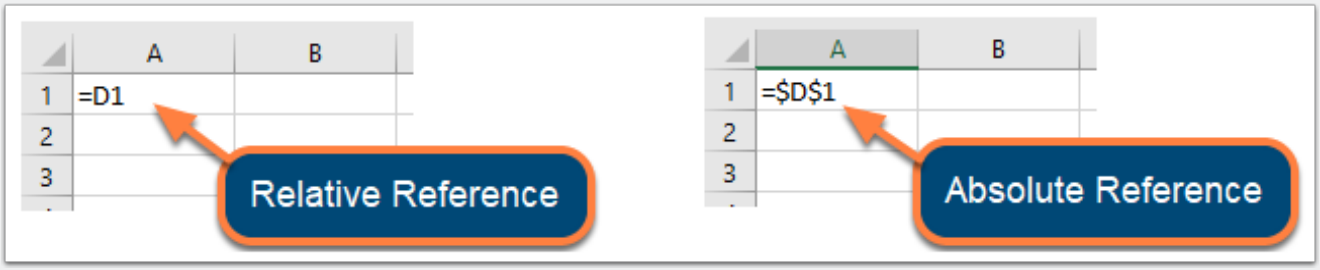
Absolute References

An Absolute cell reference is a cell address that contains a dollar sign ($) in the row or column coordinate, or both.

Relative v Absolute References



When you enter a cell reference in a formula, Excel assumes it is a Relative reference. When you want a formula to consistently refer to a particular cell, even if you copy or move the formula elsewhere on the worksheet, you need to use an Absolute cell reference.

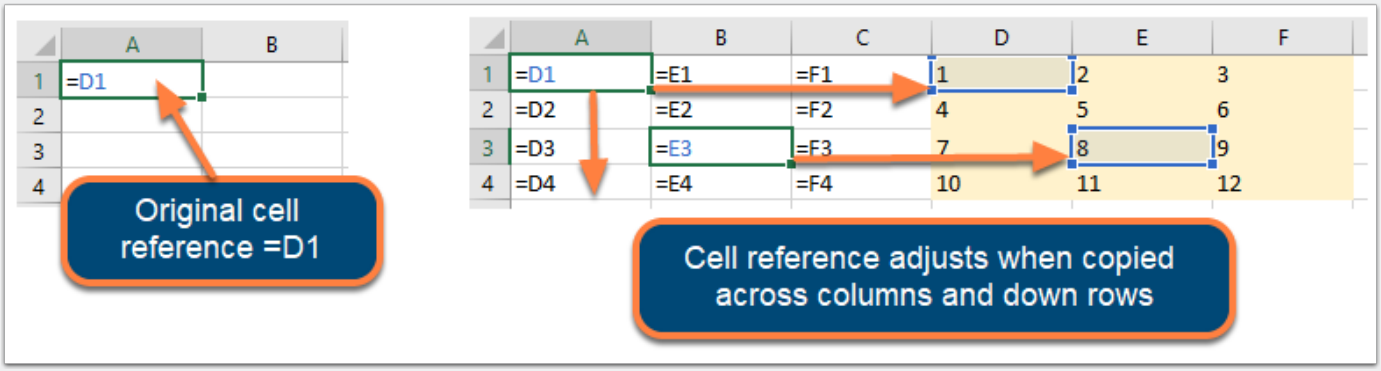
Relative Reference

By default, Excel cell references are Relative references. This means that a simple cell reference will be adjusted when copied to other cells. For example, in the spreadsheet below, cell A1 contains a reference to cell D1. The spreadsheet on the left shows the result of cell A1 being copied to cells A1-C4.

When copied across to columns B and C the reference adjusts to the right by one column (ie the reference =D1 adjusts to =E1 and =F1)

