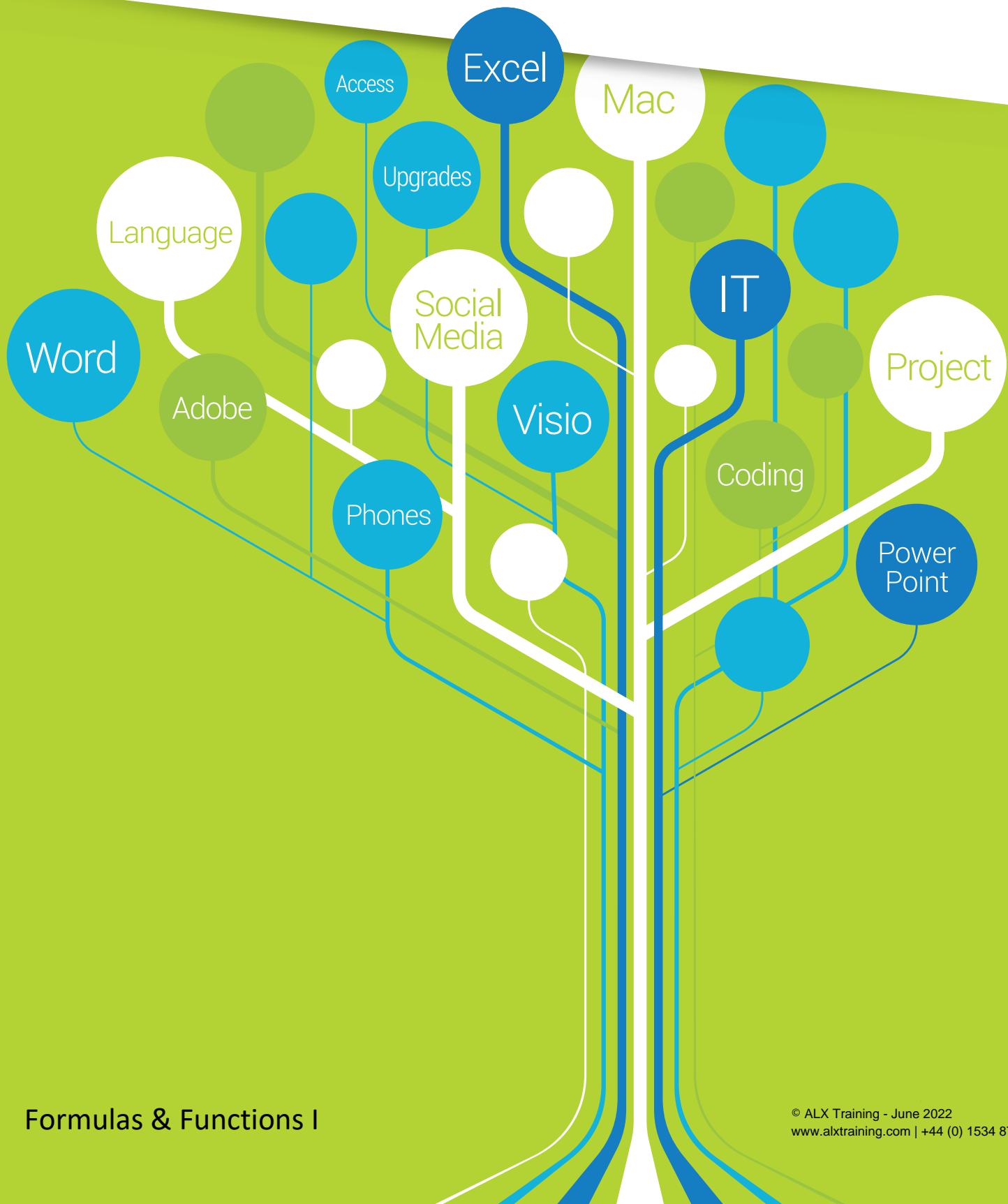


# ALX

Learning for  
the Digital Age



# IF Formulas

## TO INSERT TEXT

1. Highlight the cell where you want the formula result.
2. Open the **Formula** Tab
3. Choose the **IF** function from the **Logical** book of formulas
4. In the **Logical Test** argument click D2 containing the number of hours a week worked and type **>=35**
5. In the **Value\_if\_true** box type **FT**.
6. Press **Tab** to move to the next argument.
7. **Speech marks** indicate the value is text and not a name or cell reference
8. In the **Value\_if\_false** box type **PT**. Press **OK**
9. **Double-click** the **autofill handle** to copy the formula down

