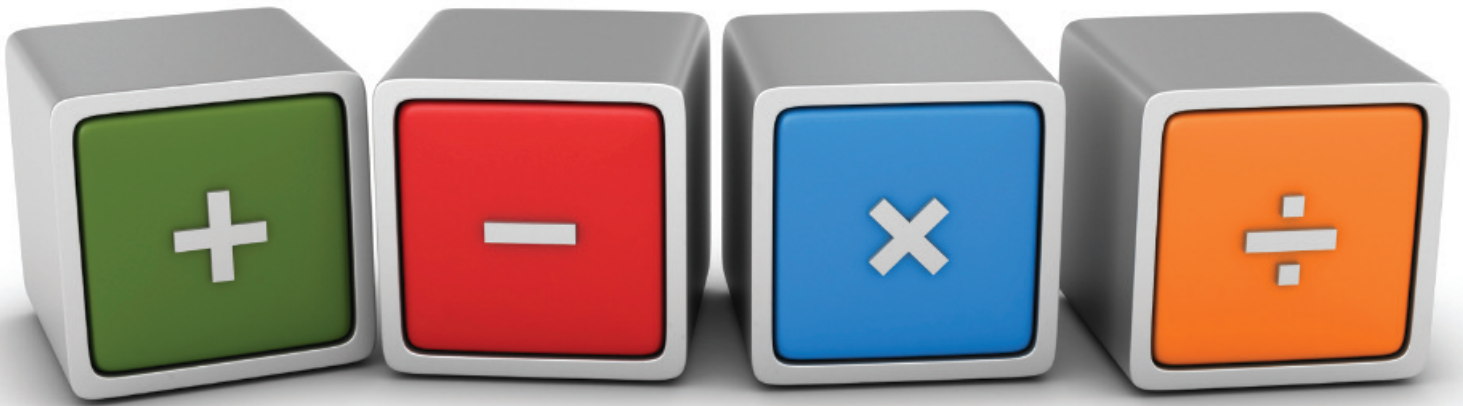
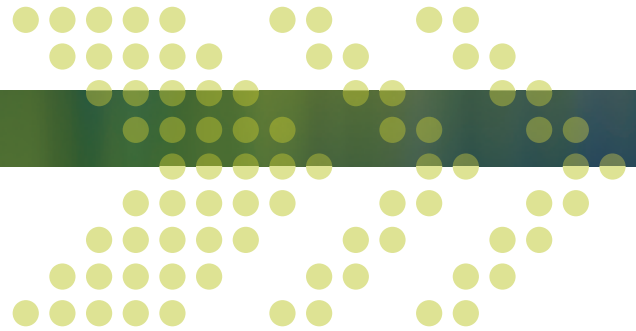


AN INTRODUCTION TO

# SPREADSHEET BASICS



SMALL BUSINESS INFORMATION SERIES



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Do you still use a manual accounting system?

Do you get frustrated at the time lost checking your calculations and looking for where you made a mistake?

That's where spreadsheet software comes in handy.

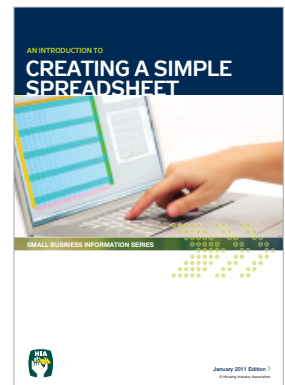
Once you've learned a couple of tricks, it can save you time (and perhaps even lower your blood pressure).

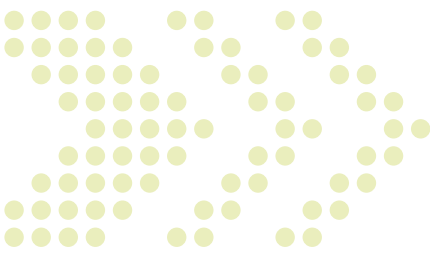
**In this guide, we will show you, using Microsoft Excel 2010, how to:**

- create simple formulae; and
- “freeze” parts of the spreadsheet (to make it easier to navigate).



If you haven't already done so, we recommend you read “*An Introduction to Creating a Simple Spreadsheet* (January 2011)”, especially as the completed exercise from that guide will be used in this one.





# 1 Creating simple formulae

In this part we will show you:

- > which keys to use for your mathematical operators;
- > how to enter a formula;
- > how Excel 2010 assumes you want the formula to be calculated; and
- > how to enter the formula so it calculates the way you want it to.

## Which keys to use

This guide will only refer to those mathematical operators that represent:

- > adding;
- > subtracting;
- > multiplying; and
- > dividing.

