

XEROX

# ***Xerox ViewPoint***

## ***VP Spreadsheet Training***

**XEROX**

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# **VP Spreadsheet Training**

610E10270  
Version 2.0

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## Table of contents

<b>1. Getting started</b>	<b>1</b>
Training guide exercises	1
Hardware and software you need to begin training	2
Checking the status of applications	2
Running applications	3
Training exercise spreadsheet	3
Copying the training folder to the desktop	4
Copying the exercise spreadsheet to the desktop	4
<b>2. Updating an existing spreadsheet</b>	<b>6</b>
Preparing the spreadsheet for data entry	6
Changing the spreadsheet title	7
Entering a new column label	8
Erasing the values in a column	8
Entering new values on the spreadsheet	9
Saving the changes, calculating values, and printing the spreadsheet	10

Converting the spreadsheet to a table	11
Viewing the newly created table	12
<b>3. Creating and formatting a spreadsheet</b>	<b>13</b>
Copying a blank spreadsheet and naming it	13
Entering a title for the spreadsheet	13
Entering the first line of the title	14
Widening the first column	14
Entering the remaining two lines of the title	15
Entering and formatting the column labels	16
Widening columns to fit labels	16
Right-justifying column labels	17
Entering row labels	18
Entering dashed ruling lines	18
Inserting blank rows	19
Entering ruling lines	19
Continuing the line across the spreadsheet	20
Copying the ruling line to another row	21
Entering and formatting the spreadsheet data	21
Specifying the format for two decimal places	22

Completing entries for column B	22
Entering data in column C	22
<b>4. Entering formulas</b>	<b>24</b>
Writing an expression to calculate the To Be Reimbursed column values	24
Entering an arithmetic expression	24
Replicating the arithmetic expression down the column	25
Writing a formula to calculate the TOTAL row values	26
Writing a formula for the Paid by Company column values	28
Inserting a new column between columns A and B	28
Entering the column label and dashed lines	28
Entering and formatting the column data	29
Entering the @IF formula in the Paid by Company column	29
<b>5. Manipulating rows and columns</b>	<b>31</b>
Inserting a new row	31
Entering the row contents	31
Reversing the Paid by Company and To Be Reimbursed columns	32
Observing the effects of forward cell references	33
Converting the spreadsheet to a different structure in a table	34

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# 1.

## Getting started

Xerox ViewPoint Spreadsheet is an optional software application for the 6085 Professional Computer System and 8010 Information System. Using VP Spreadsheet, you can manipulate data and produce spreadsheet-based financial reports.

When you finish this training guide, you will be able to do the following:

- Update an existing spreadsheet.
- Create and format a new spreadsheet.
- Enter formulas in a spreadsheet.
- Manipulate spreadsheet rows and columns.

This training guide assumes that you have completed the *ViewPoint QuickStart Training* guide. If you have not yet worked through that guide, complete it now before continuing with this guide.

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### Training guide exercises

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This training guide provides exercises that illustrate typical ways of working with VP Spreadsheet. In these exercises, you update an existing spreadsheet and then create, format, and modify a new spreadsheet.

You can apply the techniques presented here when you create your own spreadsheets. For complete information on VP Spreadsheet, refer to the *VP Spreadsheet and VP Office Accessories Reference* volume of the *VP Series Reference Library*.

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## Hardware and software you need to begin training

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Before you begin your training, make sure you have the following hardware and software:

- An operating 6085 or 8010 workstation with a desktop, a fully qualified user name, and a password. If you have a 6085 or 8010 workstation that is part of a network, you can get help from your system administrator. If your workstation is a Standalone or Documenter, you can get help from the *Workstation Administration and System Resources Reference* volume.
- Default User Profile settings. The User Profile lists the settings that control your desktop. The procedures in this training guide are designed for desktops using the default User Profile settings. Check with your system administrator to make sure your desktop has the default User Profile settings, or refer to the *General User Reference* volume.

Check the status of your applications before you begin training; consult with your system administrator or follow the next procedure.

---

### Checking the status of applications

---



1. **Open** the Directory icon.
2. **Open** the Workstation divider.
3. **Open** the Loader.
4. **Compare** the list of applications in the Loader window with the list of applications here.
  - VP Document Editor
  - VP Spreadsheet

Additional applications may be running.

If the Loader lists the applications you need and their STATUS column is set to RUNNING, select [Close All] in the Loader window header.

If the applications you need are not listed in the Loader, consult your system administrator or refer to the *General User Reference* volume for information on installing, enabling, and running the applications in the above sequence.

If the applications you need are listed, but the STATUS column is set to IDLE, change the status of the applications as described next.

## Running applications

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If the STATUS column of an application you need is set to IDLE, change it to RUNNING.

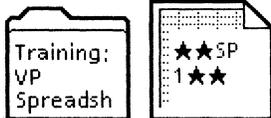
1. **Select** the application.
2. **Select** [Run] in the Loader window header.
3. **Select** [Close All] in the Loader window header when you are finished setting applications to RUNNING.

You can also set applications to run automatically; refer to the *General User Reference* volume for this procedure.

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## Training exercise spreadsheet

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To assist you in completing the training exercises, a training folder named "Training: VP Spreadsheet" accompanies this training guide. This folder is located on the floppy disk titled "VP Training Exercises."

If the training folder and exercise spreadsheet are not already on your desktop, copy them there now. If you need help, refer to the following procedures.

## Copying the training folder to the desktop

---



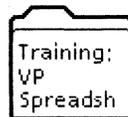
1. **Insert** the "VP Training Exercises" disk in the floppy disk drive, and **close** the door.
2. **Open** the Floppy Drive icon.

