



## All the Excel table lookup functions in action

**Note:** This is a PDF download of an example from a [blog post](#) titled: **The Excel Table Lookup Function Guide: XLOOKUP vs VLOOKUP vs INDEX & MATCH vs SUMIF(S) vs COUNTIF(S)**. See the blog post for context and a discussion of how to use XLOOKUP or INDEX & MATCH for table lookup.

Let's look at a bigger example to see all the functions in action. Here is an expanded premier league table:

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3												
4		<b>Position</b>	<b>Club</b>	<b>Games played</b>	<b>Won</b>	<b>Drawn</b>	<b>Lost</b>	<b>Goals for</b>	<b>Goals against</b>	<b>Goal difference</b>	<b>League points</b>	<i>(For VLOOKUP)</i>
5		1	Manchester City	9	7	2	0	26	3	23	<b>23</b>	Manchester City
6		2	Liverpool	9	7	2	0	16	3	13	<b>23</b>	Liverpool
7		3	Chelsea	9	6	3	0	20	7	13	<b>21</b>	Chelsea
8		4	Arsenal	9	7	0	2	22	11	11	<b>21</b>	Arsenal
9		5	Tottenham Hotspur	9	7	0	2	16	7	9	<b>21</b>	Tottenham Hotspur
10		6	AFC Bournemouth	9	5	2	2	16	12	4	<b>17</b>	AFC Bournemouth
11		7	Watford	9	5	1	3	13	12	1	<b>16</b>	Watford
12		8	Everton	9	4	3	2	15	12	3	<b>15</b>	Everton
13		9	Wolverhampton	9	4	3	2	9	8	1	<b>15</b>	Wolverhampton
14		10	Manchester United	9	4	2	3	15	16	-1	<b>14</b>	Manchester United



Here is a **set of questions with answers** produced using the various functions. The best function for each question is indicated by a **bold**-formatted answer.

Question	Type of info retrieval?	XLOOKUP	VLOOKUP	SUMIF	SUMIFS	INDEX-MATCH	COUNTIF	COUNTIFS	SUMPRODUCT
Which team had the highest goal difference?	Lookup	<b>Manchester City</b>	Manchester City	Can't do	Can't do	<b>Manchester City</b>	Can't do	Can't do	Can't do
How many league points did this team have?	Lookup	<b>23</b>	23	23	23	<b>23</b>	Can't do	Can't do	23
How many goals scored in total by teams that won at least 6 matches?	Add up	Can't do in 1 formula	Can't do in 1 formula	<b>100</b>	100	Can't do in 1 formula	Can't do	Can't do	100
Which team won the league?	Lookup	<b>Manchester City</b>	Manchester City	Can't do	Can't do	<b>Manchester City</b>	Can't do	Can't do	Can't do
How many teams drew two matches?	Count	Can't do in 1 formula	Can't do in 1 formula	4	4	Can't do in 1 formula	<b>4</b>	4	4
How many teams won 7 matches <i>and</i> lost no matches?	Count	Can't do in 1 formula	Can't do in 1 formula	Can't do in 1 formula	2	Can't do in 1 formula	Can't do in 1 formula	<b>2</b>	2



And here is the **set of formulas** used to generate those answers:

Question	Type of info retrieval?	XLOOKUP	VLOOKUP	SUMIF	SUMIFS	INDEX-MATCH	COUNTIF	COUNTIFS	SUMPRODUCT
Which team had the highest goal difference?	Lookup	=XLOOKUP(MAX(J5:J14),J5:J14,C5:C14)	=VLOOKUP(MAX(J5:J14),J5:L14,3,FALSE)	Can't do	Can't do	=INDEX(C5:C14,MATCH(MAX(J5:J14),J5:J14,0))	Can't do	Can't do	Can't do
How many league points did this team have?	Lookup	=XLOOKUP(G19,C5:C14,K5:K14)	=VLOOKUP(G19,C5:K14,9,FALSE)	=SUMIF(C5:C14,G19,K5:K14)	=SUMIFS(K5:K14,C5:C14,G19)	=INDEX(K5:K14,MATCH(J19,C5:C14,0))	Can't do	Can't do	=SUMPRODUCT(--(C5:C14=G19),K5:K14)
How many goals scored in total by teams that won at least 6 matches?	Add up	Can't do in 1 formula	Can't do in 1 formula	=SUMIF(E5:E14,">5",H5:H14)	=SUMIFS(H5:H14,E5:E14,">5")	Can't do in 1 formula	Can't do	Can't do	=SUMPRODUCT(--(E5:E14>5),H5:H14)
Which team won the league?	Lookup	=XLOOKUP(MAX(K5:K14),K5:K14,C5:C14)	=VLOOKUP(MAX(K5:K14),K5:L14,2,FALSE)	Can't do	Can't do	=INDEX(C5:C14,MATCH(MAX(K5:K14),K5:K14,0))	Can't do	Can't do	Can't do
How many teams drew two matches?	Count	Can't do in 1 formula	Can't do in 1 formula	=SUMIF(F5:F14,--("2"))/2	=SUMIFS(F5:F14,F5:F14,--("2"))/2	Can't do in 1 formula	=COUNTIF(F5:F14,2)	=COUNTIFS(F5:F14,2)	=SUMPRODUCT(--(F5:F14=2))
How many teams won 7 matches and lost no matches?	Count	Can't do in 1 formula	Can't do in 1 formula	Can't do in 1 formula	=SUMIFS(E5:E14,E5:E14,"7",G5:G14,"0")/7	Can't do in 1 formula	Can't do in 1 formula	=COUNTIFS(E5:E14,7,G5:G14,0)	=SUMPRODUCT(--(E5:E14=7),--(G5:G14=0))

You will note that some functions require a bit of gymnastics to make them do something that they were not designed for.