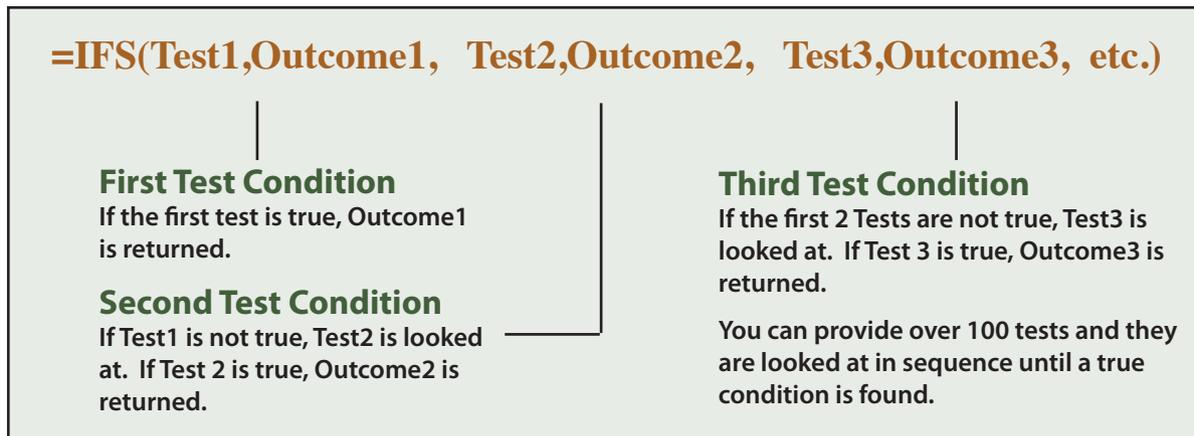


## The IFS Function

In the last chapter you saw that IF formulas can become quite complicated. The IFS function can be used to simply IF(AND or IF(OR functions. It also combines some of the features of the IF and LOOKUP functions into one function.

The IFS function checks whether one or more conditions are true and returns a value that meets that condition. Its structure is summarised in the following diagram.



## Simple IFS Functions

The first application of the IFS function will involve allocating letter grades for a school teacher's test results. Let's say that the teacher has decided that marks of 80% and over should be allocated an A, marks between 70% and 79% a B, marks between 60% and 69% a C, marks between 50% and 59% a D, and marks below 50% an E.

### A Loading the Prepared Template

- 1 Load Microsoft Excel or close the current file.
- 2 Click on the OPEN icon in the QUICK ACCESS TOOLBAR or select OPEN from the FILE tab or FILE menu.
- 3 Access the CHAPTER 20 folder of the EXCEL 2025 SUPPORT FILES and load the file:

Test Results

Selecting YES to the READ-ONLY dialogue box.

## B Entering the IFS Formula

The IFS function will be entered in stages so that you can learn its parts.

1 Position the cursor at cell H6 and enter the first condition:  
`=IFS(G6<50%,"E"`

STUDENT	TEST1	TEST2	TEST3	TEST4	TEST5	AVERAGE	GRADE
Richard	65%	72%	49%	81%	70%	67.4%	=IFS(G6<50%,"E"
Rita	42%	55%	37%	43%	51%	45.6%	
Ronald	88%	93%	99%	86%	95%	92.2%	
Rhonda	81%	76%	82%	80%	83%	80.4%	
Raymond	55%	60%	54%	59%	65%	58.6%	
Raylene	75%	71%	66%	72%	69%	70.6%	

**NOTE:** The first part of the formula says: **"IF the AVERAGE cell is less than 50%, DISPLAY an E"**. Each logical test in the formula follows the same structure.

2 Enter a **COMMA** to separate the conditions and enter the second logical test:  
`G6<60%,"D"`

STUDENT	TEST1	TEST2	TEST3	TEST4	TEST5	AVERAGE	GRADE
Richard	65%	72%	49%	81%	70%	67.4%	=IFS(G6<50%,"E",G6<60%,"D"
Rita	42%	55%	37%	43%	51%	45.6%	
Ronald	88%	93%	99%	86%	95%	92.2%	
Rhonda	81%	76%	82%	80%	83%	80.4%	
Raymond	55%	60%	54%	59%	65%	58.6%	
Raylene	75%	71%	66%	72%	69%	70.6%	

