IF Statement Lab

Worksheet: Sales Data

Product ID	Product	Sales	Target
101	Product A	120	150
102	Product B	150	140
103	Product C	200	200
104	Product D	90	100
105	Product E	220	210
106	Product F	130	160

Ques1: Use the IF function to evaluate whether each product met its sales target.

Solution:

Step1: Create a new column (F1) next to Target Column named Target Met or Not.

Step2: By using the following formula

=IF (C2>=D2,"Target Met", "Target Not Met") at column F2 we can find if the Target is Met or Not.

Product ID	Product	Sales	Target	Region	Target Met or not
101	Product A	120	150	North	Target not met
102	Product B	150	140	South	Target met
103	Product C	200	200	East	Target met
104	Product D	90	100	West	Target not met
105	Product E	220	210	North	Target met
106	Product F	130	160	South	Target not met

Ques2: Use the IF function to determine if a product is eligible for a regional bonus. Products in the "North" region with sales over 200 are eligible.

Solution:

Step1: Create a new column (G1) named Eligible for Bonus.

Step2: By using the formula **= IF (AND(E2="North",C2>200),"Eligible", "Not Eligible")**

at column(G2) we can get if the product is eligible for a regional bonus or not.

Product ID	Product	Sales	Target	Region	Target Met or not	Eligible for Bonus
101	Product A	120	150	North	Target not met	Not Eligible
102	Product B	150	140	South	Target met	Not Eligible
103	Product C	200	200	East	Target met	Not Eligible
104	Product D	90	100	West	Target not met	Not Eligible
105	Product E	220	210	North	Target met	Eligible
106	Product F	130	160	South	Target not met	Not Eligible

Ques3: Use nested IF functions to assign a commission rate based on sales. Sales >= 200 get a 10% commission, sales >= 150 get a 7% commission, and others get a 5% commission.

Solution:

Step1: Create a new column(H1) named Commission.

Step2: By using the formula **=IF(C2>=200,"10%",IF(C2>=150,"7%","5%"))** at column H2

we get the Commission rate based on the condition.

Product ID	Product	Sales	Target	Region	Target Met or not	Eligible for Bonus	Commission
101	Product A	120	150	North	Target not met	Not Eligible	5%
102	Product B	150	140	South	Target met	Not Eligible	7%
103	Product C	200	200	East	Target met	Not Eligible	10%
104	Product D	90	100	West	Target not met	Not Eligible	5%
105	Product E	220	210	North	Target met	Eligible	10%
106	Product F	130	160	South	Target not met	Not Eligible	5%

Ques4: Use the IF function to calculate a bonus amount. If sales met or exceeded the target, the bonus is 10% of the sales; otherwise, it's 5%.

Solution:

Step1: Create a new column(I1) named Bonus amount.

Step2: By using the formula **=IF(C2>=D2,0.1*C2,0.05*C2)** at column I2 we get the Bonus amount.

Product	Sales	Target	Region	Target Met or Not	Eligible for Bonus	Commission	Bonus amount
Product A	120	150	North	Target Not Met	Not Eligible	5%	6
Product B	150	140	South	Target Met	Not Eligible	7%	15
Product C	200	200	East	Target Met	Not Eligible	10%	20
Product D	90	100	West	Target Not Met	Not Eligible	5%	4.5
Product E	220	210	North	Target Met	Eligible	10%	22
Product F	130	160	South	Target Not Met	Not Eligible	5%	6.5

Ques5: Use the IF function to categorize sales performance as "Excellent" (>=200), "Good" (>=150), or "Needs Improvement" (<150).

Solution:

Step1: Create a new column(J1) named Bonus amount.

Step2: By using the formula

 =IF(C2>=200,"Excellent",IF(C2>=150,"Good",IF(C2<150,"Needs Improvement")))

at column J2 we get the Performance of each Product.

Product ID	Product	Sales	Target	Region	Performance
101	Product A	120	150	North	Needs Improvement
102	Product B	150	140	South	Good
103	Product C	200	200	East	Excellent
104	Product D	90	100	West	Needs Improvement
105	Product E	220	210	North	Excellent
106	Product F	130	160	South	Needs Improvement

Ques6: Use the IF function to assign a price tier based on the sales value. "High" for sales > 200, "Medium" for sales between 100 and 200, and "Low" for sales < 100.

Solution:

Step1: Create a new column(G12) named Price Tier.

Step2: By using the formula
=IF(C13>=200,"High",IF(AND(C13<200,C13>100),"Medium",IF(C13<100,"Low")))

at column G13 we get Price Tier for each product.

Product ID	Product	Sales	Target	Region	Performance	Price Tier
101	Product A	120	150	North	Needs Improvement	Medium
102	Product B	150	140	South	Good	Medium
103	Product C	200	200	East	Excellent	High
104	Product D	90	100	West	Needs Improvement	Low
105	Product E	220	210	North	Excellent	High
106	Product F	130	160	South	Needs Improvement	Medium

Ques7: Use the IF function to calculate the year-end bonus. If sales >= 150 and region is "North", the bonus is $500, otherwise, it's $300.

Solution:

Step1: Create a new column(H12) named Year-end Bonus.

Step2: By using the formula **=IF(AND(C13>=150,E12="North"),"$500","$300")** at column H13

We get the Year-end Bonus for each Product.

Product ID	Product	Sales	Target	Region	Performance	Price Tier	Year-end Bonus
101	Product A	120	150	North	Needs Improvement	Medium	$300
102	Product B	150	140	South	Good	Medium	$500
103	Product C	200	200	East	Excellent	High	$300
104	Product D	90	100	West	Needs Improvement	Low	$300
105	Product E	220	210	North	Excellent	High	$500
106	Product F	130	160	South	Needs Improvement	Medium	$300

==Ques8: Use the IF function to mark high performers. A product is a high performer if its sales are in the top 25% of all sales.==

Solution:

Step1: Create a new column(F21) named Sales Threshold.

Step2: By using the following formula at column F21 gives Sales threshold of top 25% products

 =PERCENTILE(C21:C26,0.75).

Step3: By using the following formula at column G21 we get if the product is High Performer or Not

=IF(C2 >= F21, "High Performer", "Regular").

Product	Sales	Target	Region	Sales Threshold	High Performer
Product A	120	150	North	187.5	Regular
Product B	150	140	South	200	Regular
Product C	200	200	East	205	High Performer
Product D	90	100	West	175	Regular
Product E	220	210	North	197.5	High Performer
Product F	130	160	South	130	Regular