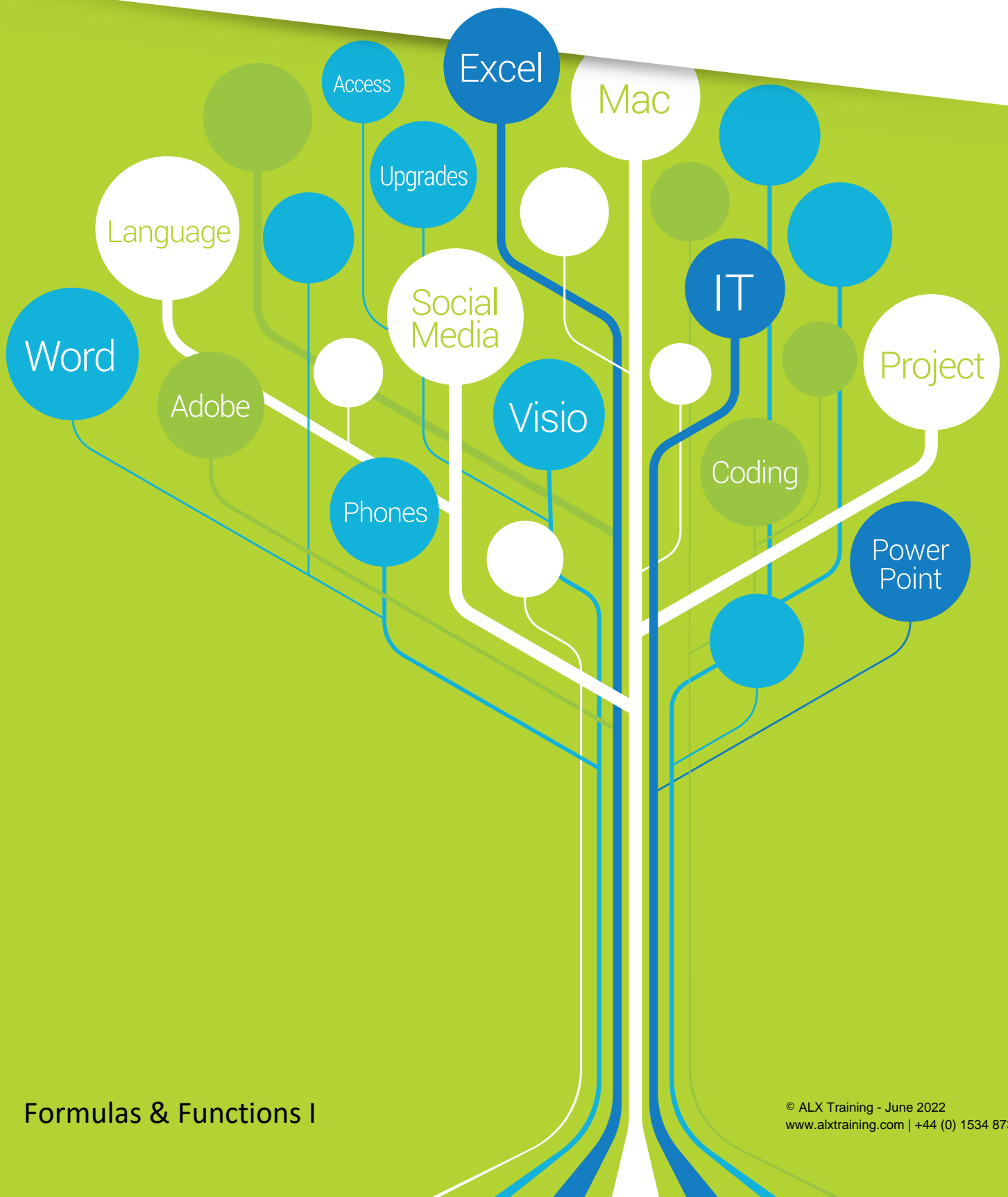




ALX

*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.

=IF(D2>=35,"FT","PT")						
Surname	Grade	Hours	FT/PT	Salary	Yrs Service	
Hampton	5	37	FT	35,000	15	
Howard	5	24	PT	29,000	7	

Function Arguments	
Logical_test	D2>=35 = TRUE
Value_if_true	"FT" = "FT"
Value_if_false	"PT" = "PT"

=IF(H2="Met",2%*F2,0)						
Hours	FT/PT	Salary	Yrs Service	Target		
5	37 FT	35,000	15	Met		

Function Arguments	
Logical_test	H2="Met" = TRUE
Value_if_true	2%*F2 = 700
Value_if_false	0 = 0

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 not TRUE.

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

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 & <i>Example</i>
COUNT	Counts how many numbers are in a range of cells	=COUNT(range) <i>=COUNT(A1:A99)</i>
COUNTA	Counts how many values are in a range of cells	=COUNTA(range) <i>=COUNTA(A1:A99)</i>
COUNTIF	Counts the number of cells within a range that meets a given criteria	=COUNTIF(range, criteria) <i>=COUNTIF(A1:A99,"Jones")</i> <i>=COUNTIF(A1:A99,B1)</i>
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]...) <i>=COUNTIFS(A1:A99,">=6",B1:B99,">0")</i>
AVERAGEIF	Returns the average of the cells in a range that meet a given criteria	=AVERAGEIF(Range, Criteria, Average_Range) <i>=AVERAGEIF(A1:A99,">=10",B1:B99)</i>
SUM	Totals the values in a range	=SUM(range) <i>=SUM(A1:A99)</i>
SUMIF	Totals the cells specified by a given criteria	=SUMIF(range, criteria, sum range) <i>=SUMIF(A1:A99,">100",B1:B99)</i>
SUMIFS	Totals the cells in a range which meet multiple criteria	SUMIFS(sum_range, criteria_range1, criteria1, [criteria_range2, criteria2], ...) <i>=SUMIFS(C1:C99,A1:A99,">100",B1:B99,"Jones")</i>
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]) <i>=IF(D2>=35,"FT","PT")</i>
AND	Returns TRUE if all its arguments evaluate to TRUE; returns FALSE if one or more arguments evaluate to FALSE	AND(logical1, [logical2], ...) <i>=IF(AND(B2="JSY",C2="EF"),"Attention","")</i>
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) <i>=IF(NOT(B2="JSY",C2="EF"),"Attention","")</i>
OR	Returns TRUE if any argument is TRUE; returns FALSE if all arguments are FALSE	OR(logical1, [logical2], ...) <i>=IF(OR(B2="JSY",C2="EF"),"Attention","")</i>



