

**The  
Power™  
of:**

**Calc Result™**  
For the Commodore 64



A Spectrum Book

**Calc**  
**Result™**



# The Power<sup>®</sup> Of: Calc Result<sup>™</sup>

by

Robert E. Williams

The Book To Be Used With:

- Calc Result Advanced Version
- Calc Result Easy

For The Commodore 64



Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632

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3543 N.E. Broadway, Portland, Oregon 97232  
(503) 287-1462

First Printing

10 9 8 7 6 5 4 3 2 1

ISBN 0-13-687773-7

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**Edited by: Estelle Phillips  
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Distributed by Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632.  
A Spectrum Book. Printed in the United States of America.

This book is available at a special discount when ordered in bulk quantities. Contact Prentice-Hall, Inc., General Publishing Division, Special Sales, Englewood Cliffs, N.J. 07632.

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## **PREFACE**

The Power Of: Calc Result is a book of exercises designed especially for users and potential users of the Calc Result computer program. By performing these simple step-by-step exercises, you will rapidly gain the ability to utilize the broad range of Calc Result capabilities that make it a most powerful software program available for personal size computers.

Better than an instruction book, The Power Of: Calc Result demonstrates the use of Calc Result through specific application samples.

The Power Of: Calc Result will show you how to apply the many functions of Calc Result, such as the Graph command and the Page command, and many other powerful functions and commands, no matter what your applications. These ten easy-to-follow exercises are designed to help you understand and use Calc Result operations. Business owners, accountants, financial analysts, stock brokers, homeowners, manufacturers, engineers, educators, scientists, architects, students, or anyone with a problem that can be solved using a computer, will find The Power Of: Calc Result an invaluable companion to their Calc Result program.

No special training is needed to benefit from the exercises in The Power Of: Calc Result. All instructions are in plain English. The logic of each step is clearly spelled out, so that you can later apply the information to your specific needs. The Power Of: Calc Result will become your most valuable reference book as you expand your use of Calc Result.

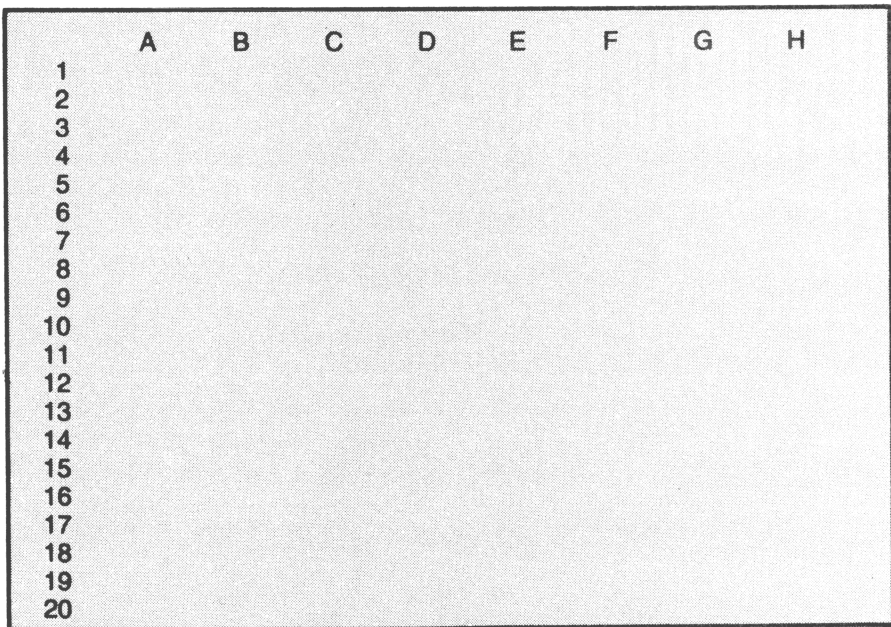
**IF YOU OWN OR ARE THINKING OF OWNING CALC RESULT,  
YOU SHOULD OWN THIS BOOK!**



# INTRODUCTION

The exercises in this book have been purposely designed to provide an opportunity to easily follow the logic of Calc Result functions, and then apply those functions to specific problem-solving situations. Each exercise is self-contained. Each demonstrates some special ability or abilities we have used in solving clients' problems. The discovery of some of these abilities, we feel, is unique to our use, since we have not found anyone else who knows of their existence.

The Calc Result format is arranged on the computer screen in columns and rows. The Calc Result format is illustrated in Figure 1. The columns are identified by letter designations, the rows by numbers. Each position where a column and row intersect is a cell, or location, like on a street map. The relationships between values in these cells are determined by simple instructions entered into the cells in the form of algebraic formulas. (Don't get panicky; that just means  $(a + b)$  and other similar expressions.) Visualizing the street map image and following the exercises, you will easily and quickly catch on to the power of Calc Result and how it can work for you.



	A	B	C	D	E	F	G	H
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

**Figure 1.**



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## EXERCISE ONE

# ACCOUNTS RECEIVABLE AGEING REPORT

### DESCRIPTION

The Calc Result ability to move specific blocks of data to disk storage has been employed in this example to shift values from one area of the worksheet for reentry in other worksheet areas, for referencing and for use in formulas.

