Solutions-

# 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")**

# 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")**

# 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")," ")**

# 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")**

# NOT Function:

* + Determine if employees are not from the Marketing department.

USING-

**=NOT($E2="Marketing")**

# 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

# 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

# COUNTIF Function:

* + Count the number of employees in the HR department.

USING-

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

Answer-44

# 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

# 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

# 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

# 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

# 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

# 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

# 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

# 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

# Conditional Formatting:

* + Highlight cells in the Salary column that are above $60,000.

Range-F1:F201  
Value is greater than 60000

# Pivot Table:

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Average of Sales** | **Column Labels** |  |  |  |  |  |  |
| **Row Labels** | **Finance** | **HR** | **IT** | **Marketing** | **Sales** |  | **Grand Total** |
| 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** |

# 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

# Chart Creation:

Create a bar chart to visualize the total sales by department