The Floppy Drive window lists the contents of the floppy disk.

If you do not have a Floppy Drive icon on your desktop, refer to the *General User Reference* volume for the procedure to copy the icon, or ask your system administrator.
3. **Select** the "Training: VP Spreadsheet" folder, and **press** <COPY>.
4. **Select** a location on the desktop.
5. **Select** [Close] in the Floppy Drive window header.
6. **Remove** the floppy disk from the floppy disk drive, and **put** it in a safe location.

## Copying the exercise spreadsheet to the desktop

---



Do not work with the exercise spreadsheet inside the training folder. Copy the exercise spreadsheet to the desktop.

1. **Open** "Training: VP Spreadsheet," and **select** the spreadsheet in the folder.
2. **Press** <COPY>, and **select** a location on the desktop.
3. **Select** [Close] in the "Training: VP Spreadsheet" folder window header.



The exercise spreadsheet is now on the desktop.

Two final notes before you begin:

- This training guide uses underlining to indicate information that you type; however, you do not need to underline the information you type.

- As you use this training guide, you will see terms in ***bold italic*** type. You can find more information on these terms in the Glossary, which is located in the *QuickFind Reference* volume.

You are ready to start training.

## 2. Updating an existing spreadsheet

VP Spreadsheet enables you to create an electronic worksheet on which you can enter and calculate rows and columns of numbers. You can update the spreadsheet easily to reflect changing data and to perform “what-if” analyses.

In this chapter, you prepare an already existing spreadsheet for data entry, enter new values on the spreadsheet, save the changes, calculate the spreadsheet, print it, and then convert the spreadsheet to a table.

### Preparing the spreadsheet for data entry



#### 1. Open exercise spreadsheet ★★SP 1★★.

The exercise spreadsheet appears on your desktop.

5	CATEGORY	November	Paid by Company	To Be Reimbursed
7	Plane fare	800.00	800.00	0.00
8	Rental car	50.00	50.00	0.00
9	Parking fees	45.00	0.00	45.00
10	Meals	59.60	0.00	59.60
11	Lodging	90.00	90.00	0.00
12	Other	2.45	0.00	2.45
14	TOTAL	1047.05	940.00	107.05

Cell

Notice that the spreadsheet consists of rows and columns. The intersection of a row and a column is called a **cell**.

2. **Select** the cell containing "November 1987" with the left mouse button.

The program displays the spreadsheet function keys at the bottom of the desktop. The top-row function keys on the keyboard now perform the operations named on the displayed function keys.



## Changing the spreadsheet title

---

**Status line** The upper left corner of the spreadsheet displays a **status line** that provides some information about the cell you selected.

*A2/FL* tells you that the cell location or cell "reference" is A2 (column A, row 2), and that the format of the cell contents is FL, or flush left.

*(L)[17]* tells you that the cell contains a label, and that the column width is 17 characters.

*November 1987* represents the cell contents.

1. **Type:** / (a slash).

**Prompt line** A new line, the **prompt line**, appears under the status line. The prompt line lists all the available commands.

2. **Type:** E, for the Edit command.

You can specify commands in uppercase or lowercase letters. The Edit command enables you to edit the cell contents.

**Entry line** The prompt line now displays "[Edit]: Label." Also, a third line, the **entry line**, appears under the prompt line. The entry line displays the current contents of cell A2, "November 1987."

3. **Select** the word "November" in the entry line, using the select-adjust method.
4. **Press** <DEL>.

5. **Type:** December.
6. **Press** the return key to replace the contents of the cell with the contents of the entry line.

You can cancel any spreadsheet operation by pressing <STOP> before pressing the return key.

### **Entering a new column label**

---

1. **Select** the cell containing the "November" column label (cell B5).
2. **Type:** December.
3. **Press** the return key.

The new label replaces the old one.

### **Erasing the values in a column**

---

1. **Select** the down-arrow function key twice.

The first cell below the dashed line in the December column becomes selected.

The down-arrow function key is located in the row of spreadsheet function keys at the bottom of the desktop. You can also press the corresponding top-row function key.

2. **Type:** /B, for the Blank command.
3. **Press** the return key.

The cell contents disappear.

4. **Press** <NEXT>.

Pressing <NEXT> automatically selects the cell in the direction last used; in this case, the next cell down is selected.

5. **Blank out** the remaining five cells in the column using /B, down to the second dashed line.

The spreadsheet now looks like this.

1	Travel Expenses			
2	December 1987			
3	Vivian Jones			
4				
5	CATEGORY	December	Paid by Company	To Be Reimbursed
6				
7	Plane fare		0.00	0.00
8	Rental car		0.00	0.00
9	Parking fees		0.00	0.00
10	Meals		0.00	0.00
11	Lodging		0.00	0.00
12	Other		0.00	0.00
13				
14	TOTAL	0.00	0.00	0.00
15				

---

## Entering new values on the spreadsheet

---

1. **Select** cell B7.
2. **Type:** 2000, and **press** the return key.

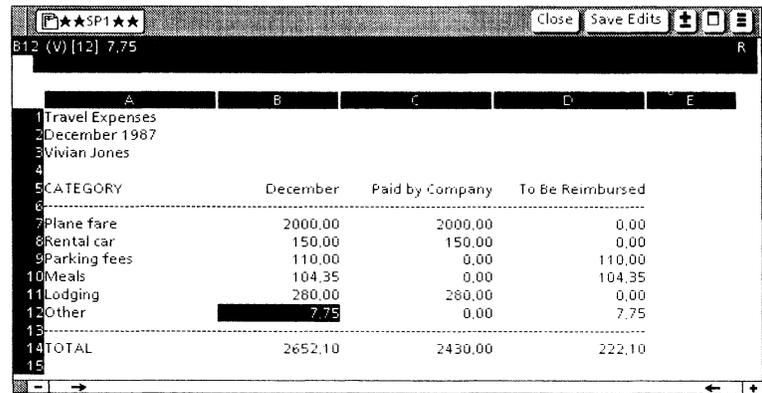
The spreadsheet automatically displays the number with two decimal places; this format has been preset.