To demonstrate Calc Result's ability, an Accounts Receivable Ageing Report ledger has been set up. To age the accounts listed, an updating operation is performed once a month. Current accounts and those over 30 days old, along with a blank column immediately to their left, are moved to a storage disk, then reentered on the ledger sheet, repositioned one column to the right. The over 60 day and over 90 day values are moved to a storage disk, then reentered in a Work Area for an accumulating function.

# 1 EXERCISE Accounts Receivable Ageing Report

## OPERATIONS PERFORMED

Setting Up The Format

Entering Mathematical Formulas

Making Ledger Entries

Ledger Updating

Making Monthly Entries

Making Additional Entries

Saving

Printing

Loading Your Worksheet Back Into Memory

## FUNCTIONS USED

SUM

## COMMANDS USED

### SYSTEM COMMAND

BLANK

DISK

EDIT

RECALCULATE

—

### DISK COMMAND

DIF-File

LOAD

SAVE

### EDIT COMMAND

COPY

PRINT

REPLICATE

### GLOBAL COMMAND

FORMAT

## SETTING UP THE FORMAT

To set up your worksheet, USE THE FOLLOWING DIRECTIONS.

First format all locations to display the values with two decimal places.

Leave your cursor on any location and press:

- F7** starts SYSTEM commands
- G** starts GLOBAL command
- F** starts FORMAT command
- \$** selects \$ option, to display in two decimal places

AFTER READING THE FOLLOWING NOTE, type in your labels as illustrated Figure 1, retaining exact row and column locations of all information.

	A	B	C	D	E	F	G	H	I
1	Customer		Current	Over 30	Over 60	Over 90	Total		Work Area
2	Name		Billing	Days	Days	Days	Due	Old 60	Old 90
3	-----								
4									
5									
6									
7									
8									
9									
10									
11									
12	=====								
13									

Figure 1

**1** EXERCISE Accounts Receivable Ageing Report

**NOTE**

Before entering each label, you must first press the space bar once.

**NOTE**

When entering a label that contains more characters than the width of the column allows, you must move the cursor to the next adjacent column and continue typing the label.

After you have entered your labels, you will enter the dashed line in row 3. To do this,

Place your cursor on A3 and press:

- F7** starts SYSTEM command
- selects — COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
- character to be repeated

The column your cursor is on will now have a dashed line across its width.

To extend the dashed line, in the same row, across the other columns,

Leave your cursor on A3 and press:

- F7** starts SYSTEM commands
- E** selects EDIT Command

- R** selects Replicate option and displays Source Range From A3
- RETURN RETURN** displays Target Range From
- B3 RETURN** displays Target Range From B3 To
- I3** displays Target Range From B3 To I3
- RETURN** executes the command

To enter the double-dashed line in row 12,

Place your cursor on A12 and press:

- F7** starts SYSTEM command
- selects — COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
- =** character to be repeated

The column your cursor is on will now have a double-dashed line across its width.

To extend the double-dashed line, in the same row, across the other columns,

Leave your cursor on A12 and press:

- F7** starts SYSTEM commands
- E** selects EDIT Command
- R** selects Replicate option and displays Source Range From A12
- RETURN RETURN** displays Target Range From
- B12 RETURN** displays Target Range From B12 To
- I12** displays Target Range From B12 to I12
- RETURN** executes the command

Your worksheet should now look like Figure 1.

## ENTERING MATHEMATICAL FORMULAS

Now that you have entered your labels and the dashed and double-dashed lines, you will enter the mathematical formulas which will establish the relationship between column and row locations. The formulas and their locations are illustrated in Figure 2.

### NOTE

If you make a mistake when entering a formula, you must first erase it, by using the BLANK command, before reentering your formula. To do this:

With your cursor on the cell you wish to erase, press:

**F7** starts SYSTEM commands

**B** starts BLANK command

The cell your cursor is on will be empty, and you may reenter your formula.

### NOTE

You must first enter zero values into the cells which will not contain formulas, so that later, when you enter formulas into other cells, the formulas will calculate correctly.

First you will enter zero values into the Current Billing, Over 30 Days and Over 60 Days columns.

Place your cursor on C4 and type:

**0** value

**RETURN** enters the value

Place your cursor on D4 and type:

0 value  
RETURN enters the value

Place your cursor on E4 and type:

0 value  
RETURN enters the value

Now you will copy the zero values just entered down their respective columns.

Place your cursor on C4 and press:

F7 starts SYSTEM commands  
E starts EDIT command  
R selects Replicate option and displays Source Range From C4 To  
RETURN displays Source Range From C4 To  
E4 displays Source Range From C4 To E4  
RETURN displays Target Range From  
C5 RETURN displays Target Range From C5 To  
C11 displays Target Range From C5 To C11  
RETURN executes the command

Now you will enter zero values into columns H and I, above the double-dashed line.

Place your cursor on H4 and type:

0 value to be entered  
RETURN enters the value

Place your cursor on I4 and type:

0 value to be entered  
RETURN enters the value

# 1 EXERCISE Accounts Receivable Ageing Report

Now you will copy the zero values down their respective columns.