Absolute References

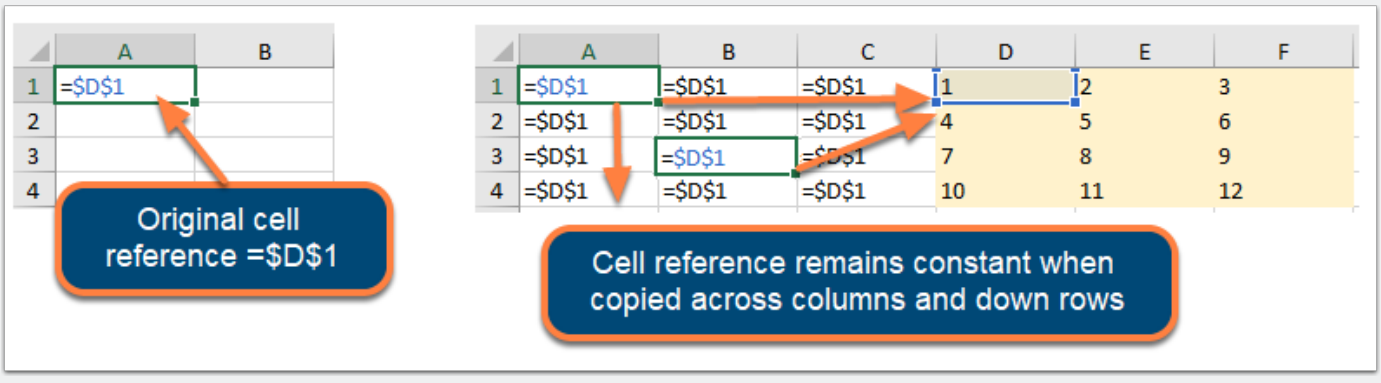
When copied down to rows 2, 3, and 4 the reference adjusts down by one row (ie the reference = D1 adjusts to =D2, =D3, =D4)



Absolute Reference

Unlike Relative references, Absolute references do not change when copied or filled to other cells in a worksheet. In order to keep a row and/or column constant, use an Absolute reference.

An Absolute reference is designated in a formula by the addition of a dollar sign ($).



Fixing the $ Sign

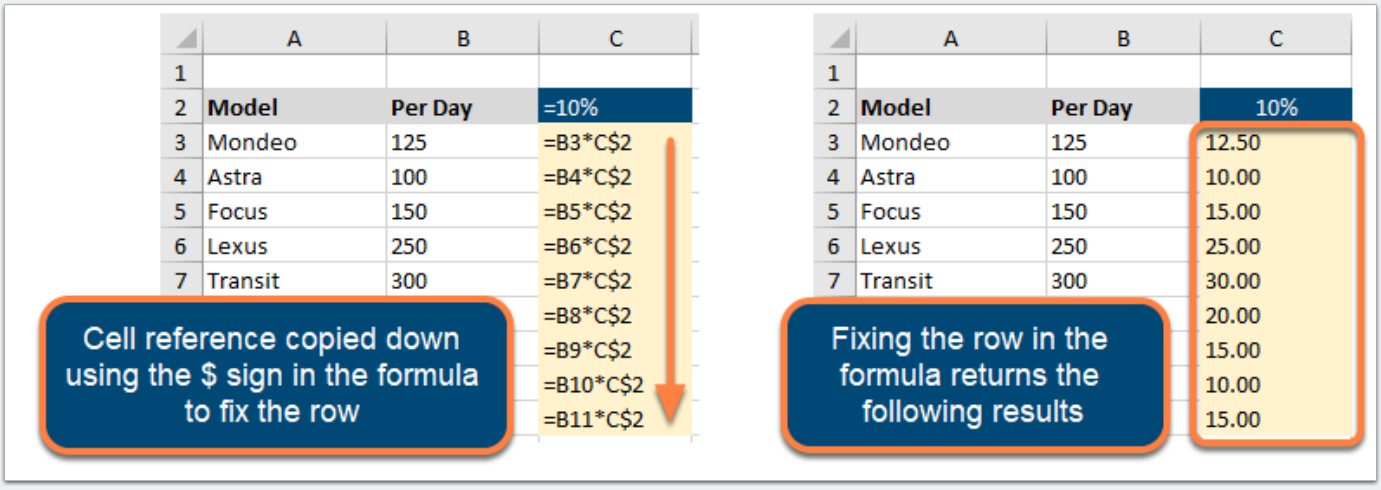
The dollar sign can precede the column reference, the row reference, or both.

D1	The column and the row do not change when copied
D$1	The row does not change when copied
$D1	The column does not change when copied

Using the formula =B3*C$2, the entries in colum B are to be multiplied by the entry in cell C2 (10%)

The following examples show the $ sign has fixed the reference to row 2, creating an Absolute reference.

When the formula is copied down, column C returns the correct results.



