USING EXCEL AS AN AUDIT TOOL

Sanjib Sanghi, FCA

ss@cpa2ca.com

S. Sanghi & Co.

85 Mansatala Lane Khidderpore Kolkata-700023

Important Excel Functions

EXACT()

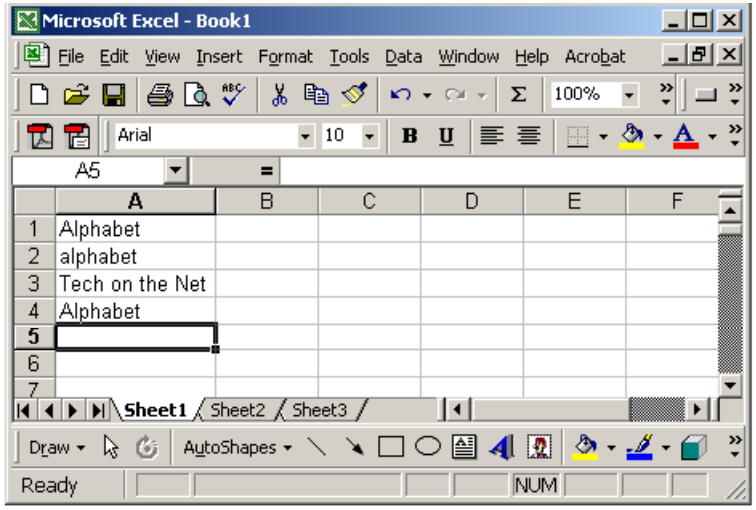
In Excel, the **Exact** function compares two strings and returns TRUE if both values are the same. Otherwise, it will return FALSE.

The syntax for the **Exact** function is:

Exact(text1, text2)

text1* and *text2 are the values to compare.

The **Exact** function is case-sensitive.



Based on the Excel spreadsheet above:

=Exact(A1, A2) would return FALSE

=Exact(A1, A4) would return TRUE

=Exact(A1, A3) would return FALSE

=Exact(A4, "Alphabet") would return TRUE

Important Excel Functions

In Excel, the **Proper** function sets the first character in each word to uppercase and the rest to lowercase.

The syntax for the **Proper** function is:

Proper(text)

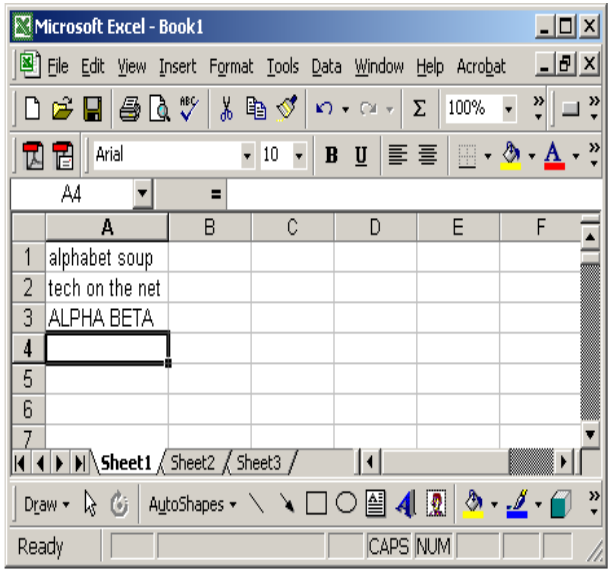
Based on the Excel spreadsheet above:

=Proper(A1) would return "Alphabet Soup"

=Proper(A2) would return "Tech On The Net"

=Proper(A3) would return "Alpha Beta"

=Proper ("excel") would return "Excel"



PROPER()

Important Excel Functions

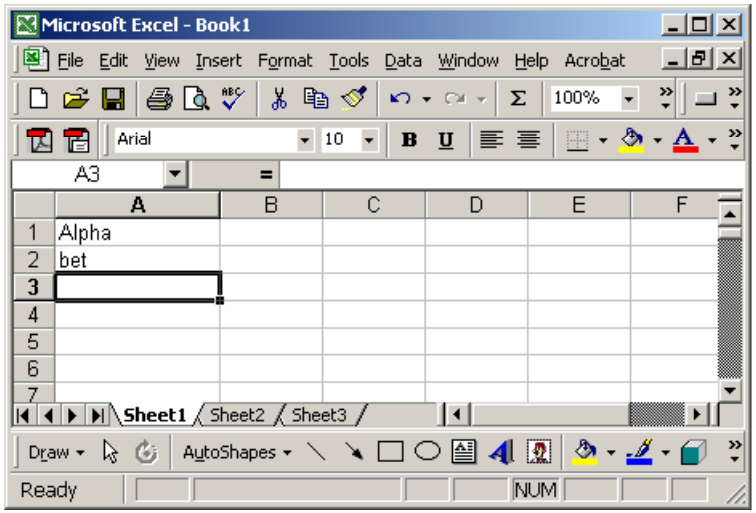
CONCATENATE()

In Excel, the **Concatenate** function allows you to join 2 or more strings together.

The syntax for the **Concatenate** function is:

Concatenate(text1, text2, ... text_n)

There can be up to 30 strings that are joined together.



Based on the Excel spreadsheet above:

=Concatenate(A1, A2) would return "Alphabet"

=Concatenate ("Tech on the ", "Net") would return "Tech on the Net"

=Concatenate(A1, "bet soup") would return

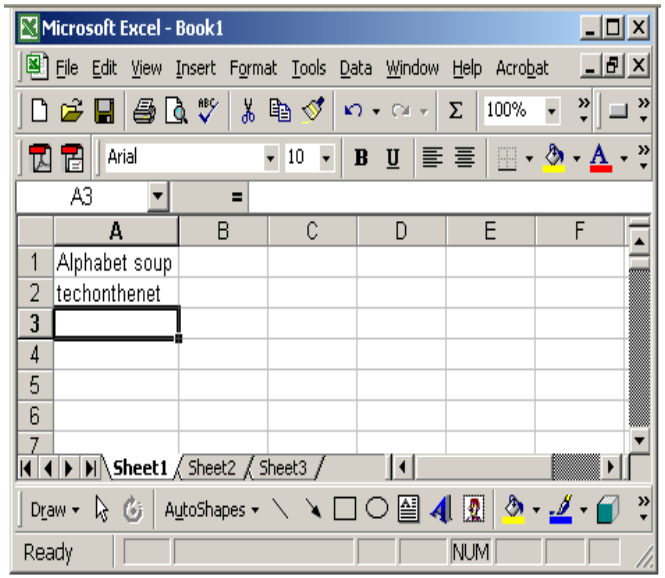
"Alphabet soup"

Important Excel Functions

In Excel, the **Upper** function allows you to convert text to all uppercase.