Place your cursor on H4 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From H4
- RETURN** displays Source Range From H4 to
- I4** displays Source Range From H4 to I4
- RETURN** displays Target Range From
- H5 RETURN** displays Target Range From H5 To
- H11** displays Target Range From H5 to H11
- RETURN** executes the command

Now that all the zero values are entered, you are ready to enter the formulas.

Formula one, in the Current Billing column, immediately underneath the double-dashed line, will add the values in the Current Billing column.

Place your cursor on C13 and type:

- SUM ( C 3 : C 1 2 )** formula
- RETURN** enters the formula

Your next operation is to copy the formula you have just entered to the bottom of each column you wish to add.

Leave your cursor on C13 and press:

- F7** starts SYSTEM commands
- E** starts EDIT Command
- R** selects Replicate option and displays Source Range From C13 To

<b>RETURN</b>	<b>RETURN</b>	displays Target Range From
<b>D13</b>	<b>RETURN</b>	displays Target Range From D13 To
<b>G13</b>		displays Target Range From D13 To G13
<b>RETURN</b>		executes the command and prepares to receive additional instructions
<b>R</b>		selects Relative, which tells the command
<b>R</b>		to copy the cell address in the formula relative to its new location

Formula two, in the Over 90 Days column, immediately underneath the dashed line, adds the values in the two Work Area columns, and displays the answer in the Over 90 Days column. This value will reflect the accumulated value of accounts receivable held more than 90 days.

Place your cursor on F4 and type:

**SUM ( H 4 : I 4 )** formula

**RETURN** enters the formula

Formula three, in the Total Due column, immediately underneath the dashed line, adds the sum of the values in each column in the row to the left.

Place your cursor on G4 and type:

**SUM ( C 4 : F 4 )** formula

**RETURN** enters the formula

It will now be necessary to copy the two formulas just entered into each row in their respective columns (Over 90 Days and Total Due).

Place your cursor on F4 and type:

**F7** starts SYSTEM commands

**E** starts EDIT Command

**R** selects Replicate option and displays Source Range From F4 To

**RETURN** displays Source Range From F4 To

# 1 EXERCISE Accounts Receivable Ageing Report

- G4 displays Source Range From F4 To G4
- RETURN** displays Target Range From
- F5 **RETURN** displays Target Range From F5 To
- F11 displays Target Range From F5 To F11
- RETURN** executes the command and prepares to receive additional instructions
- R selects Relative, which tells the command to copy the cell address in the formula relative to its new location
- R
- R
- R
- R

Your worksheet should now look like Figure 2.

	A	B	C	D	E	F	G	H	I
1	Customer		Current	Over 30	Over 60	Over 90	Total	Work Area	
2	Name		Billing	Days	Days	Days	Due	Old 60	Old 90
3	-----								
4			0.00	0.00	0.00	0.00	0.00	0.00	0.00
5			0.00	0.00	0.00	0.00	0.00	0.00	0.00
6			0.00	0.00	0.00	0.00	0.00	0.00	0.00
7			0.00	0.00	0.00	0.00	0.00	0.00	0.00
8			0.00	0.00	0.00	0.00	0.00	0.00	0.00
9			0.00	0.00	0.00	0.00	0.00	0.00	0.00
10			0.00	0.00	0.00	0.00	0.00	0.00	0.00
11			0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	-----								
13			0.00	0.00	0.00	0.00	0.00		
			SUM (C3: C12)		SUM (H4: I4)		SUM (C4: F4)		

Figure 2

## MAKING LEDGER ENTRIES

Your Accounts Receivable Ageing Ledger is now set up. Once a month, all you have to do is perform the update process, described in the next section, and make current billing entries.

To perform the following series of exercises, **FIRST READ THE FOLLOWING NOTES, AND THEN TYPE IN THE ENTRIES** into columns A, C, D, E and I, illustrated in Figure 3. For this example, entries have been selected to illustrate a ledger in operation more than 90 days.

### NOTE

DO NOT TYPE IN THE OVER 90 DAYS COLUMN. The value to be shown in the Over 90 Days column should be typed in the OLD 90 COLUMN in the WORK AREA, in the same row. It will be displayed in the Over 90 Days column by the formula entered there.

Column B must remain blank for this example.

### NOTE

If you accidentally type in a value into a cell containing a formula, Calc Result will display ERROR on your screen.

Now that your entries have been typed in, your worksheet should look like Figure 3.

**1** EXERCISE Accounts Receivable Ageing Report

	A	B	C	D	E	F	G	H	I
1	Customer		Current	Over 30	Over 60	Over 90	Total	Work Area	
2	Name	Billing	Days	Days	Days	Due	Old 60	Old 90	
3	-----								
4	Acme Co.		0.00	45.00	0.00	0.00	45.00	0.00	0.00
5	Bell Co.		0.00	0.00	25.00	45.00	70.00	0.00	45.00
6	Koll Co.		0.00	56.58	0.00	0.00	56.58	0.00	0.00
7	Maxel Co		0.00	0.00	0.00	89.00	89.00	0.00	89.00
8	Reddy Co		0.00	0.00	35.00	0.00	35.00	0.00	0.00
9	Ajax Co.		75.16	0.00	0.00	15.00	90.16	0.00	15.00
10	Ziplok		84.00	0.00	0.00	0.00	84.00	0.00	0.00
11	Milti-Cr		3578.00	0.00	0.00	0.00	3578.00	0.00	0.00
12	=====								
13			3737.16	101.58	60.00	149.00	4047.74		

**Figure 3**

Now you can proceed with the Ledger Updating procedure.

