

# What is the purpose and syntax of the IF function in Google Sheets?

Authored by  
**stats writer**

June 30, 2024

## RECOMMENDED CITATION

stats writer (2024). *What is the purpose and syntax of the IF function in Google Sheets?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=160391>

The IF function in Google Sheets is used to perform logical comparisons and return a specific value based on the result of the comparison. Its purpose is to allow users to create conditional statements that can be used to control the outcome of a cell or formula. The syntax of the IF function follows the format: =IF(logical\_test, , ). The logical\_test is the condition that is evaluated, and the value\_if\_true and value\_if\_false are the values to be returned based on the result of the logical test. This function allows for the creation of more dynamic and customized spreadsheets in Google Sheets.

## Google Sheets IF Function

### IF Function

The **IF** function is a premade function in Google Sheets, which returns values based on a **true** or **false** condition.

It is typed =IF and has 3 parts:

=IF(logical\_expression, value\_if\_true, value\_if\_false)

The **condition** is referred to as logical\_expression, which can check things like:

If a number is **greater than** another number > If a number is **smaller than** another number < If a number or text is **equal** to something =

**Note:** You can decide both the return values and the condition.

### Example IF function (equal to)

Check if the Pokemon type is grass:

The condition is if the "Type 1" value for the Pokemon is "Grass".

The function returns "Yes" or "No".

	A	B	C	D	E
1	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>Grass Type</b>	
2	Bulbasaur	Grass	318		
3	Ivysaur	Grass	405		
4	Venusaur	Grass	525		
5	Charmander	Fire	309		
6	Charmeleon	Fire	405		
7	Charizard	Fire	534		
8	Squirtle	Water	314		
9	Wartortle	Water	405		
10	Blastoise	Water	530		
11					

Example **IF** function, step by step:

Select the cell **D2**Type **=IF**Click the **IF** command

	A	B	C	D	E	F	G
1	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>Grass Type</b>			
2	Bulbasaur	Grass	318	=IF			
3	Ivysaur	Grass	405	IF			
4	Venusaur	Grass	525	Returns value depending on logical expression.			
5	Charmander	Fire	309	IFS			
6	Charmeleon	Fire	405	IFNA			
7	Charizard	Fire	534	SUMIF			
8	Squirtle	Water	314	MAXIFS			
9	Wartortle	Water	405	MINIFS			
10	Blastoise	Water	530	SUMIFS			
11				COUNTIF			
12				DATEDIF			
13				IFERROR			
14							

Specify the condition **B2="Grass"**Type **,**Specify the value **"Yes"** for when the condition is **TRUE**Type **,**Specify the value **"No"** for when the condition is **FALSE**Hit enter

	A	B	C	D	E	F	G
1	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>Type</b>			
2	Bulbasaur	Grass	318	=IF(B2="Grass", "Yes", "No")			
3	Ivysaur	Grass	405				
4	Venusaur	Grass	525				
5	Charmander	Fire	309				
6	Charmeleon	Fire	405				
7	Charizard	Fire	534				
8	Squirtle	Water	314				
9	Wartortle	Water	405				
10	Blastoise	Water	530				
11							
12							
13							
14							
15							
16							
17							
18							
19							

IF(logical\_expression, value\_if\_true, value\_if\_false)

**EXAMPLE**  
 IF(A2 = "foo", "A2 is foo", "A2 is not foo")

**ABOUT**  
 Returns one value if a logical expression is TRUE and another if it is FALSE.

---

**logical\_expression**  
 An expression or reference to a cell containing an expression that represents some logical value, i.e. TRUE or FALSE.

**value\_if\_true**  
 The value the function returns if logical\_expression is TRUE.

**value\_if\_false**  
 The value the function returns if logical\_expression is FALSE.

[Learn more](#)

Since the value in cell B2 is "Grass", the condition is **true** and the function will return "Yes".

**Note:** Text values needs to be in quotes: " "

The function can be repeated with the filling function for each row to perform the same check for each Pokemon:

	A	B	C	D	E
1	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>Grass Type</b>	
2	Bulbasaur	Grass	318	=IF(B2="Grass", "Yes", "No")	
3	Ivysaur	Grass	405	=IF(B3="Grass", "Yes", "No")	
4	Venusaur	Grass	525	=IF(B4="Grass", "Yes", "No")	
5	Charmander	Fire	309	=IF(B5="Grass", "Yes", "No")	
6	Charmeleon	Fire	405	=IF(B6="Grass", "Yes", "No")	
7	Charizard	Fire	534	=IF(B7="Grass", "Yes", "No")	
8	Squirtle	Water	314	=IF(B8="Grass", "Yes", "No")	
9	Wartortle	Water	405	=IF(B9="Grass", "Yes", "No")	
10	Blastoise	Water	530	=IF(B10="Grass", "Yes", "No")	
11					

Now, each row has a check for Grass Type:

	A	B	C	D	E
1	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>Grass Type</b>	
2	Bulbasaur	Grass	318	Yes	
3	Ivysaur	Grass	405	Yes	
4	Venusaur	Grass	525	Yes	
5	Charmander	Fire	309	No	
6	Charmeleon	Fire	405	No	
7	Charizard	Fire	534	No	
8	Squirtle	Water	314	No	
9	Wartortle	Water	405	No	
10	Blastoise	Water	530	No	
11					

### Example IF Function (greater than)

Check if the Pokemon's total stats is **greater than** 500:

The function returns "Yes" or "No".