The syntax for the **Upper** function is:

Upper(text)



Based on the Excel spreadsheet above:

=Upper(A1) would return "ALPHABET SOUP"

=Upper(A2) would return "TECHONTHENET"

=Upper("Excel") would return "EXCEL"

=Upper("123abc") would return "123ABC"

UPPER()

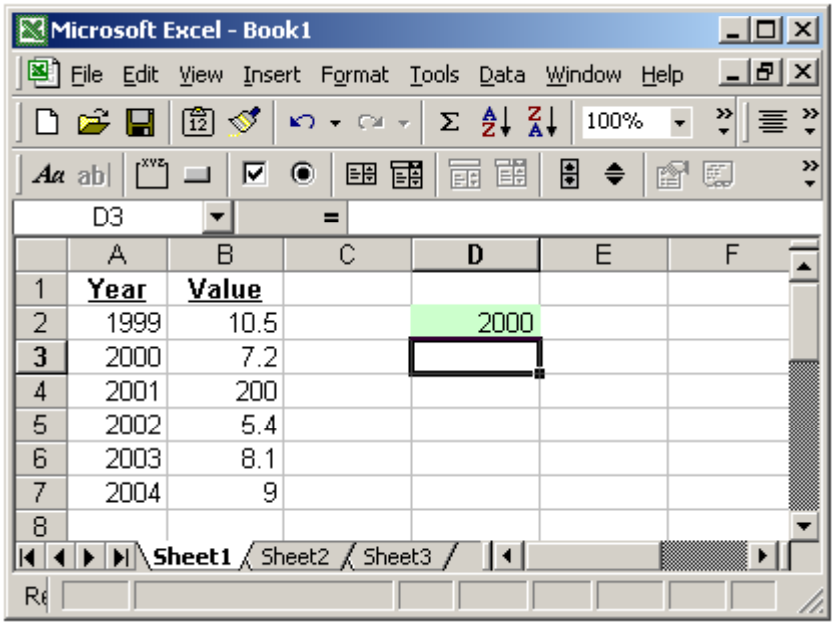
Important Excel Functions

COUNTIF()

In Excel, the **Count If** function counts the number of cells in a range, that meets a given criteria.

The syntax for the **Count If** function is:

Count If(range, criteria)



	A	B	C	D	E	F
1	Year	Value				
2	1999	10.5		2000		
3	2000	7.2				
4	2001	200				
5	2002	5.4				
6	2003	8.1				
7	2004	9				
8						

Based on the Excel spreadsheet above:

=CountIf(A2:A7, D2) would return 1

=Count If (A:A, D2) would return 1

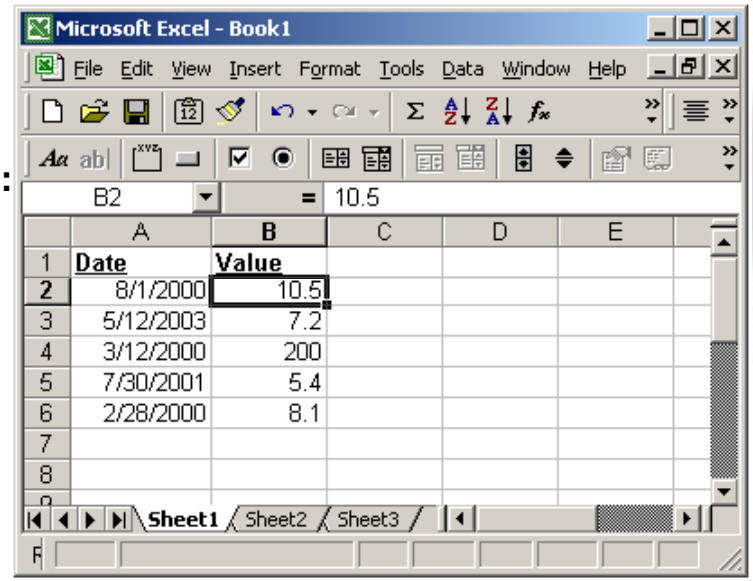
=CountIf(A2:A7, ">=2001") would return 4

Important Excel Functions

In Excel, the **Average** function returns the average (arithmetic mean) of the numbers provided.

The syntax for the **Average** function is:

Average(number1, number2, ...number_n)



	A	B	C	D	E
1	Date	Value			
2	8/1/2000	10.5			
3	5/12/2003	7.2			
4	3/12/2000	200			
5	7/30/2001	5.4			
6	2/28/2000	8.1			
7					
8					

Based on the Excel spreadsheet above:

=Average(B2, B3) would return 8.85

=Average(B3, B5, 45) would return 19.2

=Average(B2:B6) would return 46.24

AVERAGE()

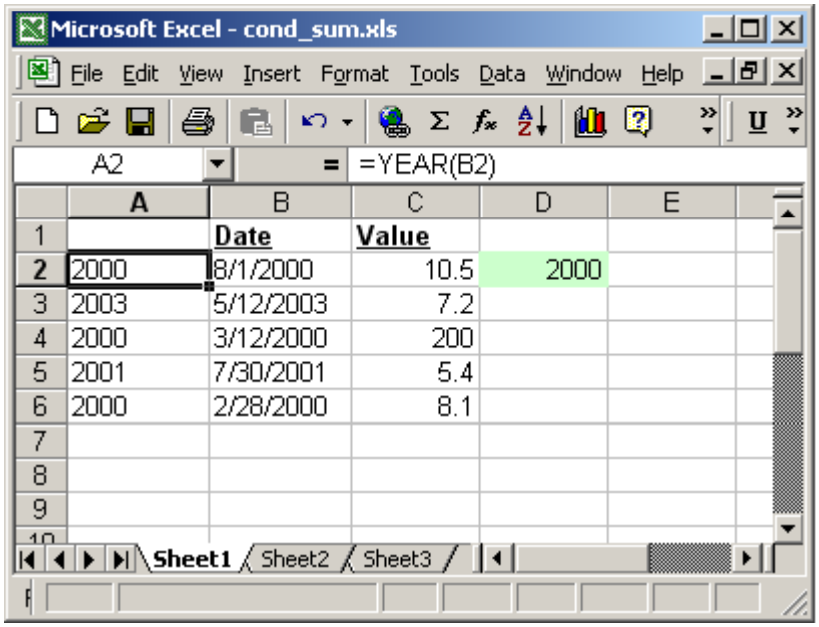
Important Excel Functions

SUMIF()

In Excel, the **Sum If** function adds all numbers in a range of cells, based on a given criteria.