**Each of these signs can be found on your keyboard.**

They are as follows:

Mathematical operators	On your keyboard	Description
Addition	+	The “plus” sign.
Subtraction	-	The “minus” sign.
Multiplication	*	The asterisk (which is used for the “times” sign).
Division	/	The “forward slash” (which is used instead of the ÷ sign).

## How to enter a simple formula

We’ve already seen how to add a column or row of figures by clicking on the cell that contains the first number and dragging it to the cell with the last number and then clicking onto the AutoSum sign (“ $\Sigma$ ”) which is situated at the top right hand corner of the “Home” tab.

**But what if you want to do something a little bit more complicated?**

## How to enter a simple formula

Figure 1 is the spreadsheet taken from the worked example in “An Introduction to Creating a Simple Spreadsheet (January 2011)”, which we will be referring to in the examples that are used in this guide.

**FIGURE 1**

	A	B	C	D	E	F	G	H	I	J	K	L
1	Date	Ref #	Paid to	For	Amount Paid	GST Paid	Bank Fees	Drawings	Equip't Hire	MV Exp.	Super	
2	7	151	Cash	Wages	\$600.00	\$0.00		\$600.00				
3	7	152	Moell	Petrol (ABC 123)	308.00	28.00				\$280.00		
4	14	153	Cash	Wages	600.00	0.00		600.00				
5	14	154	Bob's Bobcat Hire	Bobcat Hire - Smith	1,100.00	100.00			\$1,000.00			
6	21	155	Cash	Wages	600.00	0.00		600.00				
7	21	156	Mike the Mechanic	Service of Vehicle (ABC 123)	440.00	40.00				400.00		
8	28	157	Cash	Wages	600.00	0.00		600.00				
9	28	158	Bob's Bobcat Hire	Bobcat Hire - Jones	1,100.00	100.00			1,000.00			
10	28	159	My Super	Superannuation for May 2010	218.00	0.00					\$216.00	
11	31	FEE	NAB	Bank Fees	10.00	0.00	\$10.00					
12					\$5,674.00	\$268.00	\$10.00	\$2,400.00	\$2,000.00	\$600.00	\$216.00	
13												
14												
15												
16												

As you would with entering figures or text, you have two choices for entering a formula, either in:

- > **the cell;** or
- > **the formula bar.**

In each example, we will show you how to do the calculation using both of these methods.

### Example #1 – calculating the GST

Let's say we want to calculate the GST component of the total price paid for petrol on 7 May.

#### Using “the cell method”

We need to start from scratch, so you'll need to delete the amount of \$28.00 from the GST column in cell F3.

- > **Step 1** – place your cursor over the cell where you want your calculated amount to appear (in this case, F3) and left-click your mouse. That cell should now be outlined in black.
- > **Step 2** – With your cursor still in the cell and using your keyboard, type “=” (without the inverted commas). This tells Excel that you're about to enter a formula.

## How to enter a simple formula

- > **Step 3** – using your arrow keys, move over to the cell that contains the GST-inclusive amount of \$308.00 (E3). As you move across, you will see each cell is highlighted by a coloured dotted line for the border.
- > **Step 4** – using your keyboard, type the “/” sign (without the inverted commas). You’ll notice that the cell containing the amount of \$308.00 is now outlined in a colour.
- > **Step 5** – Now type in the number 11. Because you only want to perform a simple division and there are no more operators or numbers to be included in the formula, you simply press the “Enter” key.

**You will see that the amount of \$28.00 is now showing in cell F3.**

### Using “the formula method”

When you point your mouse at the amount of \$28.00 (in F3) and left-click your mouse, you will see that the following text appears in formula bar:

**=E3/11**

You’ve probably guessed how to use the formula method, but we’ll go through it anyway. Remember, we need to start from scratch, so you’ll need to delete the amount of \$28.00 again (from cell F3).

- > **Step 1** – place your cursor over the cell where you want your calculated amount to appear (in this case, F3) and left-click your mouse. That cell should now be outlined in black.
- > **Step 2** – point your mouse to the formula bar. Your cursor should change from an arrow (“↑”) to a symbol that looks like a capital i (“I”). Left-click your mouse and you’ll see that your cursor is now in the formula bar.
- > **Step 3** – type in the following formula.

**=E3/11**

**You will see that \$28.00 is now showing in cell J3.**

## How to enter a simple formula



Instead of having to re-enter this formula in each cell of the GST column, you can copy the formula all the way down the GST column.

You can do this by:

- > **Step 1** – clicking on the cell (F3) - You'll see that the cell is outlined in a thick black line with a small black box in the bottom right hand corner; and
- > **Step 2** – placing your cursor over this small black box (the cursor should now appear as a black cross instead of a white cross), left-click your mouse and drag down the column.