Because VP Spreadsheet recalculates values on the spreadsheet after every change you make, other values on the spreadsheet change automatically.

3. **Select** the down-arrow function key once.
4. **Type:** 50\*3, and **press** <NEXT>.
5. **Type:** (25+30)\*2, and **press** <NEXT>.
6. **Type:** 16.75+18+12+25.85+31.75, and **press** <NEXT>.
7. **Type:** 280, and **press** <NEXT>.

8. **Type:** 7.75, and **press** the return key.

The spreadsheet now looks like this.



5	CATEGORY	December	Paid by Company	To Be Reimbursed
7	Plane fare	2000.00	2000.00	0.00
8	Rental car	150.00	150.00	0.00
9	Parking fees	110.00	0.00	110.00
10	Meals	104.35	0.00	104.35
11	Lodging	280.00	280.00	0.00
12	Other	7.75	0.00	7.75
14	TOTAL	2652.10	2430.00	222.10

If your total for Column B is not 2652.10, check that the cells in Column B contain the appropriate values. If one does not, select that cell and enter the correct contents.

---

## Saving the changes, calculating values, and printing the spreadsheet

---

1. **Select** [Save Edits] in the spreadsheet window header.

Select [Save Edits] periodically to save the most recent set of changes you make to the spreadsheet.

2. **Type:** !, for the Calculate command.

Calculating the spreadsheet before printing it is a good habit to adopt. In this case, no values change because the spreadsheet recalculates automatically after every change. For information on manual spreadsheet calculations, refer to the *VP Spreadsheet and VP Office Accessories Reference* volume.

3. **Select** [Close] in the spreadsheet window header.

Selecting [Close] automatically saves changes to the spreadsheet.

4. **Copy** the spreadsheet icon labeled **★★SP 1★★** to a printer icon.
5. **Select** [Start] in the Printing option sheet header.

While the spreadsheet is being printed, you can proceed with the next exercise.

---

## Converting the spreadsheet to a table

---

Converting a spreadsheet to a table enables you to insert data from a spreadsheet into a document. When you convert a spreadsheet to a table, VP Spreadsheet creates a new document and inserts the newly created table into it.

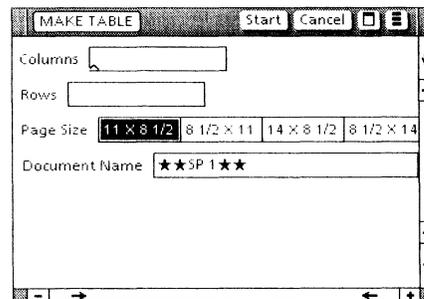


1. **Open** **★★SP 1★★**.

The exercise spreadsheet appears on your desktop.

2. **Select** [MAKE TABLE] in the spreadsheet auxiliary menu (the  symbol in the header).

The Make Table option sheet appears on the desktop. The caret is in the Columns option box.



3. **Type:** a.d

The period represents an ellipsis (...), which means "through." This entry means that columns A through D will be included in the table.

4. **Press** <NEXT>.

5. Type: 1.14

Rows 1 through 14 will also be included in the table.

6. Delete the contents of the Document Name option.

7. Type: Spreadsheet table

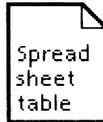
8. Select [Start].

VP Spreadsheet converts the spreadsheet to a table, inserts the table into a document labeled "Spreadsheet table," and places the document icon for the new table on the desktop. The messages in the message area indicate the progress of the spreadsheet-to-table operation.

---

## Viewing the newly created table

---



1. Close the spreadsheet.

2. Open the document labeled "Spreadsheet table."

The table created from the spreadsheet looks like this.

Travel Expenses			
December 1987			
Vivian Jones			
CATEGORY	December	Paid by Company	To Be Reimbursed
Plane fare	2000.00	2000.00	0.00
Rental car	150.00	150.00	0.00
Parking fees	110.00	0.00	110.00
Meals	104.35	0.00	104.35
Lodging	280.00	280.00	0.00
Other	7.75	0.00	7.75
TOTAL	2652.10	2430.00	222.10

3. Close the table document.

---

### 3. Creating and formatting a spreadsheet

In this chapter, you create a spreadsheet that resembles the spreadsheet you updated in chapter 2.

---

#### Copying a blank spreadsheet and naming it

---



1. **Copy** the Blank Spreadsheet icon from the Basic Icons divider to the desktop.  
Remember to close the divider and Directory windows.
2. **Name** the blank spreadsheet My Spreadsheet.

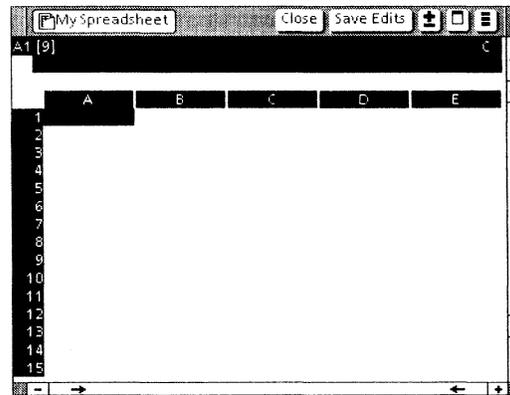
---

#### Entering a title for the spreadsheet

---



1. **Open** My Spreadsheet.