The syntax for the **SumIf** function is:

SumIf(range, criteria, sum_range)



	A	B	C	D	E
1		Date	Value		
2	2000	8/1/2000	10.5	2000	
3	2003	5/12/2003	7.2		
4	2000	3/12/2000	200		
5	2001	7/30/2001	5.4		
6	2000	2/28/2000	8.1		
7					
8					
9					

Based on the Excel spreadsheet above:

=SumIf(A2:A6, D2, C2:C6) would return 218.6

=Sum If (A:A, D2, C:C) would return 218.6

=SumIf(A2:A6, 2003, C2:C6) would return 7.2

=SumIf(A2:A6, ">=2001", C2:C6) would return 12.6

Important Excel Functions

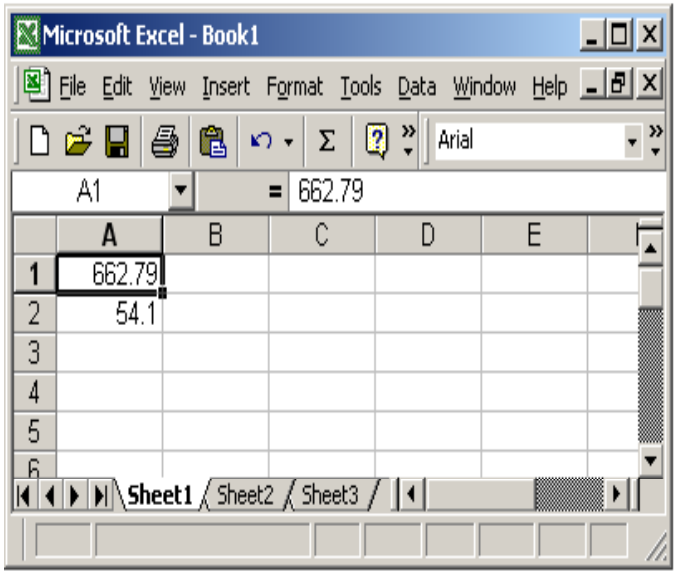
In Excel, the **Round** function returns a number rounded to a specified number of digits.

The syntax for the **Round** function is:

Round(number, digits)

Based on the Excel spreadsheet above:

=Round(A1, 0)	would return 663
=Round(A1, 1)	would return 662.8
=Round(A2, -1)	would return 50
=Round(55.1, -1)	would return 60
=Round(-23.67, 1)	would return -23.7



ROUND()

85 Mansatala Lane Khidderpore Kolkata-700023

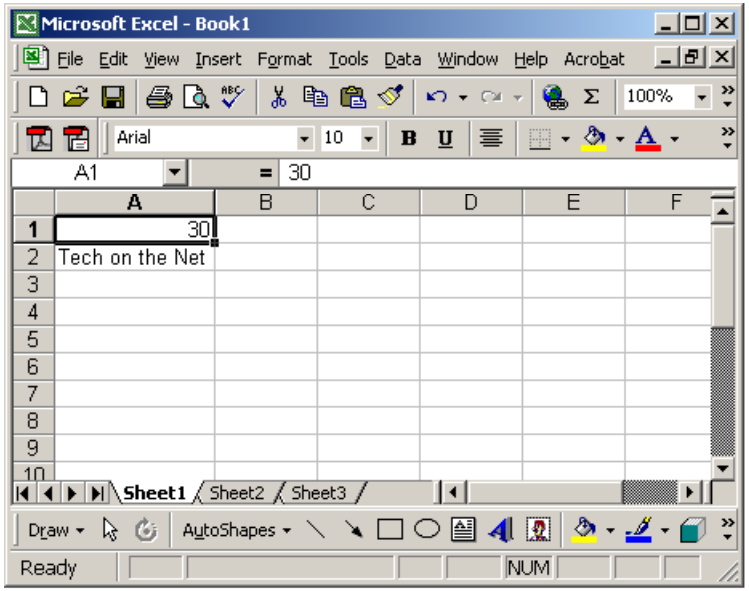
Important Excel Functions

IF()

In Excel, the **If** function returns one value if a specified condition evaluates to TRUE, or another value if it evaluates to FALSE.

The syntax for the **If** function is:

If(condition, value_if_true, value_if_false)



Based on the Excel spreadsheet above:

=If(A1>10, "Larger", "Smaller") would return "Larger".

=If(A1=20, "Equal", "Not Equal") would return "Not Equal".

=If(A2="Tech on the Net", 12, 0) would return 12.

Important Excel Functions

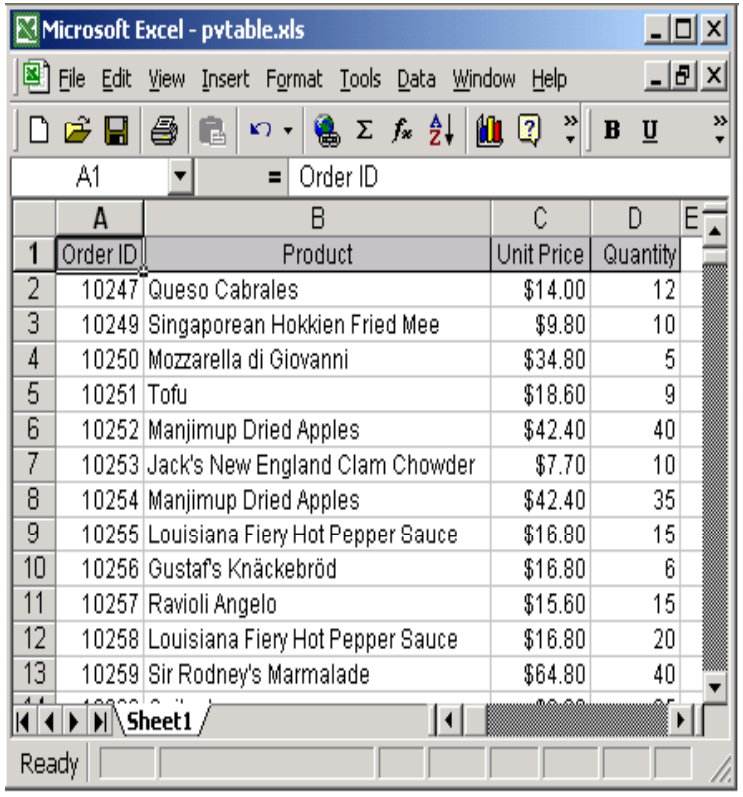
In Excel, the **VLookup** function searches for value in the left-most column of *table_array* and returns the value in the same row based on the *index_number*.