**LEDGER UPDATING**

To perform the updating process, you will first save the Over 90 Days column, onto a disk storage file, using the DIF (Data Interchange Format) command.

The second step will be to copy the Over 60 Days column to the Old 60 column, using the COPY command.

The third step will be to copy the Blank column (column B), the Current Billing column and the Over 30 Days column to the Current Billing column, the Over 30 Days column and the Over 60 Days column, using the COPY command. This moves each of the values to the right, into its new ageing column, and clears the Current Billing column.

The fourth step will be to blank the Old 90 column because the DIF command will not load into cells with values already entered there.

The fifth step will be to load the Over 90 Days into the Old 90 column in the Work Area.

The last step will be to perform a manual recalculation.

To perform the first step, saving the Over 90 Days column into a DIF, place a formatted data diskette into Drive A.

Place your cursor on F4 and press:

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>D</b>	selects DIF-File option
<b>S</b>	selects Save option
<b>RETURN</b>	prepares to receive additional information
<b>NINETYDAY</b>	name of column to be saved
<b>RETURN</b>	displays From F4 to
<b>RETURN</b>	prepares to receive additional information
<b>F11</b>	last cell in column to be saved
<b>RETURN</b>	displays By Rows or By Columns
<b>R</b>	executes the command and saves the values in row format

To perform step two, copying the Over 60 Days column to the Old 60 column in the Work Area,

Place your cursor on E4 and press:

<b>F7</b>	starts SYSTEM command
<b>E</b>	starts EDIT command
<b>C</b>	starts COPY command and displays Source Range From E4
<b>RETURN</b>	prepares to receive additional information

# 1 EXERCISE Accounts Receivable Ageing Report

- E11** last cell to copy from
- RETURN** prepares to receive additional information
- H4** Target Range, From H4
- RETURN** executes the command

To perform step three, you will copy column B (blank), the Current Billing and the Over 30 Days columns into the Current Billing column, the Over 30 Days column and the Over 60 Days column, using the COPY command.

Place your cursor on B4 and press:

- F7** starts SYSTEM command
- E** starts EDIT command
- C** starts COPY command
- RETURN** displays From B4 to B4
- D11** displays From B4 to D11, area to be copied
- RETURN** prepares to receive additional information
- C4** displays Target Range From C4
- RETURN** executes the command

To perform step four, you will first blank the Old 90 column because the DIF command will not load into cells with values already there. Then you will load the Over 90 Days column into the Old 90 column, using the DIF command.

Place your cursor on I4 and press:

- F7** starts SYSTEM command
- B** starts BLANK command
- Press F7** starts SYSTEM command
- E** starts EDIT command
- R** starts Replicate option
- RETURN RETURN** displays Target Range

- I5** first cell to copy the blank to  
**RETURN** prepares to receive additional information
- I11** last cell to copy the blank to  
**RETURN** executes the command

To continue with step four, you will load the Over 90 Days column into the Old 90 column in the Work Area.

Leave your cursor on I4 and press:

- F7** starts SYSTEM command
- D** starts DISK command
- D** starts DIF-File command
- L** selects Load option  
**RETURN** prepares to receive additional information
- NINETYDAY** name of column to be loaded  
**RETURN** displays From I4  
**RETURN** displays By Row or By Columns
- R** executes the command and saves the values in row format

Now perform a recalculation by pressing the up arrow (**not** the cursor).

Enter zero values into the Current Billing column. You have now completed your monthly update of existing entries.

Your ledger should now look like Figure 4.

**1** EXERCISE Accounts Receivable Ageing Report

	A	B	C	D	E	F	G	H	I
1 Customer		Current	Over 30	Over 60	Over 90	Total		Work Area	
2 Name		Billing	Days	Days	Days	Due		Old 60	Old 90
3	-----								
4 Acme Co.		0.00	0.00	45.00	0.00	45.00		0.00	0.00
5 Bell Co.		0.00	0.00	0.00	70.00	70.00		25.00	45.00
6 Koll Co.		0.00	0.00	56.58	0.00	56.58		0.00	0.00
7 Maxel Co		0.00	0.00	0.00	89.00	89.00		0.00	89.00
8 Reddy Co		0.00	0.00	0.00	35.00	35.00		35.00	0.00
9 Ajax Co.		0.00	75.16	0.00	15.00	90.16		0.00	15.00
10 Ziplok		0.00	84.00	0.00	0.00	84.00		0.00	0.00
11 Milti-Cr		0.00	3578.00	0.00	0.00	3578.00		0.00	0.00
12	=====								
13		0.00	3737.16	101.58	209.00	4047.74			

**Figure 4**

Now you are ready to enter the transactions that have accumulated during the month just passed.