## 2. **Look** at the spreadsheet contents.

Cell A1 is highlighted, which is the default condition for spreadsheets copied from the Directory icon and not yet edited. However, the cell is only highlighted; it is not selected.

### **Entering the first line of the title**

---

#### 1. **Select** cell A1.

The spreadsheet function keys appear below the spreadsheet.

#### 2. **Type:** Travel Expenses, and **press** the return key.

The label "Travel Expenses" appears in cell A1. However, the label does not fit within the default column width.

### **Widening the first column**

---

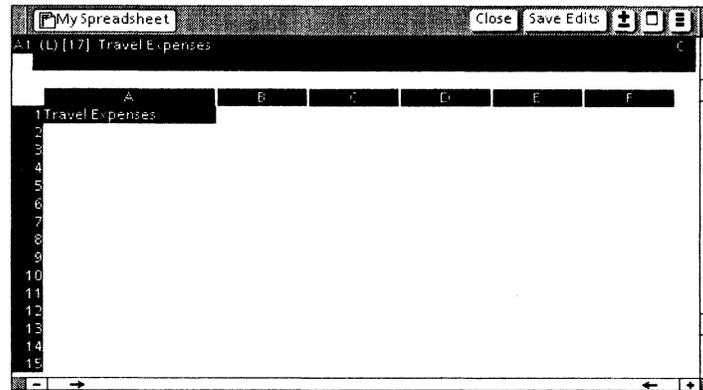
#### 1. With cell A1 still selected, **type:** /E, for the Format command.

#### 2. **Type:** C, for Column.

#### 3. **Type:** 17, for the new column width.

**4. Press the return key.**

Now the entire label appears in cell A1.



### **Entering the remaining two lines of the title**

---

1. With cell A1 still selected, **select** the down-arrow function key once.

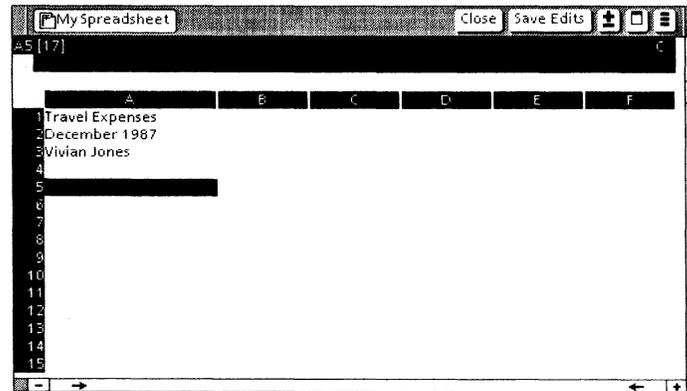
Cell A2 is now selected.

2. **Type:** December 1987, and **press** <NEXT>.

Cell A3 is now selected. VP Spreadsheet remembers the last direction used, and repeats that direction when you press <NEXT>.

3. **Type:** Vivian Jones, and **press** <NEXT> twice.

Your spreadsheet looks like this.



4. **Select** [Save Edits] in the window header.

---

## Entering and formatting the column labels

---

1. In cell A5, **type:** CATEGORY, and **select** the right-arrow function key.  
Cell B5 is now selected.
2. **Type:** December, and **press** <NEXT>.  
Cell C5 is now selected.
3. **Type:** Paid by Company, and **press** the return key.  
Notice that the label appears cut off.

---

## Widening columns to fit labels

---

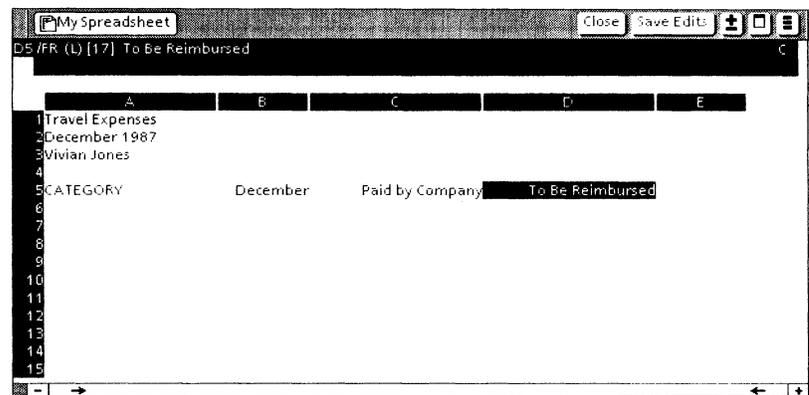
1. **Type:** /E, for the Format command.
2. **Type:** C, for Column.

3. **Type:** 17, and **press** the return key.
4. **Press** <NEXT> .  
Cell D5 is now selected.
5. **Type:** To Be Reimbursed, and **press** the return key.
6. **Widen** column D to 17 so that the label fits.

## Right-justifying column labels

---

1. **Select** cell B5.
2. **Type:** /E, for the Format command.
3. **Type:** R, for Right-justify.  
The December label becomes right-justified.
4. **Select** cell C5, and **type:** /FR.  
The Paid by Company label becomes right-justified.
5. **Select** cell D5, and **type:** /FR.  
The To Be Reimbursed label becomes right-justified. Your spreadsheet now looks like this.



6. **Select** [Save Edits].