The syntax for the **VLookup** function is:

VLookup(value, table_array, index_number, not_exact_match)

Based on the Excel spreadsheet above:

=VLookup(10251, A1:B21, 2, FALSE)	would return Tofu"
=VLookup(10251, A1:C21, 3, FALSE)	would return $18.60
=VLookup(10248, A1:B21, 2, FALSE)	would return #N/A
=VLookup(10248, A1:B21, 2, TRUE)	would return "Queso Cabrales



	A	B	C	D
1	Order ID	Product	Unit Price	Quantity
2	10247	Queso Cabrales	$14.00	12
3	10249	Singaporean Hokkien Fried Mee	$9.80	10
4	10250	Mozzarella di Giovanni	$34.80	5
5	10251	Tofu	$18.60	9
6	10252	Manjimup Dried Apples	$42.40	40
7	10253	Jack's New England Clam Chowder	$7.70	10
8	10254	Manjimup Dried Apples	$42.40	35
9	10255	Louisiana Fiery Hot Pepper Sauce	$16.80	15
10	10256	Gustaf's Knäckebröd	$16.80	6
11	10257	Ravioli Angelo	$15.60	15
12	10258	Louisiana Fiery Hot Pepper Sauce	$16.80	20
13	10259	Sir Rodney's Marmalade	$64.80	40

V L O O K U P ( )

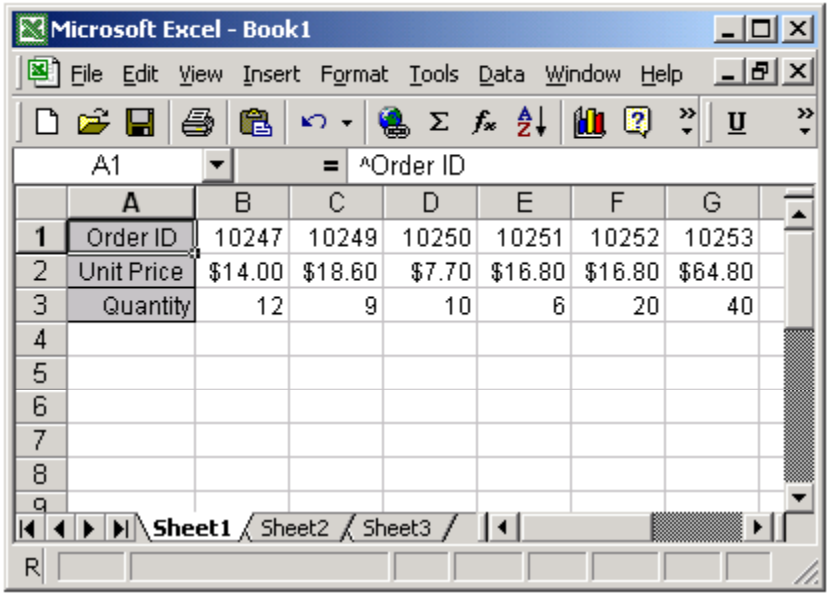
Important Excel Functions

HLOOKUP()

In Excel, the **HLookup** function searches for value in the top row of *table_array* and returns the value in the same column based on the *index_number*.

The syntax for the **HLookup** function is:

HLookup(value, table_array, index_number, not_exact_match)



	A	B	C	D	E	F	G
1	Order ID	10247	10249	10250	10251	10252	10253
2	Unit Price	$14.00	$18.60	$7.70	$16.80	$16.80	$64.80
3	Quantity	12	9	10	6	20	40
4							
5							
6							
7							
8							
9							

Based on the Excel spreadsheet above:

=HLookup(10251, A1:K3, 2, FALSE) would return $16.80

=HLookup(10251, A1:K3, 3, FALSE) would return 6

=HLookup(10248, A1:K3, 2, FALSE) would return #N/A

=HLookup(10248, A1:K3, 2, TRUE) would return $14.00

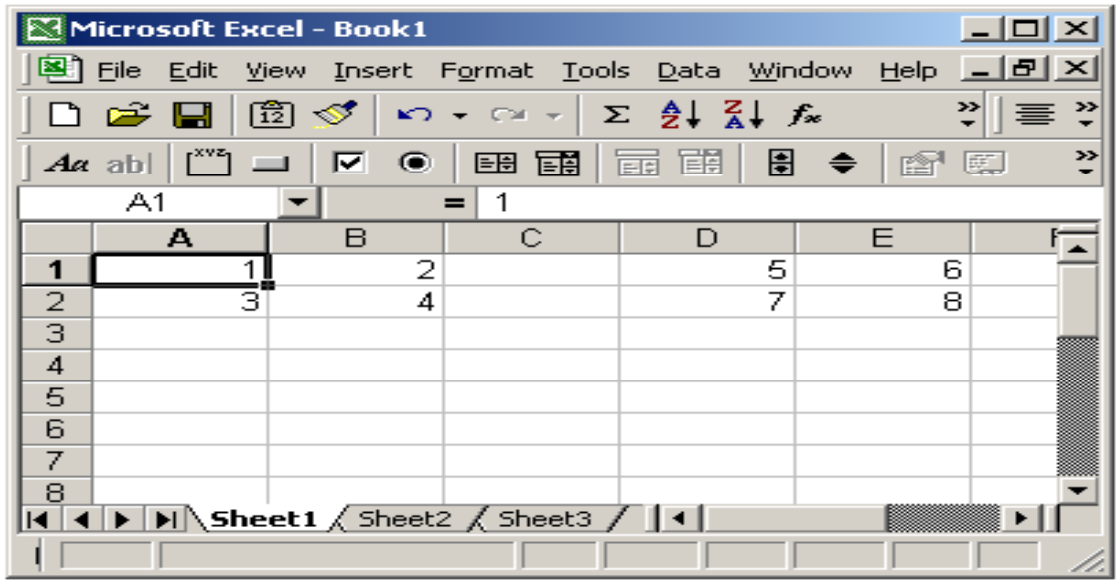
Important Excel Functions

USING WEIGHTED AVERAGE()