**MAKING MONTHLY ENTRIES**

Monthly ledger entries will take two forms: payments and current billings.

To make current billing entries, type them directly into the Current Billing column.

To make a payment entry into the Over 30 Days or the Over 60 Days columns, press your cursor on the value you wish to deduct from and press:

**F8** displays, at top of screen, the value your cursor is on

Move your cursor so that it immediately follows the value.

Type a minus sign.

Then type the amount you wish to deduct.

**RETURN** enters the new value

To make a payment entry into the Over 90 Days column, first be sure to read the following note:

### NOTE

To make payment entries for Over 90 Days, DO NOT TYPE THEM DIRECTLY INTO THE OVER 90 DAYS COLUMN. Make your entries for Over 90 Days into the OLD 90 COLUMN OF THE WORK AREA.

After you make an entry into the Old 90 column, the value will be displayed in the Over 90 Days column because of the formula entered there.

USE THE FOLLOWING INSTRUCTIONS for making a payment entry in the Over 90 Days column.

Place your cursor in the Old 90 column, in the adjacent Work Area, in the same row, containing a value, and press:

**F8** displays, at top of screen, the value your cursor is on

Move your cursor so that it immediately follows the value.

Type a minus sign.

Type in the amount you wish to deduct.

**RETURN** enters the new value

The value will now appear in the Over 90 Days column.

## SAVING

Be sure you have a formatted data diskette in Drive A.

## 1 EXERCISE Accounts Receivable Ageing Report

Leave your cursor on any location and press:

- F7** starts SYSTEM command
- D** starts DISK command
- S** selects SAVE option
- RETURN** prepares to receive additional information

Type in file name.

- RETURN** executes the command

If the worksheet has been saved previously, you will see Replace? displayed on your screen. You will then type Y, for Yes.

If you see Save All Pages? displayed on your screen, type Y, for Yes.

## PRINTING

To print out your worksheet, place your cursor on A1 and press:

- F7** starts SYSTEM command
- E** starts EDIT command
- P** starts PRINT command
- D** selects Direct print option
- RETURN** displays Print A1 To:

Type in the lower right-hand cell address of the worksheet area rectangle that you wish to print.

- RETURN** executes the command

## LOADING YOUR WORKSHEET BACK INTO CALC RESULT

It is not necessary to clear your screen before loading a worksheet into Calc Result. Just make sure you have saved whatever is on your screen before loading in a new worksheet.

With your cursor on any location, press:

- |               |  |
|---------------|--|
| <b>F7</b>     | starts SYSTEM command                      |
| <b>D</b>      | starts DISK command                        |
| <b>L</b>      | selects Load option                        |
| <b>RETURN</b> | prepares to receive additional information |

Type in name of file to be loaded.

- |               |                      |
|---------------|----------------------|
| <b>RETURN</b> | executes the command |
|---------------|----------------------|

If you see Load All pages? displayed on your screen, type Y, for Yes.

### NOTE

After following the above instructions for loading, press F1, which guarantees the loading of all the pages in the file.



## EXERCISE TWO

# COST RECOVERY

### DESCRIPTION

In this exercise, you will use the Calc Result ability to select the minimum or maximum of values when compared to a fixed value. The exercise is designed to record a declining balance as entries accumulate against the fixed value. An increasing positive balance is recorded when the fixed value is surpassed.

To demonstrate Calc Result's abilities, a Cost Recovery worksheet has been set up listing the equipment stocked by an equipment rental company. Each piece of equipment offered for rent has been listed, and the purchase price entered in the ledger. As the company receives rental income from the equipment, the cumulative amount is entered on the ledger sheet once a month. Your ledger format deducts the rental income from the purchase price of the item rented and displays the declining balance until the full cost is recovered. It then enters the above-cost profits as they accumulate. Once a month, an operation is performed to advance the ageing record of the equipment listed, providing a record of how long each piece of equipment has been in service, and to update the ledger.

## OPERATIONS PERFORMED

Setting Up The Format

Entering Mathematical Formulas

Making Ledger Entries

Ledger Updating

Saving

Printing

Loading Your Worksheet Back Into Memory

## FUNCTIONS USED

Then/Else

## COMMANDS USED

SYSTEM

BLANK

DISK

EDIT

FORMAT

GLOBAL

RECALCULATE

—

DISK COMMAND

DIF-File

LOAD

SAVE

EDIT COMMAND

COPY

PRINT

REPLICATE

FORMAT COMMAND

\$

LEFT

GLOBAL

COLUMN WIDTH

FORMAT

RECALCULATION

## SETTING UP THE FORMAT

To set up your ledger sheet, USE THE FOLLOWING DIRECTIONS.

First format all locations to display the values with two decimal places.

Leave your cursor on any location and press:

- F7** starts SYSTEM commands
- G** starts GLOBAL command
- F** starts FORMAT command
- \$** selects \$ option, to display in two decimal places

AFTER READING THE FOLLOWING NOTE, type in your labels, as illustrated in Figure 1, retaining exact row and column locations of all information.

