.

USING-

=IF(AND(\$E2="HR",\$I2="North"),IF(\$H2>15000,"Above 15000","Below 15000")," ")

4. OR Function:

- Identify employees who are either in the IT department or have a salary above \$60,000.

USING-

=IF(OR(\$E2="IT",\$F2>60000),"TRUE","FLASE")

5. NOT Function:

- Determine if employees are not from the Marketing department.

USING-

=NOT(\$E2="Marketing")

6. SUMIF Function:

- Calculate the total salary of employees from the Sales department.

USING-

=SUMIF(\$E\$2:\$E\$201,"Sales",\$F\$2:\$F\$201)

Answer-1813735

7. SUMIFS Function:

- Calculate the total salary of employees in the IT department who have more than 35 project hours.

USING-

=SUMIFS(\$F\$2:\$F\$201,\$E\$2:\$E\$201,"IT",\$J\$2:\$J\$201,">35")

Answer-1629219

8. COUNTIF Function:

- Count the number of employees in the HR department.

USING-

=COUNTIF(\$E\$2:\$E\$201,"HR")

Answer-44

9. **COUNTIFS Function:**

- Count the number of female employees in the Finance department.

USING-

=COUNTIFS(\$D\$2:\$D\$201,"F",\$E\$2:\$E\$201,"Finance")

Answer-22

10. **AVERAGEIF Function:**

- Find the average salary of employees in the Marketing department.

USING-

=AVERAGEIF(\$E\$2:\$E\$201,"Marketing",\$F\$2:\$F\$201)

Answer-53389.47

11. **AVERAGEIFS Function:**

- Find the average sales for employees in the North region with project hours above 40.

USING-

=AVERAGEIFS(\$H\$2:\$H\$201,\$I\$2:\$I\$201,"North",\$J\$2:\$J\$201,">40")

Answer-22015.65

12. **MAXIFS Function:**

- Determine the maximum salary among employees in the South region.

USING-

=MAXIFS(\$F\$2:\$F\$201,\$I\$2:\$I\$201,"South")

Answer-77358

13. **MINIFS Function:**

- Find the minimum number of project hours for employees in the Finance department.

USING-

=MINIFS(\$J\$2:\$J\$201,\$E\$2:\$E\$201,"Finance")

Answer-22

14. **VLOOKUP Function:**

- Use VLOOKUP to find the salary of an employee based on their ID.

USING-

=VLOOKUP(A2,A2:J201,6,FALSE)

Answer- for input 1->70986

15. **HLOOKUP Function:**

- Use HLOOKUP to find the joining date of employees based on their department.

USING-

=HLOOKUP(\$G\$1,\$G\$1:\$G\$201,MATCH(\$S22,\$E\$1:\$E\$201,0), FALSE)

Answer- for input Finance->2018-10-12

16. **INDEX and MATCH Functions:**

- Use INDEX and MATCH to find the sales amount for a specific employee.

USING-

=INDEX(\$A\$1:\$J\$201,MATCH(\$AA\$2,\$B:\$B,0),MATCH(Z3,\$A\$1:\$J\$1,0))

Answer- for input 1->13394

17. **Conditional Formatting:**

- Highlight cells in the Salary column that are above \$60,000.

Range-F1:F201

Value is greater than 60000

18. Pivot Table:

- Create a pivot table to summarize average sales by region and department.

Average of Sales Row Labels	Column Labels					Grand Total
	Finance	HR	IT	Marketing	Sales	
East	21695.25	28007.4	26365.25	21329.22222	27965.25	24950.68627
North	25643.8	23668	27001.66667	23127.72727	21239.375	24329.34615
South	25144.54545	21239.91667	28201.22222	28375.08333	26815	25733.42
West	25450.9	20289	28969.9	21917.83333	19889.7	23357.25532
(blank)						
Grand Total	24369.30233	23147.27273	27532.86047	24167.78947	23544.5	24610.365

19. Data Validation:

- Set up data validation to allow only dates after 2015-01-01 in the Joining Date column.

Range- G2:G201

Date is after 2015-01-01

20. Chart Creation:

Create a bar chart to visualize the total sales by department