In Excel, the **SumProduct** function multiplies the corresponding items in the arrays and returns the sum of the results

The syntax for the **SumProduct** function is:
SumProduct(array1, array2, ... array_n)

Based on the Excel spreadsheet above, you could enter the following formula:
=SumProduct(A1:B2, D1:E2)

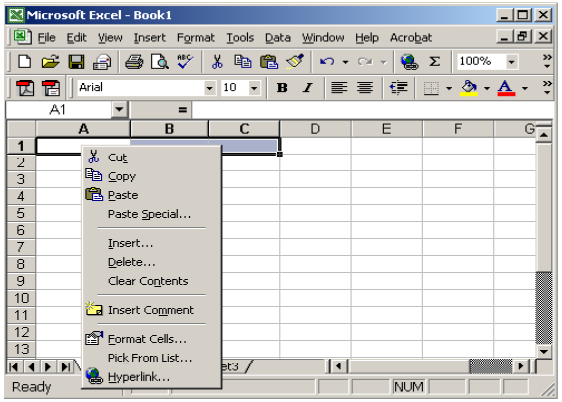


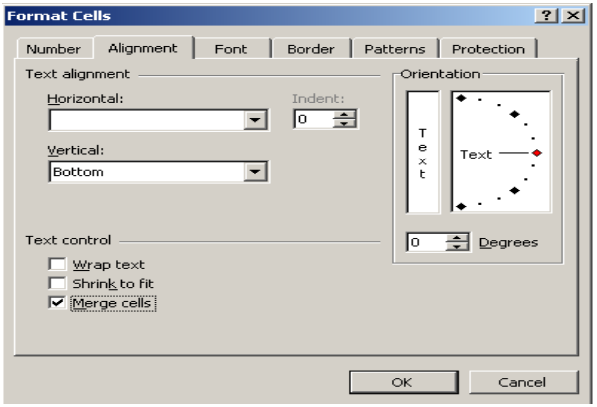
The above example would return 70

Important Excel Functions

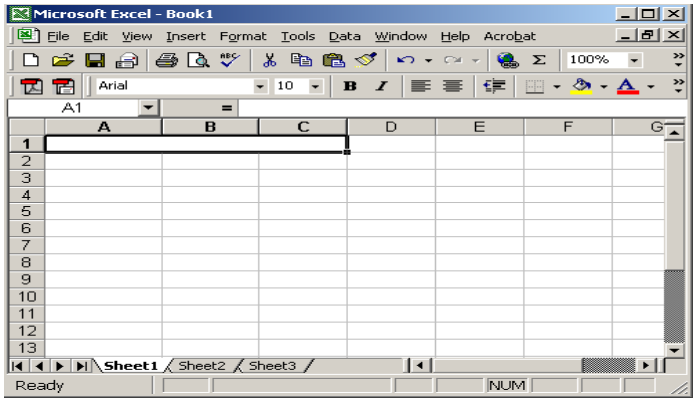
MERGECELLS

In Excel, **Merging Cells** helps you to bring more than one cell together





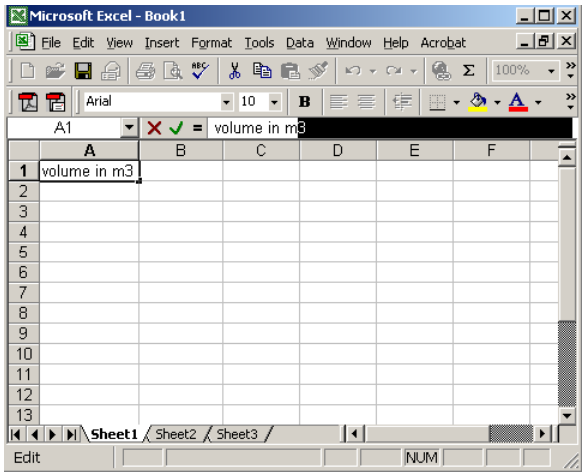
Select the cells that you wish to merge.
Right-click and then select **"Format Cells"** from the popup.



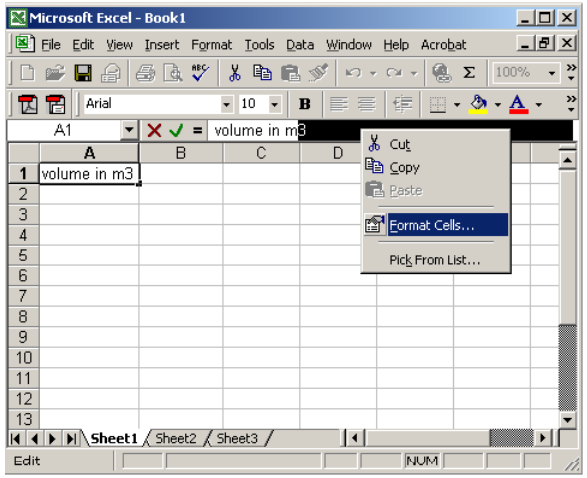
Now when you return to the spreadsheet,you will find your selected cells **merged** into a single cell.