	A	B	C	D	E
1	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>More than 500 Total Stats</b>	
2	Bulbasaur	Grass	318		
3	Ivysaur	Grass	405		
4	Venusaur	Grass	525		
5	Charmander	Fire	309		
6	Charmeleon	Fire	405		
7	Charizard	Fire	534		
8	Squirtle	Water	314		
9	Wartortle	Water	405		
10	Blastoise	Water	530		
11					

Example **IF** function, step by step:

Select the cell **D2**Type =**IF**Click the **IF** command

	A	B	C	D	E	F
1	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>More than 500 Total Stats</b>		
2	Bulbasaur	Grass	318	=IF		
3	Ivysaur	Grass	405	IF		
4	Venusaur	Grass	525	Returns value depending on logical expression.		
5	Charmander	Fire	309	IFS		
6	Charmeleon	Fire	405	IFNA		
7	Charizard	Fire	534	SUMIF		
8	Squirtle	Water	314	MAXIFS		
9	Wartortle	Water	405	MINIFS		
10	Blastoise	Water	530	SUMIFS		
11				COUNTIF		
12				DATEDIF		
13				IFERROR		
14						

Specify the condition **C2>500**Type , Specify the value "Yes" for when the condition is **TRUE**Type  
 , Specify the value "No" for when the condition is **FALSE**Hit enter

	A	B	C	D	E	F
1	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>More than 500 Total Stats</b>		
2	Bulbasaur	Grass	318	=IF(C2>500; "Yes", "No")		
3	Ivysaur	Grass	405			
4	Venusaur	Grass	525			
5	Charmander	Fire	309			
6	Charmeleon	Fire	405			
7	Charizard	Fire	534			
8	Squirtle	Water	314			
9	Wartortle	Water	405			
10	Blastoise	Water	530			
11						
12						
13						
14						
15						
16						
17						
18						
19						

No x

IF(logical\_expression, value\_if\_true, value\_if\_false)

EXAMPLE

IF(A2 = "foo", "A2 is foo", "A2 is not foo")

ABOUT

Returns one value if a logical expression is TRUE and another if it is FALSE.

---

**logical\_expression**  
An expression or reference to a cell containing an expression that represents some logical value, i.e. TRUE or FALSE.

**value\_if\_true**  
The value the function returns if logical\_expression is TRUE.

**value\_if\_false**  
The value the function returns if logical\_expression is FALSE.

[Learn more](#)

Since the value in cell c2 is 318, the condition is **false** and the function will return "No".

The function can be repeated with the filling function for each row to perform the same check for each Pokemon:

	A	B	C	D	E
1	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>More than 500 Total Stats</b>	
2	Bulbasaur	Grass	318	=IF(C2>500, "Yes", "No")	
3	Ivysaur	Grass	405	=IF(C3>500, "Yes", "No")	
4	Venusaur	Grass	525	=IF(C4>500, "Yes", "No")	
5	Charmander	Fire	309	=IF(C5>500, "Yes", "No")	
6	Charmeleon	Fire	405	=IF(C6>500, "Yes", "No")	
7	Charizard	Fire	534	=IF(C7>500, "Yes", "No")	
8	Squirtle	Water	314	=IF(C8>500, "Yes", "No")	
9	Wartortle	Water	405	=IF(C9>500, "Yes", "No")	
10	Blastoise	Water	530	=IF(C10>500, "Yes", "No")	
11					

Now, each row has a check for having more than 500 total stats:

	A	B	C	D	E
1	<b>Name</b>	<b>Type 1</b>	<b>Total</b>	<b>More than 500 Total Stats</b>	
2	Bulbasaur	Grass	318	No	
3	Ivysaur	Grass	405	No	
4	Venusaur	Grass	525	Yes	
5	Charmander	Fire	309	No	
6	Charmeleon	Fire	405	No	
7	Charizard	Fire	534	Yes	
8	Squirtle	Water	314	No	
9	Wartortle	Water	405	No	
10	Blastoise	Water	530	Yes	
11					

★+1 W3schools PathfinderTrack your progress - it's free!

Log in

Sign Up