	A	B	C	D	E	F	G	H
1	Item	Purchase	Rent	Invest.	Profit		Work Area	
2	Name	Price	Rec'd	Balance	Margin		Balance Margin	
3	-----							
4								
5								
6								
7								
8								
9								
10								
11	=====							
12								

Figure 1

**2** EXERCISE Cost Recovery

**NOTE**

Before entering each label, you must first press the space bar once.

**NOTE**

When entering a label that contains more characters than the width of the column allows, you must move the cursor to the next adjacent column and continue typing the label.

After you have entered your labels, you will enter the dashed line in row 3.

Place your cursor on A3 and press:

- F7** starts SYSTEM command
- starts — COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
- character to be repeated

The column your cursor is on will now have a dashed line across its width.

To extend the dashed line, in the same row, across the other columns.

Leave your cursor on A3 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From A3
- RETURN RETURN** displays Target Range From

- B3** **RETURN** displays Target Range From B3 To
- H3** displays Target Range From B3 To H3
- RETURN** executes the command

To enter the double-dashed line in row 11,

Place your cursor on A11 and press:

- F7** starts SYSTEM commands
- selects **—** command, which causes automatic repetition of characters at cell cursor is on and displays Repeat Character?
- =** character to be repeated

The column your cursor is on will now have a double-dashed line across its width.

To extend the double-dashed line, in the same row,

Leave your cursor on A11 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From A11
- RETURN** **RETURN** displays Target Range From
- B11** **RETURN** displays Target Range From B11 To
- E11** displays Target Range From B11 To E11
- RETURN** executes the command

Your worksheet should now look like Figure 1.

## ENTERING MATHEMATICAL FORMULAS

Now that you have entered your labels and the dashed and double-dashed lines, you will enter the mathematical formulas which will establish the relationship between column and row locations. The formulas and their locations are illustrated in Figure 2.

	A	B	C	D	E	F	G	H
1	Item	Purchase	Rent	Invest.	Profit		Work Area	
2	Name	Price	Rec'd	Balance	Margin		Balance Margin	
3	-----							
4		0.00	0.00	0.00	0.00	B4	0.00	0.00
5		0.00	0.00	0.00	0.00		0.00	0.00
6		0.00	0.00	0.00	0.00		0.00	0.00
7		0.00	0.00	0.00	0.00		0.00	0.00
8		0.00	0.00	0.00	0.00		0.00	0.00
9		0.00	0.00	0.00	0.00		0.00	0.00
10		0.00	0.00	0.00	0.00		0.00	0.00
11	=====							
12		0.00	0.00	0.00	0.00			

SUM(B3:B11)

IF((G4-C4)>0)THEN(G4-C4)ELSE(0)

ABS(IF((G4-C4)>0)THEN(0)ELSE(G4-C4))+H4

Figure 2

**NOTE**

If you make a mistake when entering a formula, you must first erase it, by using the BLANK command, before reentering your formula. To do this:

With your cursor on the cell you wish to erase, press:

**F7** starts SYSTEM commands

**B** starts BLANK command

The cell your cursor is on will be empty, and you may reenter your formula.

**NOTE**

You must first enter zero values into the cells which will not contain formulas, so that later, when you enter formulas into other cells, the formulas will calculate correctly.

To do this,

Place your cursor on B4 and type:

**0** value

**RETURN** enters the value

Place your cursor on C4 and type:

**0** value

**RETURN** enters the value

Now you will copy the zero values down their respective columns, to the double-dashed line.

## 2 EXERCISE Cost Recovery

Place your cursor on B4 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From B4 To
- RETURN** displays Source Range From B4 To
- C4** displays Source Range From B4 To C4
- RETURN** displays Target Range From
- B5 RETURN** displays Target Range From B5 To
- B10** displays Target Range From B5 To B10
- RETURN** executes the command

Now you will enter a zero value in column H of the Work Area.

Place your cursor on H4 and type:

- 0** value
- RETURN** enters the value

Copy the zero value down column H.

Leave your cursor on H4 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From H4
- RETURN RETURN** displays Target Range From
- H5 RETURN** displays Target Range From H5 To
- H10** displays Target Range From H5 To H10
- RETURN** executes the command

Formula one, in column D, the Invest. Balance column, displays the unrecovered purchase cost of each item listed. When the full purchase cost of each piece of equipment is recovered, the Invest. Balance column will display 0.00 opposite that item.

Place your cursor on D4 and type:

**IF (( G4 — C4 ) > 0 ) THEN ( G4 — C4 ) ELSE ( 0 )** formula

**RETURN** enters the formula

You will now see NA displayed. Later, when all the formulas have been entered, 0.00 will automatically be displayed in place of the NA.

Formula two, in column E, the Profit Margin column, displays accumulated gross profits when purchase cost of the listed item has been recovered, and adds the value in the Work Area, Margin column.

Place your cursor on E4 and type:

**ABS ( IF ( (G4 — C4) > 0 ) THEN ( 0 ) ELSE (G4 — C4) ) + H4** formula

**RETURN** enters the formula

You will now see NA displayed. Later, when all the formulas have been entered, 0.00 will automatically be displayed in place of the NA.

Formula three, in column G, in the Work Area, Balance column, displays the original purchase price in the Work Area column.