Important Excel Functions

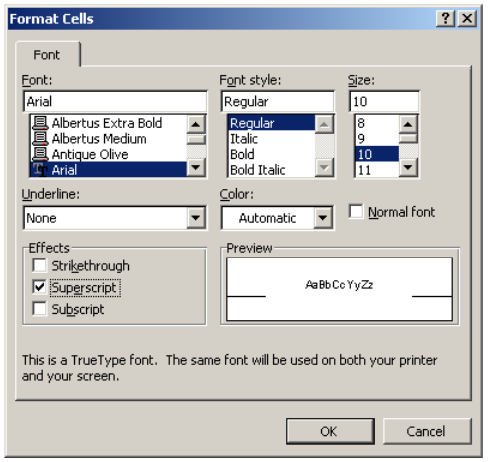
USING SUPERSCRIPT



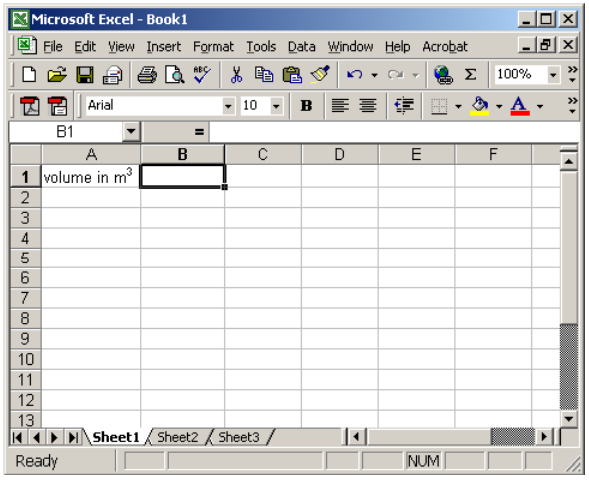
Select the text that you wish to convert to superscript. This can either be the entire cell or only a character in the cell.



While your mouse is over the selected text, right-click and then select "Format Cells" from the popup menu.

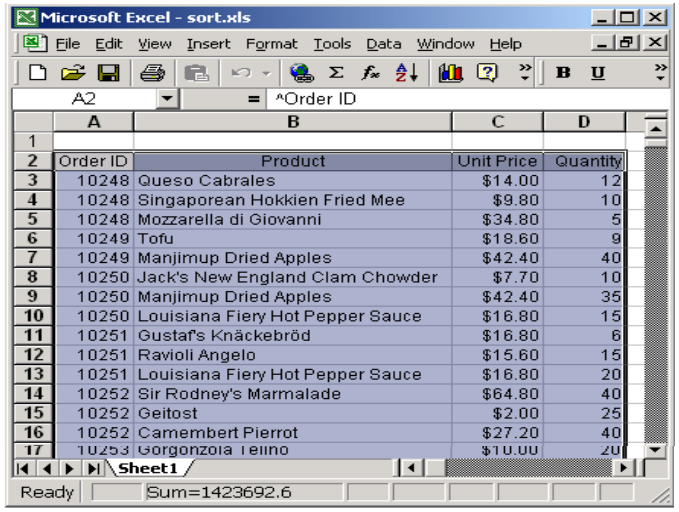


When the Format Cells window appears, select the Font tab. Check the Superscript checkbox.

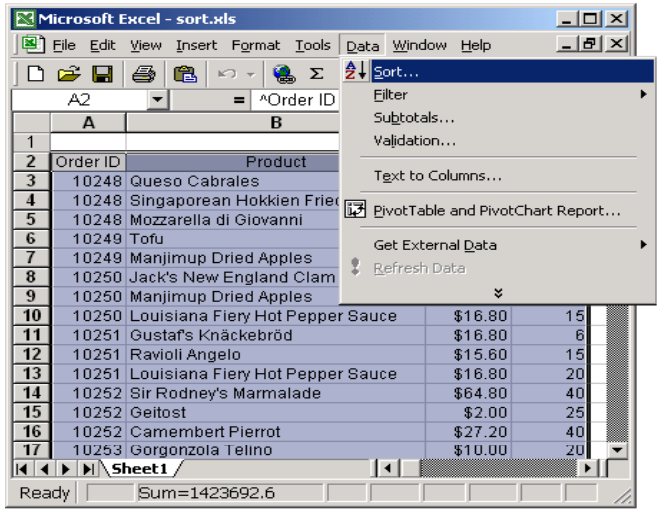


Now when you return to your spreadsheet, you should see the selected text as a superscript value.

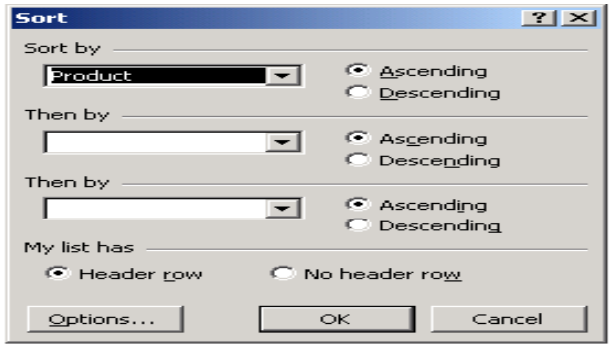
Important Excel Functions

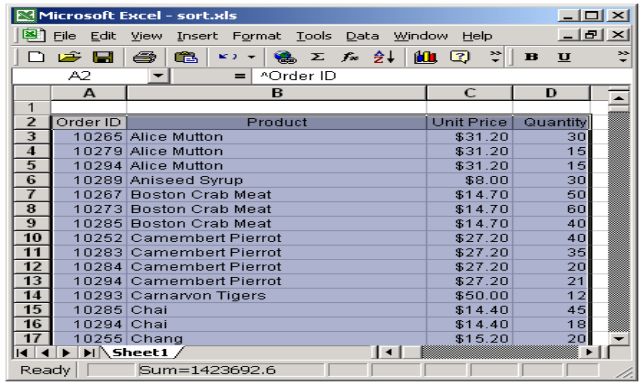


	A	B	C	D
1				
2	Order ID	Product	Unit Price	Quantity
3	10248	Queso Cabrales	$14.00	12
4	10248	Singaporean Hokkien Fried Mee	$9.80	10
5	10248	Mozzarella di Giovanni	$34.80	5
6	10249	Tofu	$18.60	9
7	10249	Manjimup Dried Apples	$42.40	40
8	10250	Jack's New England Clam Chowder	$7.70	10
9	10250	Manjimup Dried Apples	$42.40	35
10	10250	Louisiana Fiery Hot Pepper Sauce	$16.80	15
11	10251	Gustaf's Knäckebröd	$16.80	6
12	10251	Ravioli Angelo	$15.60	15
13	10251	Louisiana Fiery Hot Pepper Sauce	$16.80	20
14	10252	Sir Rodney's Marmalade	$64.80	40
15	10252	Geitost	$2.00	25
16	10252	Camembert Pierrot	$27.20	40
17	10253	Gorgonzola Telino	$10.00	20



To apply a sort in Excel, highlight the data that you wish to sort.