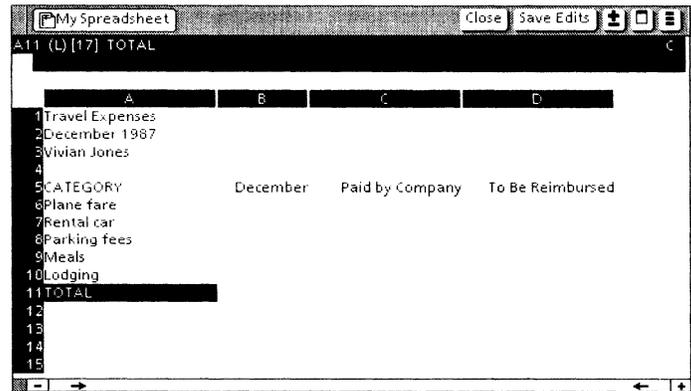
---

## Entering row labels

---

1. **Select** cell A5 (the cell containing "CATEGORY"), and **select** the down-arrow function key.
2. **Type:** Plane fare, and **press** <NEXT>.
3. **Type:** Rental car, and **press** <NEXT>.
4. **Type:** Parking fees, and **press** <NEXT>.
5. **Type:** Meals, and **press** <NEXT>.
6. **Type:** Lodging, and **press** <NEXT>.
7. **Type:** TOTAL, and **press** the return key.

The spreadsheet now looks like this.



8. **Select** [Save Edits].

---

## Entering dashed ruling lines

---

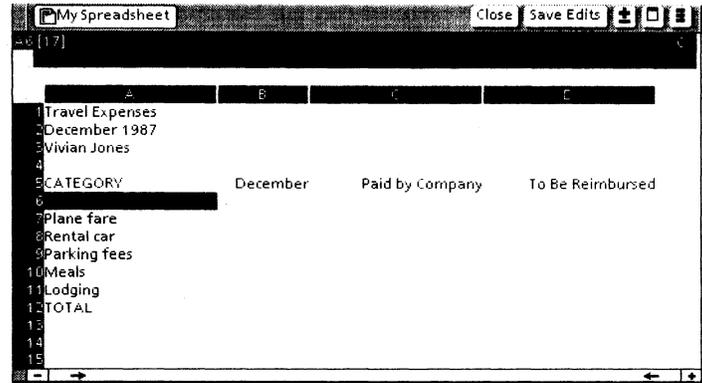
To separate the column labels from the spreadsheet data, and the spreadsheet data from the TOTAL row, you insert dashed ruling lines.

## Inserting blank rows

---

1. Select cell A6, which contains the row label "Plane fare."
2. Type: /I, for the Insert command.
3. Type: R, for Row.

A blank row appears, and the remaining rows shift down one row. The spreadsheet looks like this.



4. Select cell A12, which now contains the row label "TOTAL."
5. Type: /IR, to insert a blank row at that location.

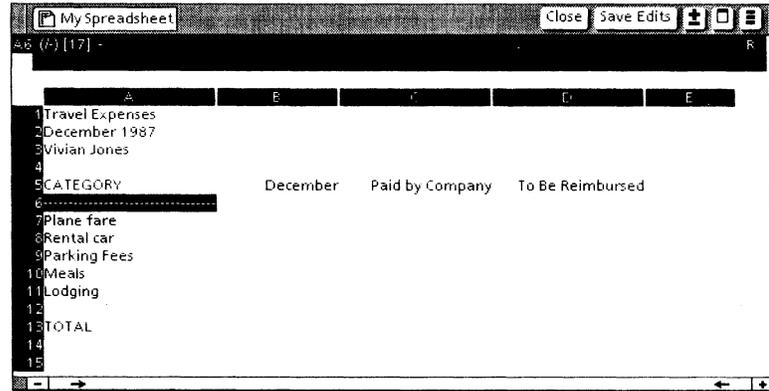
## Entering ruling lines

---

1. Select cell A6.
2. Type: /-, to specify that you want to repeat a label.
3. Type: - again, to repeat a hyphen as a label.

#### 4. Press the return key.

Repeating hyphens appear across the cell, creating the beginning of a dashed ruling line.



### Continuing the line across the spreadsheet

---

#### 1. Type: /R, for the Replicate command.

VP Spreadsheet displays the message, "Replicate: Source range or ENTER."

#### 2. Press the return key to indicate that you want to replicate the contents of cell A6.

VP Spreadsheet displays the message "Replicate: Target range."

#### 3. Select cell B6 as the first cell to receive the replicated cell contents.

#### 4. Type a period (.), to indicate that a range of cells is to receive the replicated cell contents.

The period represents an ellipsis (...), which means "through."

#### 5. Select cell D6 as the last cell to receive the replicated cell contents.

6. Press the return key.

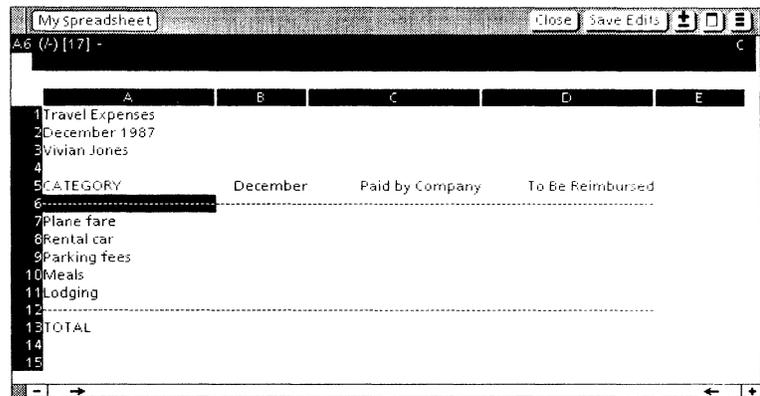
The repeating hyphens fill cells B6 through D6.