## TO INSERT A CALCULATION

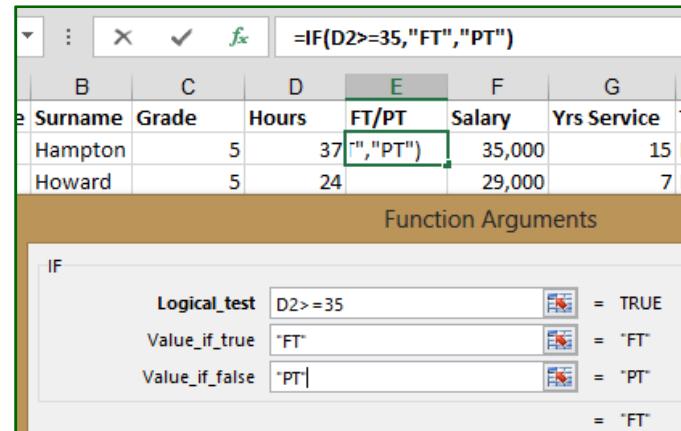
10. In the **Logical Test** click the cell relating to **Target** and type **= "met"**.
11. Speechmarks identify this as text and not a column or named range.
12. In the **Value\_if\_true** box click the cell relating to **Salary** and type **\*2%**
13. In the **Value\_if\_false** box put **0**.
14. Press **OK** to finish
15. Study the formula in the formula bar. Note the **syntax**:  
**=IF(logic test, value if true, value if false)**

## NESTED IF FORMULAS

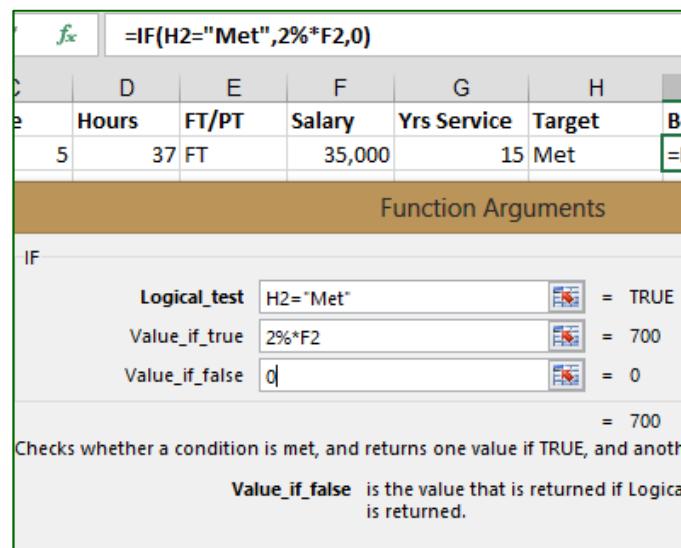
16. **Nested IF formulas** contain more than one IF function and produce multiple results
17. After the **Value if True** argument, insert a **comma** and start a new IF Formula then add a second “Value if true” argument to finish enter “Value if false”.

## PRACTICE

18. Create a nested IF formula to calculate the number of days' holiday each employee should receive. Holidays are determined by number of years' service. **>=10** years - 30 days, **>=5** years - 25 days and everyone else gets 22 days
19. Try to create an IF formula to calculate the pension rates for each employee. Grades **>=10** get 15% of their salary, grades **>=6** get 10% and everyone else gets 5%
20. Note; the order you create the statement is critical.