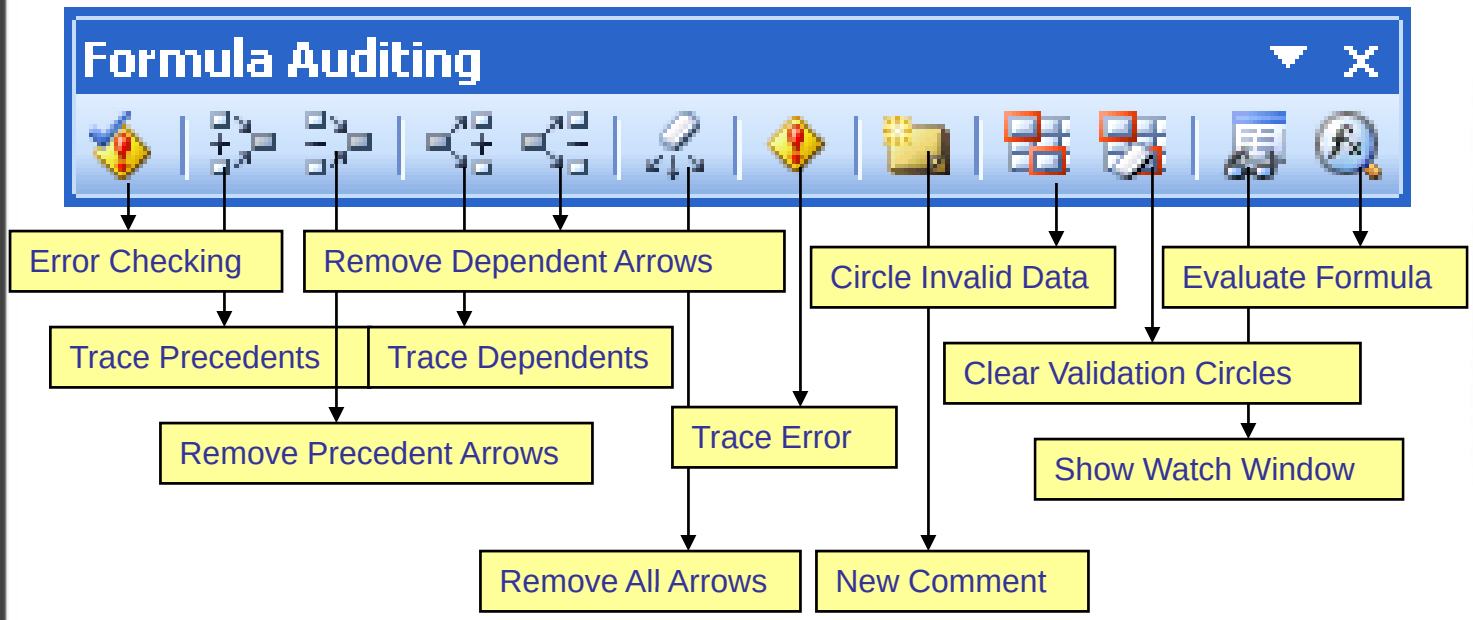


	A	B	C	D
1				
2	Order ID	Product	Unit Price	Quantity
3	10265	Alice Mutton	$31.20	30
4	10279	Alice Mutton	$31.20	15
5	10294	Alice Mutton	$31.20	15
6	10289	Aniseed Syrup	$8.00	30
7	10267	Boston Crab Meat	$14.70	50
8	10273	Boston Crab Meat	$14.70	60
9	10285	Boston Crab Meat	$14.70	40
10	10252	Camembert Pierrot	$27.20	40
11	10283	Camembert Pierrot	$27.20	35
12	10284	Camembert Pierrot	$27.20	20
13	10294	Camembert Pierrot	$27.20	21
14	10293	Carnarvon Tigers	$50.00	12
15	10285	Chai	$14.40	45
16	10294	Chai	$14.40	18
17	10255	Chang	$15.20	20

When the Sort window appears, select the columns that you wish to sort by. In our example, we are going to sort the Product column in ascending order. Click on the OK button.

SORT DATA()