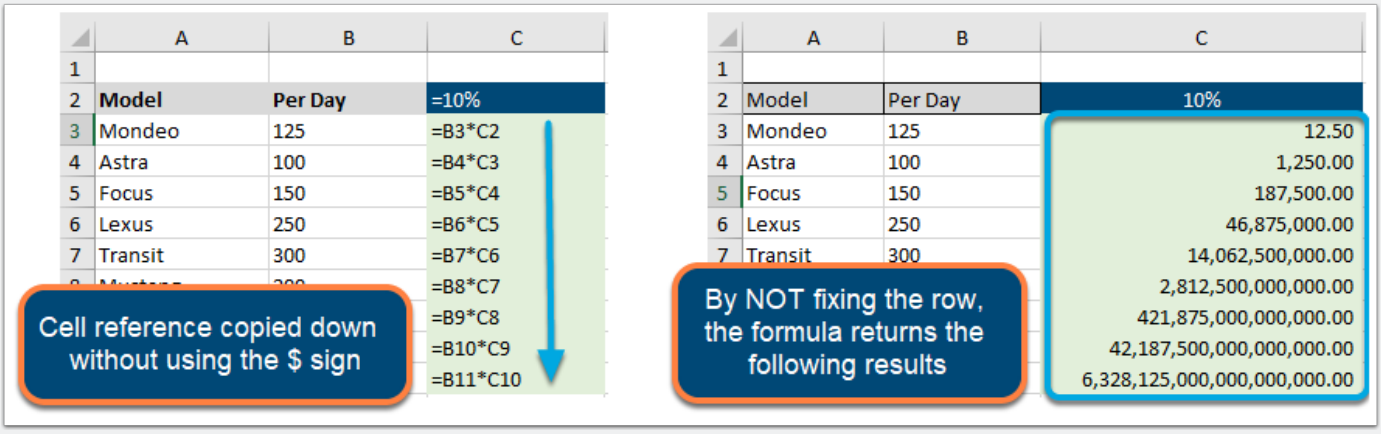
	A	B	C
1			
2	Model	Per Day	=10%
3	Mondeo	125	=B3*C$2
4	Astra	100	=B4*C$2
5	Focus	150	=B5*C$2
6	Lexus	250	=B6*C$2
7	Transit	300	=B7*C$2
			=B8*C$2
			=B9*C$2
			=B10*C$2
			=B11*C$2

	A	B	C
1			
2	Model	Per Day	10%
3	Mondeo	125	12.50
4	Astra	100	10.00
5	Focus	150	15.00
6	Lexus	250	25.00
7	Transit	300	30.00
			20.00
			15.00
			10.00
			15.00

Absolute References

Had the $ sign not been used to fix the row, the cell reference would have remained Relative and automatically adjusted on each row.

As you will see in the following example, using the Relative reference returns a very different set of results!



	A	B	C
1			
2	**Model**	**Per Day**	**=10%**
3	Mondeo	125	=B3*C2
4	Astra	100	=B4*C3
5	Focus	150	=B5*C4
6	Lexus	250	=B6*C5
7	Transit	300	=B7*C6
			=B8*C7
			=B9*C8
			=B10*C9
			=B11*C10

	A	B	C
1			
2	Model	Per Day	10%
3	Mondeo	125	12.50
4	Astra	100	1,250.00
5	Focus	150	187,500.00
6	Lexus	250	46,875,000.00
7	Transit	300	14,062,500,000.00
			2,812,500,000,000.00
			421,875,000,000,000.00
			42,187,500,000,000,000.00
			6,328,125,000,000,000,000.00

Changing the Cell Reference

Once you have entered a reference in to a cell you can easily switch it from Relative to Absolute, from Absolute to Relative, or a mixture of the two. For example, if you enter A1 to start a formula, press F4 to to display A1. Press F4 again to display A$1, and again to display A1.