Place your cursor on G4 and type:

**B4** original purchase price

**RETURN** enters the formula

Your next operation is to copy the formulas just entered at the top of each column into each row in their respective columns.

Place your cursor on D4 and press:

**F7** starts SYSTEM commands

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From D4 To

**RETURN** displays Source Range From D4 To

**G4** displays Source Range From D4 To G4

**RETURN** displays Target Range From

**D5 RETURN** displays Target Range From D5 To

**D10** displays Target Range From D5 To D10

**RETURN** executes the command and prepares to receive additional instructions



## MAKING LEDGER ENTRIES

Your Cost Recovery Ledger is now set up so once a month all you have to do is perform the update process, described in the next section, and make current billing entries.

NOW TYPE IN THE ENTRIES in the Item Name, Purchase Price and Rent Rec'd columns, exactly as they are shown in Figure 3.

After making your entries, your worksheet should look like Figure 3.

	A	B	C	D	E	F	G	H
1	Item	Purchase	Rent	Invest.	Profit		Work Area	
2	Name	Price	Rec'd	Balance	Margin		Balance Margin	
3	-----							
4	Hammer	25.00	5.00	20.00	0.00		25.00	0.00
5	Trailer	675.00	155.00	520.00	0.00		675.00	0.00
6	Shovel	55.00	89.00	0.00	34.00		55.00	0.00
7	Bike	255.00	15.00	240.00	0.00		255.00	0.00
8	Truck	6500.00	250.00	6250.00	0.00		6500.00	0.00
9	Motor	152.00	225.00	0.00	73.00		152.00	0.00
10	Ax	89.00	18.00	71.00	0.00		89.00	0.00
11	=====							
12		7751.00	757.00	7101.00	107.00			

Figure 3

## LEDGER UPDATING

The first operation in the updating process is to transfer the values in the Invest. Balance and Profit Margin columns into a storage file on a disk, using the DIF command. The values will be filed under the name MONTHTOTAL. Next you will blank the Work Area, because you cannot enter values where values are already present. Then you will reenter the MONTHTOTAL values you have saved into the Work Area, in columns G and H. The last operation in the updating process is to blank, using the BLANK command, the amounts in the Rent Rec'd column. To accomplish this updating process,

## 2 EXERCISE Cost Recovery

Place a blank formatted data diskette in Drive A.

Place your cursor on D4 (the upper left-hand cell of the rectangular area of your ledger sheet you wish to copy into the storage file) and press:

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>D</b>	selects DIF-File command
<b>S</b>	selects Save option
<b>RETURN</b>	prepares to receive additional information
<b>MONTHTOTAL</b>	name of file to be saved
<b>RETURN</b>	displays From D4 to
<b>RETURN</b>	prepares to receive additional information
<b>E10</b>	lower right-hand corner of rectangular area to be saved
<b>RETURN</b>	displays By Rows or By Columns
<b>C</b>	executes the command and saves the values in column format

The next operation is to reenter the values you have just saved into the Work Area columns, G and H.

FIRST YOU MUST BLANK the Work Area columns, because Calc Result will not allow you to enter values into cells which already have values in them.

Place your cursor on G4 and press:

<b>F7</b>	starts SYSTEM command
<b>B</b>	starts BLANK command and blanks the value in G4

Place your cursor on H4 and press:

<b>F7</b>	starts SYSTEM command
<b>B</b>	starts BLANK command and blanks the value in H4

Now you will copy these blank cells down columns G and H, using the Replicate option.

Place your cursor on G4 and press:

- F7** starts SYSTEM command
- E** starts EDIT command
- R** selects Replicate option
- RETURN** displays Source Range From G4 To
- H4** displays Source Range From G4 To H4
- RETURN** displays Target Range From
- G5 RETURN** displays Target Range From G5
- G10** displays Target Range From G5 to G10
- RETURN** executes the command

Now you will reenter the Month's Totals into the Work Area.

Leave your cursor on G4 and press:

- F7** starts SYSTEM commands
- D** starts DISK command
- D** starts DIF-File command
- L** selects Load option
- RETURN** prepares to receive additional information
- MONTHTOTAL** name of file to be loaded
- RETURN** displays From G4
- RETURN** displays By Row or By Columns
- C** executes the command and loads the values in column format

Now you will blank the Rent Rec'd column.

Place your cursor on C4 and press:

## 2 EXERCISE Cost Recovery

**F7** starts SYSTEM command

**B** starts BLANK command

Next you will copy this blank cell down the Rent Rec'd column.

Leave your cursor on C4 and press:

**F7** starts SYSTEM command

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From C4

**RETURN** **RETURN** displays Target Range From

**C5** **RETURN** displays Target Range From C5 To

**C10** displays Target Range From C5 to C10

**RETURN** executes the command

Now that you have blanked the Rent Rec'd column you must reenter zero values in that column, so that the formulas on your worksheet will calculate correctly.

Leave your cursor on C4 and type:

**0** value

**RETURN** enters the value

Now copy the zero value down the column.

Leave your cursor on C4 and press:

**F7** starts SYSTEM commands

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From C4

**RETURN** **RETURN** displays Target Range From

**C5** **RETURN** displays Target Range From C5 to

**C10** displays Target Range From C5 To C10

**RETURN** executes the command

To be sure all formulas have calculated correctly, press the up arrow which recalculates all formulas.