Formula Auditing

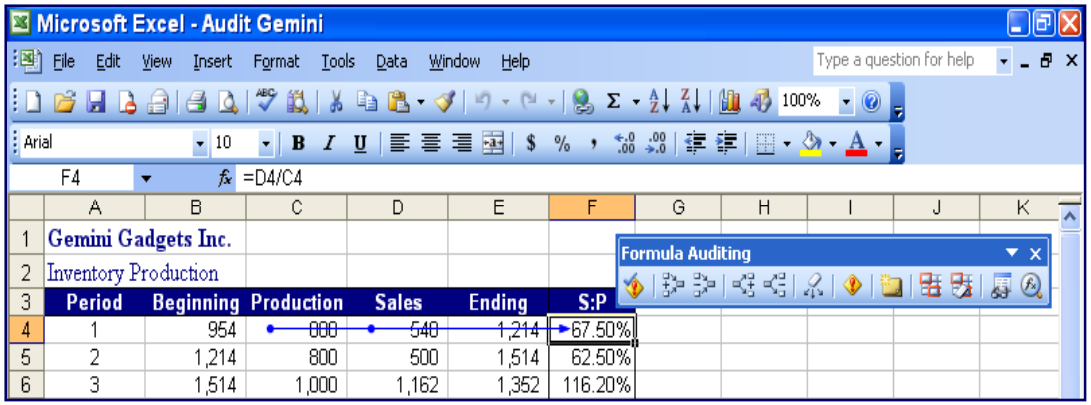


FORMULA AUDITING

Formula Auditing

TRACE PRECEDENTS

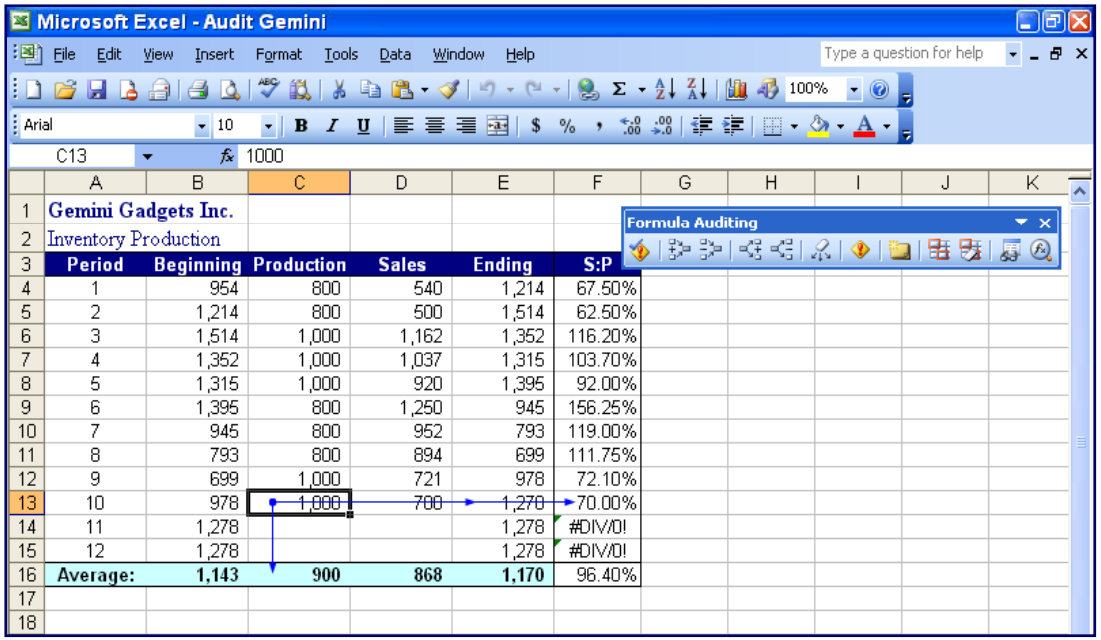
- Show all the cells that contribute to the formula's result
  - Applicable only to cells that contain a formula
- **Direct precedents** – cells that you use directly in the formula.
- **Indirect precedents** – cells that aren't used directly in the formula, but are used by a cell that you refer to in the formula.



Each circle endpoint shows a cell that provides precedent information for the selected formula

Formula Auditing

- Show what other cells use the results of the current cell.
- A cell's dependents consist of all formula cells that use the cell.
  - The formula cell can be a **direct** dependent or an **indirect** dependent.



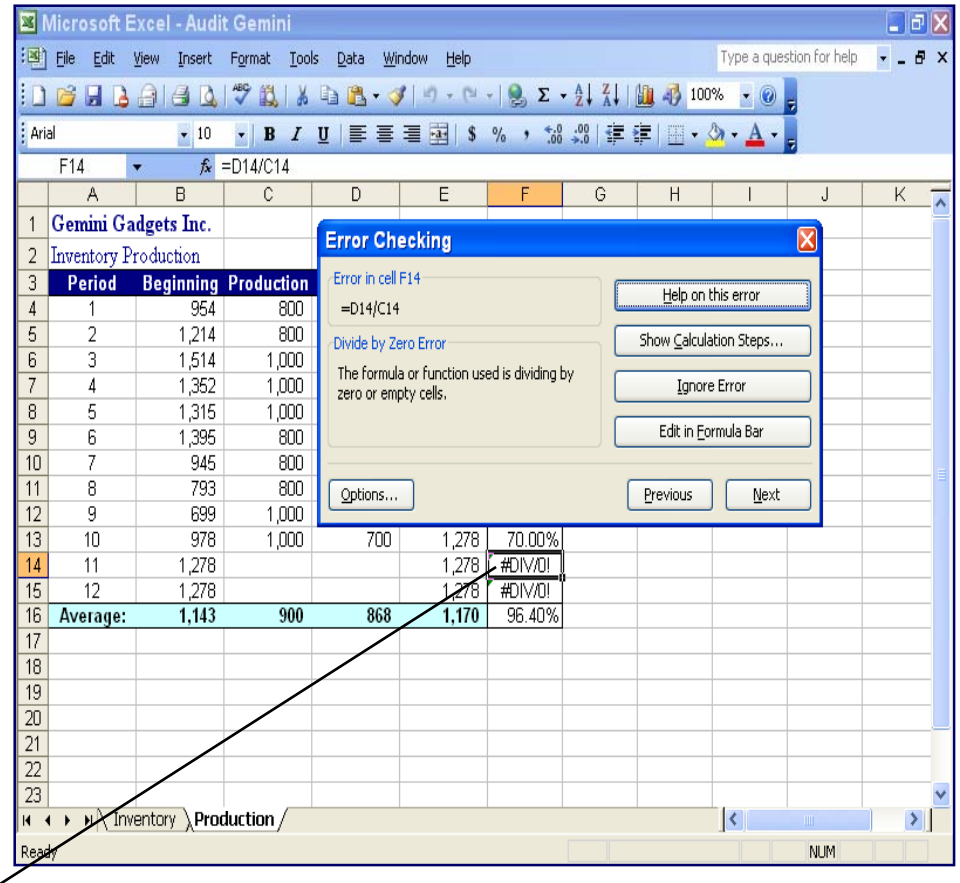
	A	B	C	D	E	F
1	Gemini Gadgets Inc.					
2	Inventory Production					
3	Period	Beginning	Production	Sales	Ending	S:P
4	1	954	800	540	1,214	67.50%
5	2	1,214	800	500	1,514	62.50%
6	3	1,514	1,000	1,162	1,352	116.20%
7	4	1,352	1,000	1,037	1,315	103.70%
8	5	1,315	1,000	920	1,395	92.00%
9	6	1,395	800	1,250	945	156.25%
10	7	945	800	952	793	119.00%
11	8	793	800	894	699	111.75%
12	9	699	1,000	721	978	72.10%
13	10	978	1,000	708	1,270	70.00%
14	11	1,278			1,278	#DIV/0!
15	12	1,278			1,278	#DIV/0!
16	Average:	1,143	900	868	1,170	96.40%
17						
18						

Each arrowhead endpoint shows a cell that is dependent on the selected cell for information

TRACE DEPENDANT

Formula Auditing

LOCATING ERRORS



Period	Beginning	Production			
1	954	800			
2	1,214	800			
3	1,514	1,000			
4	1,352	1,000			
5	1,315	1,000			
6	1,395	800			
7	945	800			
8	793	800			
9	699	1,000			
10	978	1,000	700	1,278	70.00%
11	1,278			1,278	#DIV/0!
12	1,278			1,278	#DIV/0!
Average:	1,143	900	868	1,170	96.40%

A “Divide by Zero Error” has been found in cell F14. Notice that the formula is also displayed above the error description