**You'll see that every time you enter an amount in the GST-inclusive column, the GST component will automatically appear in each of those cells that you have copied the formula in.**

### Example #2 – Subtraction

Now we know what the GST is, we will want to calculate the GST-exclusive amount of \$280.00 that is shown in the MV Expenses column (in cell J3).

We need to start from scratch, so you'll need to place your cursor in cell J3 and delete the \$280.00.

### Using "the cell method"

- > **Step 1** – is the same as for example #1.
- > **Step 2** – using your arrow keys, move over to the cell that contains the GST-inclusive amount of \$308.00 (E3).
- > **Step 3** – using your keyboard, type the "-" sign (without the inverted commas).
- > **Step 4** – Again, using your arrow keys, move over to the cell with \$28.00 in it (F3) and press the "Enter" key.

## How to enter a simple formula



You will see that the amount of \$280.00 is now showing in cell J3.

You may have also noticed that the following text appears in formula bar:

**=E3-F3**

This is the formula that you need to enter into the formula bar, in case you prefer this method.

When entering a formula, it is important that you don't have any spaces, otherwise it won't work.

## How Excel assumes you want the formula to be calculated

Excel doesn't simply read the formula from left to right. Instead it assumes that some mathematical operators are more important than others and therefore, should be calculated first.

Excel will always calculate a formula in the following order:

- > 1st – division (/).
- > 2nd – multiplication (\*).
- > 3rd – addition (+).
- > 4th – subtraction (-).

Let's take this formula as an example.

**50 – 25/5**

Excel's answer will be "45".

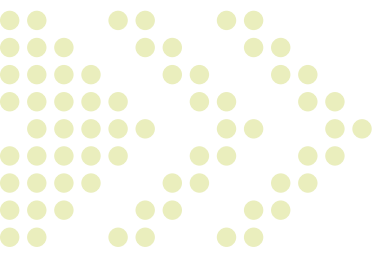
## How to enter the formula so it calculates the way you want it to

You can re-arrange Excel's order of priority by using brackets, because no matter what the operators are inside the brackets, Excel will always calculate within the brackets first.

If you enter the formula as

**(50 – 25)/5**

Excel's answer will now be "5".



# 2

## Freezing parts of a spreadsheet

It's not hard for a spreadsheet to become bigger than your screen and it can get confusing scrolling backwards and forwards (or up and down) to make sure you're in the right spot.

**“Freezing” the panes**

The way to get around a large spreadsheet easily is to “freeze” the panes.

So, with the spreadsheet in Figure 1, let's say you want to freeze the panes so all the columns up to and including the GST columns remain on your screen, all you have to do is:

> **Step 1** – click on the “View” tab

FIGURE 2

	A	B	C	D	E	F	G	
1	Date	Ref #	Paid to	For	Amount Paid	GST Paid	Bank Fees	
2	7	151	Cash	Wages	\$600.00	\$0.00		
3	7	152	Mobil	Petrol (ABC 123)	308.00	28.00		
4	14	153	Cash	Wages	600.00	0.00		
5	14	154	Bob's Bobcat Hire	Bobcat Hire - Smith	1,100.00	100.00		
6	21	155	Cash	Wages	600.00	0.00		
7	21	156	Mike the Mechanic	Service of Vehicle (ABC 123)	440.00	40.00		
8	28	157	Cash	Wages	600.00	0.00		
9	28	158	Bob's Bobcat Hire	Bobcat Hire - Jones	1,100.00	100.00		
10	28	159	My Super	Superannuation for May 2010	216.00	0.00		
11	31	FEE	NAB	Bank Fees	10.00	0.00	\$10.00	
12					\$5,574.00	\$268.00	\$10.00	\$
13								

