

Lab Assignment 1

Dataset Given

	A	B	C	D	E	F
1	Sales Data					
2						
3	Product ID	Product	Sales	Target	Region	
4	101	Product A	120	150	North	
5	102	Product B	150	140	South	
6	103	Product C	200	200	East	
7	104	Product D	90	100	West	
8	105	Product E	220	210	North	
9	106	Product F	130	160	South	

Q1. Use the IF function to evaluate whether each product met its sales target.

Ans. Formula Used:

=IF(C4>=D4, "Yes","No")

Output obtained: Met Target?

	A	B	C	D	E	F
1	Sales Data					
2						Q1
3	Product ID	Product	Sales	Target	Region	Met Target?
4	101	Product A	120	150	North	No
5	102	Product B	150	140	South	Yes
6	103	Product C	200	200	East	Yes
7	104	Product D	90	100	West	No
8	105	Product E	220	210	North	Yes
9	106	Product F	130	160	South	No
10						

Q2. 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.

Ans. First we check for region if it's North or not, afterwards we check for sales over 200. Therefore, nested IF is required here.

Formula Used:

=IF(E4="North",IF(C4>200,"Eligible","Not Eligible"),"Not Eligible")

Output Obtained: Regional Eligibility

	A	B	C	D	E	F	G
1	Sales Data						
2						Q1	Q2
3	Product ID	Product	Sales	Target	Region	Met Target?	Regional Eligibility
4	101	Product A	120	150	North	No	Not Eligible
5	102	Product B	150	140	South	Yes	Not Eligible
6	103	Product C	200	200	East	Yes	Not Eligible
7	104	Product D	90	100	West	No	Not Eligible
8	105	Product E	220	210	North	Yes	Eligible
9	106	Product F	130	160	South	No	Not Eligible
10							

Q3. 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.

Ans. Clearly, this question required the implementation of nested Ifs as there are multiple conditional checks.

Formula Used: =IF(C4>=200,0.1,IF(C4>=150,0.07,0.05))

Output Obtained: Commission

	A	B	C	D	E	F	G	H
1	Sales Data							
2						Q1	Q2	Q3
3	Product ID	Product	Sales	Target	Region	Met Target?	Regional Eligibility	Commission
4	101	Product A	120	150	North	No	Not Eligible	5%
5	102	Product B	150	140	South	Yes	Not Eligible	7%
6	103	Product C	200	200	East	Yes	Not Eligible	10%
7	104	Product D	90	100	West	No	Not Eligible	5%
8	105	Product E	220	210	North	Yes	Eligible	10%
9	106	Product F	130	160	South	No	Not Eligible	5%

Q4. 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 is 5%.

Ans. Bonus amount needs to be calculated, meaning the actual bonus quantity and not just the bonus percentage. Here, we can use the previously created Met Target Column since it already checks if a product has met its sales target or not.

Formula Used: =IF(F4="Yes",0.1*C4,0.05*C4)

Output Obtained: Bonus

	A	B	C	D	E	F	G	H	I
1	Sales Data								
2						Q1	Q2	Q3	Q4
3	Product ID	Product	Sales	Target	Region	Met Target?	Regional Eligibility	Commission	Bonus
4	101	Product A	120	150	North	No	Not Eligible	5% ₹	6.00
5	102	Product B	150	140	South	Yes	Not Eligible	7% ₹	15.00
6	103	Product C	200	200	East	Yes	Not Eligible	10% ₹	20.00
7	104	Product D	90	100	West	No	Not Eligible	5% ₹	4.50
8	105	Product E	220	210	North	Yes	Eligible	10% ₹	22.00
9	106	Product F	130	160	South	No	Not Eligible	5% ₹	6.50

Q5. Use the IF function to categorize sales performance as "Excellent" (>=200), "Good" (>=150), or "Needs Improvement" (<150).

Ans. Again, multiple conditional statements meaning nested Ifs required.

Formula Used: =IF(C4>=200,"Excellent",IF(C4>=150,"Good",IF(C4<150,"Needs Improvement")))

Output Obtained: Performance

	A	B	C	D	E	F	G	H	I	J
1	Sales Data									
2						Q1	Q2	Q3	Q4	Q5
3	Product ID	Product	Sales	Target	Region	Met Target?	Regional Eligibility	Commission	Bonus	Performance
4	101	Product A	120	150	North	No	Not Eligible	5% ₹	6.00	Needs Improvement
5	102	Product B	150	140	South	Yes	Not Eligible	7% ₹	15.00	Good
6	103	Product C	200	200	East	Yes	Not Eligible	10% ₹	20.00	Excellent
7	104	Product D	90	100	West	No	Not Eligible	5% ₹	4.50	Needs Improvement
8	105	Product E	220	210	North	Yes	Eligible	10% ₹	22.00	Excellent
9	106	Product F	130	160	South	No	Not Eligible	5% ₹	6.50	Needs Improvement