## Copying the ruling line to another row

---

1. Type: /R, for the Replicate command.
2. With cell A6 already selected, **press** the return key.
3. **Select** cell A12, **type** a period (.), and **select** cell D12.
4. **Press** the return key.

The spreadsheet now looks like this.



5. **Select** [Save Edits].

---

## Entering and formatting the spreadsheet data

---

1. **Select** cell B7 (below the dashed line in the December column).
2. **Type:** 2000.00, and **select** the down-arrow function key.

The spreadsheet displays only “2000,” without the decimal point and the two zeros to the right.

## Specifying the format for two decimal places

---

1. **Type:** /G, for the Global command.
2. **Type:** F, for Format.
3. **Type:** \$, for the “money” format.

The spreadsheet redisplay the value in cell B7, using two decimal places.

## Completing entries for column B

---

1. In cell B8, **type:** 50\*3, and **press** <NEXT>.
2. **Type:** (25+30)\*2, and **press** <NEXT>.
3. **Type:** 16.75+18+12+25.85+31.75, and **press** <NEXT>.
4. **Type:** 280, and **press** the return key.

## Entering data in column C

---

1. In cell C7, **type:** 2000, and **press** the down-arrow function key.
2. **Type:** 150, and **press** <NEXT>.
3. **Type:** 0, and **press** <NEXT>.
4. **Type:** 0, and **press** <NEXT>.

5. Type: 280, and press the return key.

The spreadsheet now looks like this.

My Spreadsheet Close Save Edits

C11 (V) [17] 280

CATEGORY	December	Paid by Company	To Be Reimbursed
Plane fare	2000.00	2000.00	
Rental car	150.00	150.00	
Parking Fees	110.00	0.00	
Meals	104.35	0.00	
Lodging	280.00	280.00	
TOTAL			

6. Select [Save Edits].

## 4.

## Entering formulas

In this chapter, you enter formulas that calculate totals and other values.

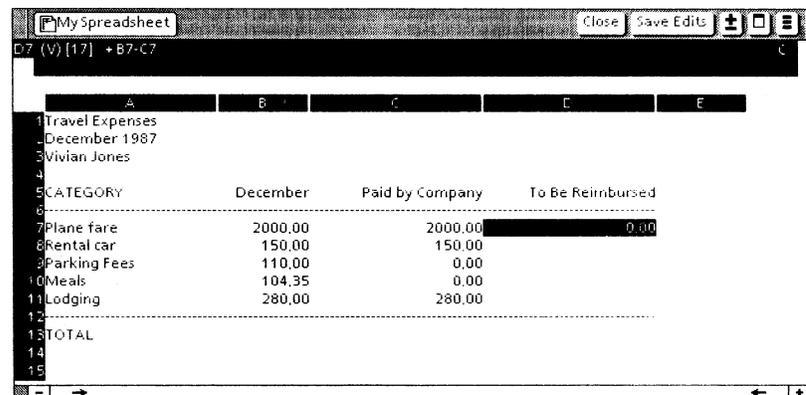
### Writing an expression to calculate the To Be Reimbursed column values

You now write a formula that calculates values for the To Be Reimbursed column.

#### Entering an arithmetic expression

1. **Select** cell D7.
2. **Type:** +B7-C7, and **press** the return key.

The initial plus sign (+) tells VP Spreadsheet that you are entering a value, not a label. The formula subtracts the value of cell C7 from the value of cell B7. The calculated value appears in cell D7.



The screenshot shows a window titled "My Spreadsheet" with a spreadsheet grid. The formula bar at the top displays "D7 (V) [17] +B7-C7". The spreadsheet data is as follows:

5	CATEGORY	December	Paid by Company	To Be Reimbursed
7	Plane fare	2000.00	2000.00	0.00
8	Rental car	150.00	150.00	
9	Parking Fees	110.00	0.00	
10	Meals	104.35	0.00	
11	Lodging	280.00	280.00	
13	TOTAL			

## Replicating the arithmetic expression down the column

---

1. **Type:** R, for the Replicate command.

The prompt line displays the message, "Replicate: Source range or ENTER," and the entry line shows the cell you selected to replicate, D7.

2. **Press** the return key.

Pressing the return key selects cell D7 as the cell to replicate; the prompt line then requests the target range.

3. **Select** cell D8 as the first cell of the target range.

4. **Type** a period (.), to indicate "through."

5. **Select** cell D11.

The entry line displays "D7...D7:D8...D11."

6. **Press** the return key.

VP Spreadsheet displays the formula up to the first cell reference on the entry line, and the message "Replicate: N=No change, R=Relative" on the prompt line. You type N for no change or R for a relative change to the cell reference.

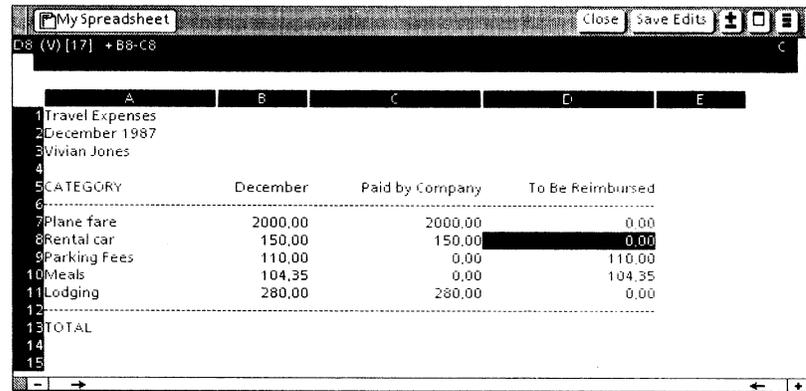
In a relative change, VP Spreadsheet updates the formula to reflect changes in its location. For example, if you have a formula in cell A3 that adds cells A1 and A2, and you replicate the formula to cell B3 with relative changes, the formula in B3 adds cells B1 and B2.