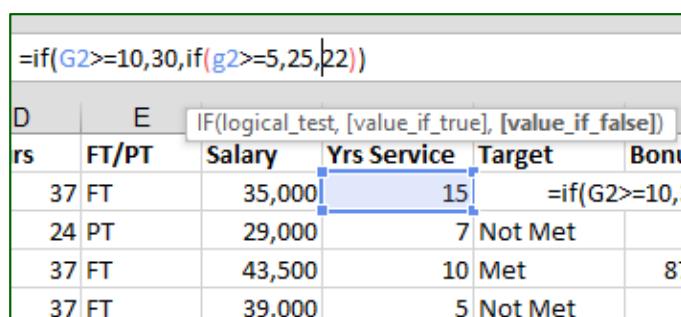


Surname	Grade	Hours	FT/PT	Salary	Yrs Service
Hampton		5	37 ("PT")	35,000	15
Howard		5	24	29,000	7

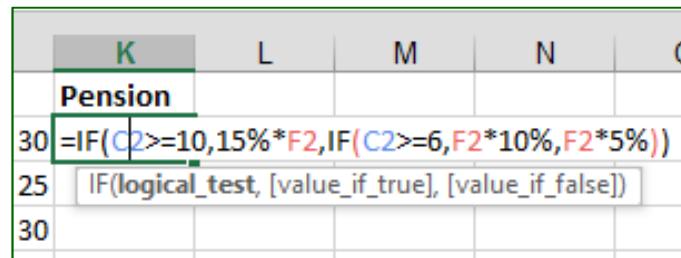


Hours	FT/PT	Salary	Yrs Service	Target	Bonus
5	37 FT	35,000	15	Met	

Checks whether a condition is met, and returns one value if TRUE, and another if FALSE.  
Value\_if\_false is the value that is returned if Logical test is returned.



FT/PT	Salary	Yrs Service	Target	Bonus
37 FT	35,000	15	=if(G2>=10,30,if(g2>=5,25,22))	
24 PT	29,000	7	Not Met	
37 FT	43,500	10	Met	87
37 FT	39,000	5	Not Met	



K	L	M	N	O
Pension				
30	=IF(C2>=10,15%*F2,IF(C2>=6,F2*10%,F2*5%))			
25	IF(logical_test, [value_if_true], [value_if_false])			
30	--			



# Functions I

Function	Description	Formula Structure & Example
COUNT	Counts how many numbers are in a range of cells	=COUNT(range) =COUNT(A1:A99)
COUNTA	Counts how many values are in a range of cells	=COUNTA(range) =COUNTA(A1:A99)
COUNTIF	Counts the number of cells within a range that meets a given criteria	=COUNTIF(range, criteria) =COUNTIF(A1:A99, "Jones") =COUNTIF(A1:A99,B1)
COUNTIFS	Applies a criteria to cells across multiple ranges and counts the number of times it is met	=COUNTIFS(criteria_range1, criteria1, [criteria_range2, criteria2]...) =COUNTIFS(A1:A99, ">=6", B1:B99, ">0")
AVERAGEIF	Returns the average of the cells in a range that meet a given criteria	=AVERAGEIF(Range, Criteria, Average_Range) =AVERAGEIF(A1:A99, ">=10", B1:B99)
SUM	Totals the values in a range	=SUM(range) =SUM(A1:A99)
SUMIF	Totals the cells specified by a given criteria	=SUMIF(range, criteria, sum range) =SUMIF(A1:A99, ">100", B1:B99)
SUMIFS	Totals the cells in a range which meet multiple criteria	SUMIFS(sum_range, criteria_range1, criteria1, [criteria_range2, criteria2], ...) =SUMIFS(C1:C99,A1:A99, ">100", B1:B99, "Jones")
IF	The IF function returns one value if a condition you specify evaluates to TRUE, and another value if that condition evaluates to FALSE	IF(logical_test, [value_if_true], [value_if_false]) =IF(D2>=35, "FT", "PT")
AND	Returns TRUE if all its arguments evaluate to TRUE; returns FALSE if one or more arguments evaluate to FALSE	AND(logical1, [logical2], ...) =IF(AND(B2="JSY",C2="EF"), "Attention", "")
NOT	Reverses the value of its argument. Use NOT when you want to make sure a value is not equal to one particular value	NOT(logical) =IF(NOT(B2="JSY",C2="EF"), "Attention", "")
OR	Returns TRUE if any argument is TRUE; returns FALSE if all arguments are FALSE	OR(logical1, [logical2], ...) =IF(OR(B2="JSY",C2="EF"), "Attention", "")