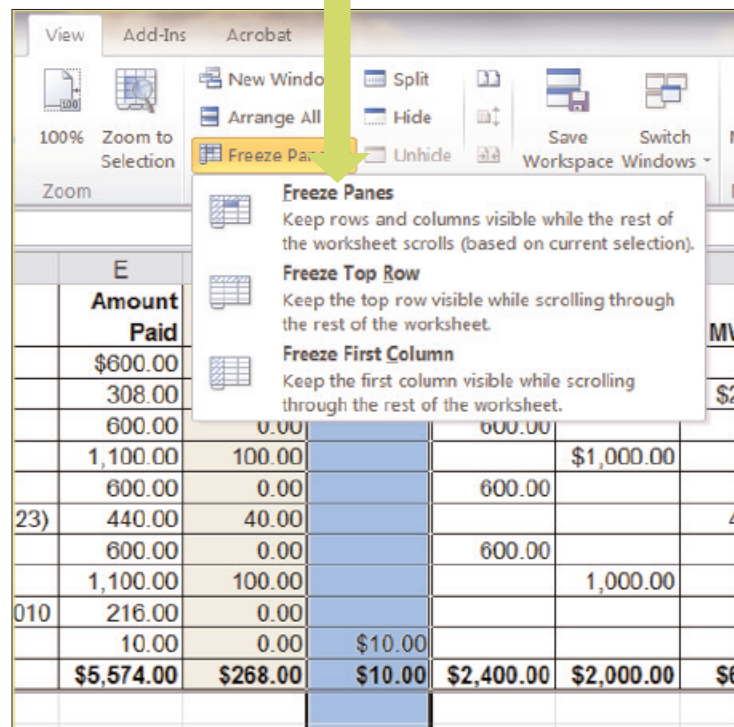
> **Step 2** – place your cursor on the letter “G” of column G, left-click your mouse, and all of column G will be highlighted.

> **Step 3** – move your cursor up to click on “Freeze panes” option (directly above column F) and you’ll get the drop-down menu as shown on the next page.

## “Freezing” the panes

- > **Step 4** – for our purposes you need to click on the (1st) “Freeze Panes” option.

FIGURE 3



Once you’ve frozen the panes, try scrolling across to column K. You will notice that it looks as though columns G to J “disappear” behind column G. (as shown below).

FIGURE 4

	A	B	C	D	E	F	K	L
1	Date	Ref #	Paid to	For	Amount Paid	GST Paid	Super	
2	7	151	Cash	Wages	\$600.00	\$0.00		
3	7	152	Mobil	Petrol (ABC 123)	308.00	28.00		
4	14	153	Cash	Wages	600.00	0.00		
5	14	154	Bob's Bobcat Hire	Bobcat Hire - Smith	1,100.00	100.00		
6	21	155	Cash	Wages	600.00	0.00		
7	21	156	Mike the Mechanic	Service of Vehicle (ABC 123)	440.00	40.00		
8	28	157	Cash	Wages	600.00	0.00		
9	28	158	Bob's Bobcat Hire	Bobcat Hire - Jones	1,100.00	100.00		
10	28	159	My Super	Superannuation for May 2010	216.00	0.00	\$216.00	
11	31	FEE	NAB	Bank Fees	10.00	0.00		
12					\$5,574.00	\$268.00	\$216.00	
13								
14								

## “Freezing” the panes

The other two options are:

- > freeze top row; and
- > freeze first column,

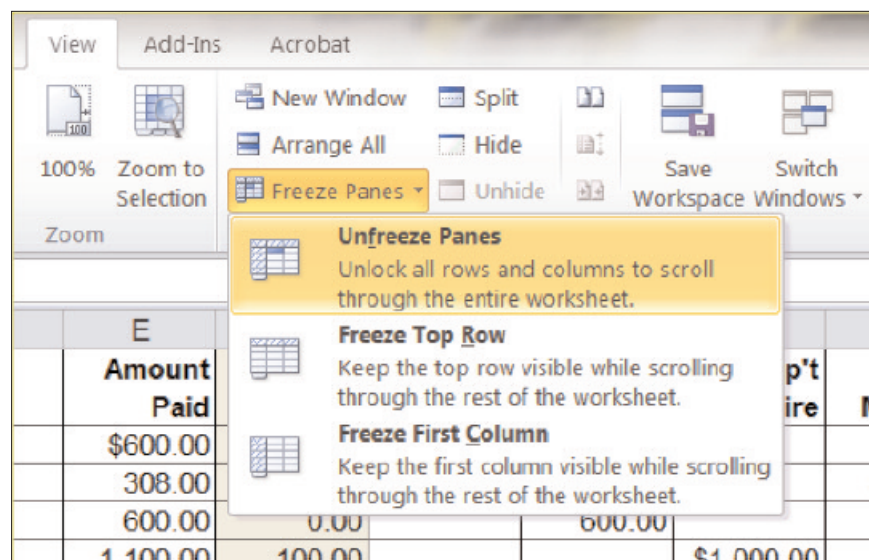
in case they are the only parts of the spreadsheet you want to freeze.

You would use the **first option** if your spreadsheet was a long document and you needed to keep track of the columns you’re entering data into.

The **second option** would be for when your spreadsheet is very wide, and you need to keep track of the rows you are entering data into.

To unfreeze the panes, you simply go back to the “Freeze Panes” section in the “View” tab and you’ll see that the drop down menu now gives you the “Unfreeze” option (see below).

FIGURE 5



Now you’re back to where we began in section 2.

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