7. **Type:** R, to make a relative change to cell B7, the first cell in the formula.

The remainder of the formula up to the second cell reference, C7, appears on the entry line, and the prompt line redisplay the message "Replicate: N=No change, R=Relative."

8. Type: R, to make a relative change to cell C7.

Calculated values appear in cells D8 through D11.



5	CATEGORY	December	Paid by Company	To Be Reimbursed
6				
7	Plane fare	2000.00	2000.00	0.00
8	Rental car	150.00	150.00	0.00
9	Parking Fees	110.00	0.00	110.00
10	Meals	104.35	0.00	104.35
11	Lodging	280.00	280.00	0.00
12				
13	TOTAL			
14				
15				

9. Select cell D8, and look at the formula on the status line.

See how the original references to cells B7 and C7 are now B8 and C8.

Another way to view formulas is to select [Show Formulas] from the spreadsheet auxiliary menu. Refer to the *VP Spreadsheet and VP Office Accessories Reference* volume for more information.

10. Select [Save Edits].

---

## Writing a formula to calculate the TOTAL row values

---

1. Select cell B13 (to the right of the cell containing "TOTAL").
2. Type: @, to indicate the beginning of a function name.
3. Type: SUM, the function name.
4. Type: ( (an opening parenthesis), to introduce the range of cells to be summed.

5. **Select** cell B7 as the first cell in the range of cells.
6. **Type** a period (.), to indicate “through.”
7. **Select** cell B12 as the last cell in the range of cells.

Cell B12 contains the dashed line, not the last value. However, specifying it enables the formula to remain correct if additional rows of data are inserted after the last row of values, a common spreadsheet modification. Specifying cell B11 as the last cell would exclude from the @SUM total any rows inserted after row 11. The @SUM function ignores the contents of any cell containing text, such as the ruling line.

8. **Type:** ) (the closing parenthesis), and **press** the return key.

The @SUM total appears in cell B13.

9. **Replicate** the formula for cell B13 into cells C13 through D13, and **specify** relative changes for every cell reference.

The spreadsheet now looks like this.

	A	B	C	D	E
1	Travel Expenses				
2	December 1987				
3	Vivian Jones				
4					
5	CATEGORY	December	Paid by Company	To Be Reimbursed	
6	-----				
7	Plane fare	2000.00	2000.00	0.00	
8	Rental car	150.00	150.00	0.00	
9	Parking Fees	110.00	0.00	110.00	
10	Meals	104.35	0.00	104.35	
11	Lodging	280.00	280.00	0.00	
12	-----				
13	TOTAL	2644.35	2430.00	214.35	
14					
15					

10. **Select** [Save Edits].

---

## Writing a formula for the Paid by Company column values

---

You now replace the existing values in the Paid by Company column with conditional formulas.

**Conditional formula** A *conditional formula*, expressed by the @IF function, defines alternative values for a cell based on specified conditions. In this example, you set up the condition by first inserting a new column.

### Inserting a new column between columns A and B

---

1. **Select** any cell in column B (the December column).
2. **Type:** /I, for the Insert command.
3. **Type:** C, for Column.

A new column B appears between column A and the former column B (now column C).

### Entering the column label and dashed lines

---

1. **Select** cell B5, **type:** Code, and **press** the return key.
2. **Right-justify** the contents of cell B5 using the /FR command.
3. **Select** cell B6, **type:** --, and **press** the return key.
4. **Select** cell B12, **type:** --, and **press** the return key.

## Entering and formatting the column data

---

1. **Select** cell B7.

2. **Type:** 1, and **press** the return key.

Notice that the spreadsheet displays "1.00," because the spreadsheet format is currently set to the money format. The new column is to contain integers.

3. **Type:** /E, for the Format command.

4. **Type:** I, for the Integer format.

The value in cell B7 now appears as an integer.

5. **Press** <NEXT>.

6. **Type:** 1, **press** the return key, **change** the cell to Integer format, and **press** <NEXT>.

7. **Type:** 2, **press** the return key, **change** the cell to Integer format, and **press** <NEXT>.

8. **Type:** 2, **press** the return key, **change** the cell to Integer format, and **press** <NEXT>.

9. **Type:** 1, **press** the return key, and **change** the cell to Integer format.

## Entering the @IF formula in the Paid by Company column

---

1. **Select** cell D7 (the first cell in the Paid by Company column).

2. **Type:** @IF, to begin the IF function.

3. **Type:** (B7=1,C7,0)

This expression specifies that if the value in cell B7 is 1, the spreadsheet inserts the value contained in cell C7 into cell D7; otherwise, it inserts a zero into cell D7.

**4. Press the return key.**

The value (which remains the same) appears in cell D7.

This type of formula is useful for spreadsheet updating, because it automatically adjusts the values in the Paid by Company column every time a value changes in the monthly expense (December) column.

**5. Replicate** the contents of cell D7 into cells D8 through D11, and **specify** relative cell reference changes.

The spreadsheet looks like this.

CATEGORY	Code	December	Paid by Company	To Be Reimbursed
Plane fare	1	2000.00	2000.00	0.00
Rental car	1	150.00	150.00	0.00
Parking fees	2	110.00	0.00	110.00
Meals	2	104.35	0.00	104.35
Lodging	1	280.00	280.00	0.00
TOTAL		2644.35	2430.00	214.35

**6. Select [Save Edits].**

At this point, your exercise spreadsheet is essentially complete. In the next chapter, you manipulate rows and columns and study the effects. You also create a table that is a reorganized subset of the spreadsheet. Refer to the *VP Spreadsheet and VP Office Accessories Reference* volume for more information on entering formulas.