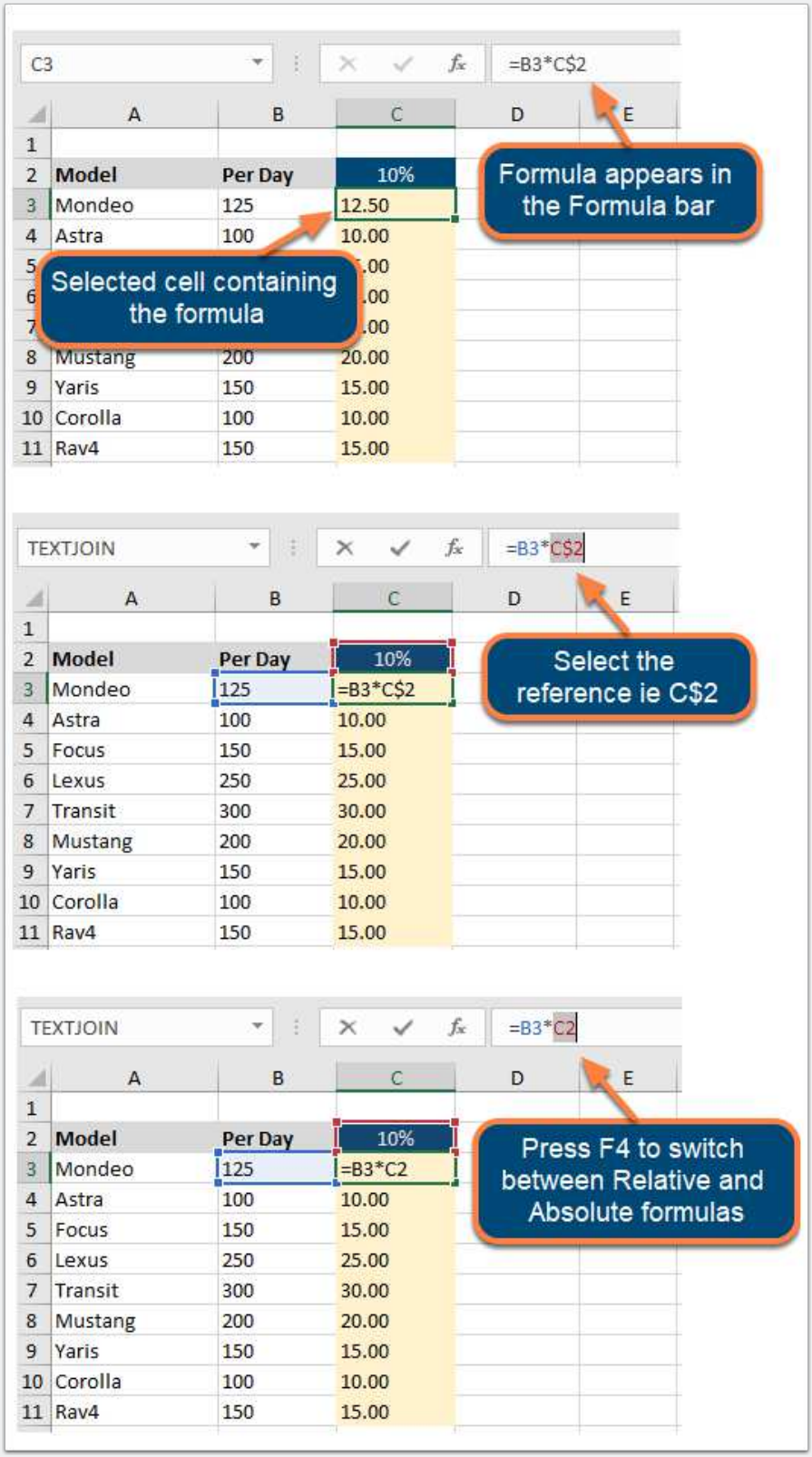
To change the type of cell reference:

Select the cell that contains the Relative or Absolute formula

In the formula bar, select either the whole reference, or the part of the reference that you want to change (ie B3*C$2)

Press F4 to scroll through all the reference types

Absolute References



	A	B	C	D	E
1					
2	**Model**	**Per Day**	10%		
3	Mondeo	125	12.50		
4	Astra	100	10.00		
5	Focus	150	15.00		
6	Lexus	250	25.00		
7	Transit	300	30.00		
8	Mustang	200	20.00		
9	Yaris	150	15.00		
10	Corolla	100	10.00		
11	Rav4	150	15.00		

	A	B	C	D	E
1					
2	**Model**	**Per Day**	10%		
3	Mondeo	125	=B3*C$2		
4	Astra	100	10.00		
5	Focus	150	15.00		
6	Lexus	250	25.00		
7	Transit	300	30.00		
8	Mustang	200	20.00		
9	Yaris	150	15.00		
10	Corolla	100	10.00		
11	Rav4	150	15.00		

	A	B	C	D	E
1					
2	**Model**	**Per Day**	10%		
3	Mondeo	125	=B3*C2		
4	Astra	100	10.00		
5	Focus	150	15.00		
6	Lexus	250	25.00		
7	Transit	300	30.00		
8	Mustang	200	20.00		
9	Yaris	150	15.00		
10	Corolla	100	10.00		
11	Rav4	150	15.00		