3 Enter a **COMMA** to separate the conditions and enter the third logical test:  
G6<70%,"C"

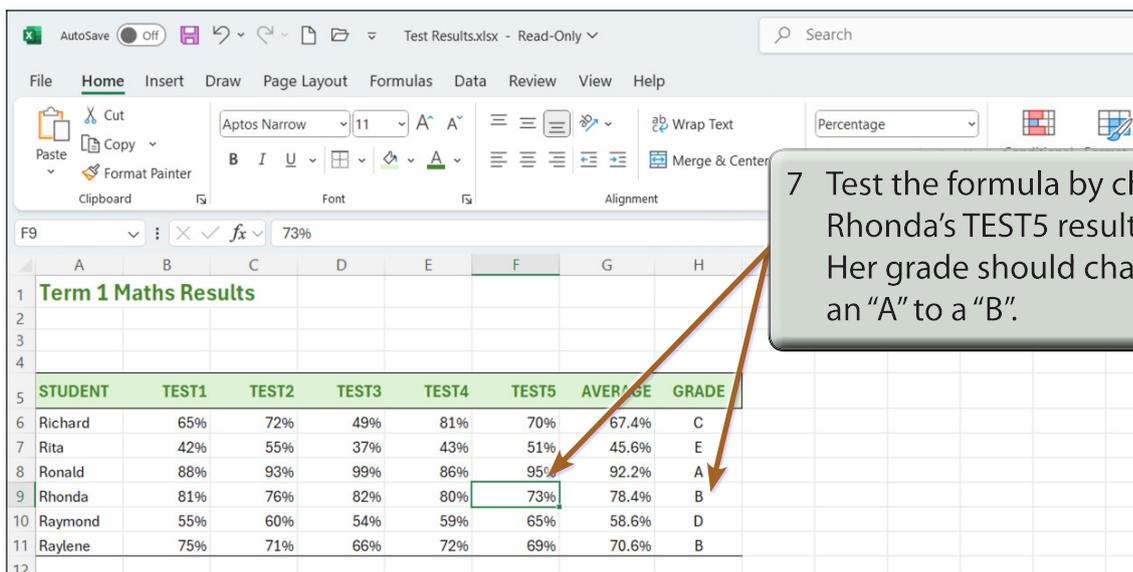
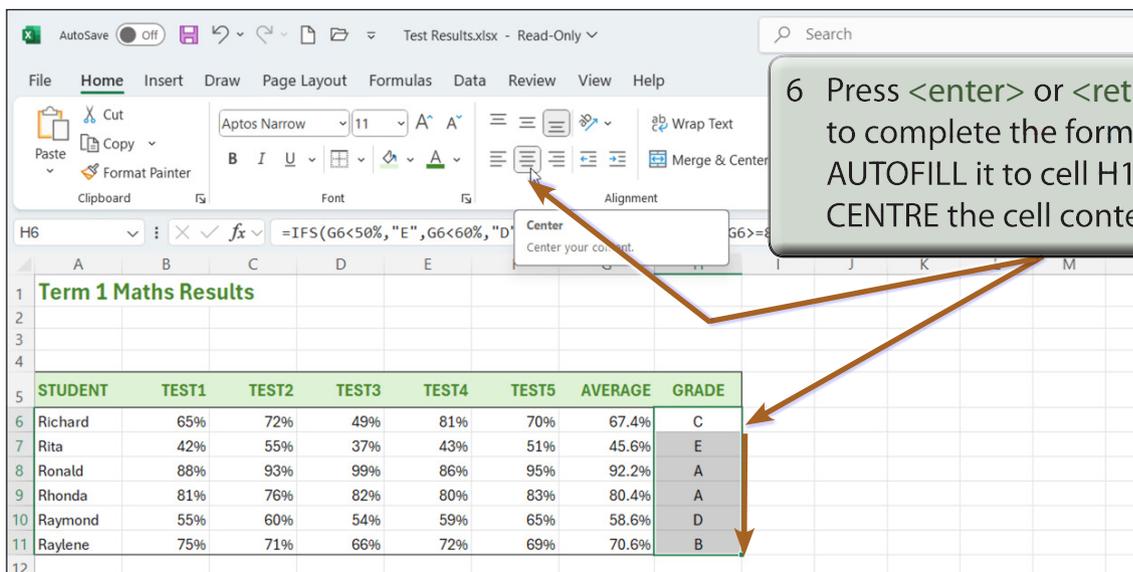
STUDENT	TEST1	TEST2	TEST3	TEST4	TEST5	AVERAGE	GRADE
Richard	65%	72%	49%	81%	70%	67.4%	
Rita	42%	55%	37%	43%	51%	45.6%	
Ronald	88%	93%	99%	86%	95%	92.2%	
Rhonda	81%	76%	82%	80%	83%	80.4%	

4 Enter a **COMMA** to separate the conditions and enter the fourth logical test:  
G6<80%,"B"

STUDENT	TEST1	TEST2	TEST3	TEST4	TEST5	AVERAGE	GRADE
Richard	65%	72%	49%	81%	70%	67.4%	
Rita	42%	55%	37%	43%	51%	45.6%	
Ronald	88%	93%	99%	86%	95%	92.2%	
Rhonda	81%	76%	82%	80%	83%	80.4%	

5 For the last condition all marks 80% and over are needed. Enter a **COMMA** to separate the conditions and enter the final logical test:  
G6>=80%,"A")

STUDENT	TEST1	TEST2	TEST3	TEST4	TEST5	AVERAGE	GRADE
Richard	65%	72%	49%	81%	70%	67.4%	C
Rita	42%	55%	37%	43%	51%	45.6%	
Ronald	88%	93%	99%	86%	95%	92.2%	
Rhonda	81%	76%	82%	80%	83%	80.4%	



**NOTE:** The IFS function works through each condition (logical test) in order. If the first condition is TRUE, its value is displayed and the function stops. If the first condition is NOT TRUE, the next condition is tested and so on until a TRUE condition is found.