---

## 5. Manipulating rows and columns

In this chapter, you manipulate rows and columns on an existing spreadsheet and during conversion to a table.

---

### Inserting a new row

---

1. **Select** any cell in row 12 (the row containing the second dashed line).
2. **Type:** I, for the Insert command.
3. **Type:** R, to insert a row.

The new row appears.

---

### Entering the row contents

---

1. **Select** cell A12, and **type:** Other; then **select** the right-arrow function key.
2. **Type:** 2, and **press** the return key.
3. **Change** the format to Integer using the /F1 command; then **press** <NEXT>.
4. **Type:** 7.75, and **press** <NEXT>.
5. **Replicate** the contents of cell D11 into cell D12, and **specify** relative cell reference changes.
6. **Replicate** the contents of cell E11 into cell E12, and **specify** relative cell reference changes.

7. **Select** cell D14, and **look** at the @SUM formula on the status line.

The ending cell reference has changed to reflect the new row insertion.

8. **Type:** ↓, for the Calculate command.

The values remain unchanged.

The spreadsheet now looks like this.

	A	B	C	D	E
1	Travel Expenses				
2	December 1987				
3	Vivian Jones				
4					
5	CATEGORY	Code	December	Paid by Company	To Be Reimbursed
6	-----				
7	Plane fare	1	2000.00	2000.00	0.00
8	Rental car	1	150.00	150.00	0.00
9	Parking Fees	2	110.00	0.00	110.00
10	Meals	2	104.35	0.00	104.35
11	Lodging	1	280.00	280.00	0.00
12	Other	2	7.75	0.00	7.75
13	-----				
14	TOTAL		2652.10	2430.00	222.10
15					

9. **Select** [Save Edits].

---

## Reversing the Paid by Company and To Be Reimbursed columns

---

1. **Select** any cell in the To Be Reimbursed column.
2. **Type:** /M, for the Move command.
3. **Select** the cell in the same row in the Paid by Company column.

#### 4. Press the return key.

The columns switch places.

CATEGORY	Code	December	To Be Reimbursed	Paid by Company
Plane fare	1	2000,00	0,00	2000,00
Rental car	1	150,00	0,00	150,00
Parking fees	2	110,00	110,00	0,00
Meals	2	104,35	104,35	0,00
Lodging	1	280,00	0,00	280,00
Other	2	7,75	7,75	0,00
TOTAL		2652,10	222,10	2430,00

## Observing the effects of forward cell references

### 1. Close the spreadsheet, open it again, and then select a cell in the To Be Reimbursed column.

The values in the To Be Reimbursed column are no longer correct; zeros have been replaced by other numbers.

CATEGORY	Code	December	To Be Reimbursed	Paid by Company
Plane fare	1	2000,00	2000,00	2000,00
Rental car	1	150,00	150,00	150,00
Parking Fees	2	110,00	110,00	0,00
Meals	2	104,35	104,35	0,00
Lodging	1	280,00	280,00	280,00
Other	2	7,75	7,75	0,00
TOTAL		2652,10	2652,10	2430,00

**2. Type: !.**

The manual recalculation produces correct numbers.

Spreadsheet calculation takes place either row by row or column by column, but always from left to right and from top to bottom. Try to avoid creating spreadsheets that contain **forward references**, in which formulas refer to cells calculated later in the cycle. Forward cell references may require additional manual recalculation to produce correct values.

**3. Select** a cell in the Paid by Company column.

**4. Type: /M,** for the Move command.

**5. Select** the cell in the same row in the To Be Reimbursed column.

**6. Press** the return key.

The columns switch back to their original positions.

**7. Select** [Save Edits].

---

## Converting the spreadsheet to a different structure in a table

---

**1. Select** [MAKE TABLE] in the spreadsheet auxiliary menu.

The Make Table option sheet appears.

**2. Delete** the contents of the Columns option, and **type:**  
A,C,E

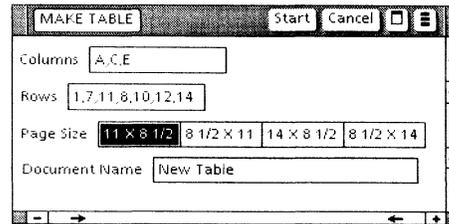
This entry specifies column A and columns C through E (omitting column B, the Code column).

**3. Delete** the contents of the Rows option, and **type:**  
1,7,11,8,10,12,14

This entry specifies rows 1 through 7, row 11, rows 8 through 10, and then rows 12 through 14.

4. Delete the contents of the Document Name option, and type: New Table.

The option sheet looks like this.



5. Select [Start].
6. Select [Close] in the spreadsheet window header, to save the spreadsheet contents and close the spreadsheet.
7. Open the New Table document, and view the results.



CATEGORY	December	Paid by Company	To Be Reimbursed
Travel Expenses			
December 1987			
Vivian Jones			
Plane fare	2000.00	2000.00	0.00
Lodging	280.00	280.00	0.00
Rental car	150.00	150.00	0.00
Parking fees	110.00	0.00	110.00
Meals	104.35	0.00	104.35
Other	7.75	0.00	7.75
TOTAL	2652.10	2430.00	222.10

You are now ready to begin creating your own spreadsheets. Refer to the *VP Spreadsheet and VP Office Accessories Reference* volume for more information.

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