Your ledger should now look like Figure 4.

	A	B	C	D	E	F	G	H
1	Item	Purchase	Rent	Invest.	Profit		Work Area	
2	Name	Price	Rec'd	Balance	Margin		Balance	Margin
3	-----							
4	Hammer	25.00	0.00	20.00	0.00		20.00	0.00
5	Trailer	675.00	0.00	520.00	0.00		520.00	0.00
6	Shovel	55.00	0.00	0.00	34.00		0.00	34.00
7	Bike	255.00	0.00	240.00	0.00		240.00	0.00
8	Truck	6500.00	0.00	6250.00	0.00		6250.00	0.00
9	Motor	152.00	0.00	0.00	73.00		0.00	73.00
10	Ax	89.00	0.00	71.00	0.00		71.00	0.00
11	=====							
12		7751.00	0.00	7101.00	107.00			

**Figure 4**

Your ledger is now ready for entry of the rental incomes for the preceding month. Type the entries into the appropriate spaces in the Rent Rec'd column, as illustrated in Figure 5.

When you have completed your Rent Rec'd entries, press:

**UP ARROW** recalculates all formulas

Your worksheet should now look like Figure 5.

2 EXERCISE Cost Recovery

	A	B	C	D	E	F	G	H
1	Item	Purchase	Rent	Invest.	Profit		Work Area	
2	Name	Price	Rec'd	Balance	Margin		Balance	Margin
3	-----							
4	Hammer	25.00	35.00	0.00	15.00		20.00	0.00
5	Trailer	675.00	200.00	320.00	0.00		520.00	0.00
6	Shovel	55.00	20.00	0.00	54.00		0.00	34.00
7	Bike	255.00	0.00	240.00	0.00		240.00	0.00
8	Truck	6500.00	2500.00	3750.00	0.00		6250.00	0.00
9	Motor	152.00	25.00	0.00	98.00		0.00	73.00
10	Ax	89.00	45.00	26.00	0.00		71.00	0.00
11	=====							
12		7751.00	2825.00	4336.00	167.00			

Figure 5

## SAVING

Now save your worksheet for future use, so that the next time you wish to figure these computations all you will need to do is enter in your new known values, and you will not need to retype in the labels or enter the formulas.

Be sure you have a formatted data diskette in Drive A.

Leave your cursor on any location and press:

**F7** starts SYSTEM command

**D** starts DISK command

**S** selects SAVE option

**RETURN** prepares to receive additional information

Type in file name.

**RETURN** executes the command

If the worksheet has been saved previously, you will see **Replace?** displayed on your screen. You will then type **Y**, for Yes.

If you see **Save All Pages?** displayed on your screen, type **Y**, for Yes.

## PRINTING

To print out your worksheet, place your cursor on **A1** and press:

<b>F7</b>	starts <b>SYSTEM</b> command
<b>E</b>	starts <b>EDIT</b> command
<b>P</b>	starts <b>PRINT</b> command
<b>D</b>	selects <b>Direct print</b> option
<b>RETURN</b>	displays <b>Print A1 To:</b>

Type in the lower right-hand cell address of the worksheet area rectangle that you wish to print.

<b>RETURN</b>	executes the command
---------------	----------------------

## LOADING YOUR WORKSHEET BACK INTO CALC RESULT

It is not necessary to clear your screen before loading a worksheet into Calc Result. Just make sure you have saved whatever is on your screen before loading in a new worksheet.

## 2 EXERCISE Cost Recovery

With your cursor on any location, press:

**F7** starts SYSTEM command

**D** starts DISK command

**L** selects Load option

**RETURN** prepares to receive additional information

Type in name of file to be loaded.

**RETURN** executes the command

If you see Load All Pages? displayed on your screen, type Y, for Yes.

### NOTE

After following the above instructions for loading, press F1, which guarantees the loading of all the pages in the file.

## EXERCISE THREE

# MAINTAINING A STOCK PORTFOLIO

### DESCRIPTION

To demonstrate Calc Result's Graphic abilities, we have set up a stock portfolio which can be used to compute a purchase gross amount, a market gross amount, the gain in dollars and the gain in percent, as well as the expected return and return ratio. The high and low estimates and the Beta percentages in this exercise were taken from the Value Line Investment Survey newsletter, which gives you the high and low estimates for a four-year period.

### 3 EXERCISE Maintaining a Stock Portfolio

## OPERATIONS PERFORMED

Setting Up The Format

Entering Mathematical Formulas

Making Worksheet Entries

Graphing

Saving

Printing The Graph

Printing The Worksheet

Loading Your Worksheet Back Into Calc Result

## FUNCTIONS USED

MEAN  
SUM

## COMMANDS USED

SYSTEM COMMAND  
DISK  
EDIT  
FORMAT  
—  
DISK COMMAND  
LOAD  
SAVE  
EDIT COMMAND  
GRAPHIC  
PRINT  
REPLICATE  
FORMAT COMMAND  
\$

## SETTING UP THE FORMAT

To set up your worksheet, USE THE FOLLOWING DIRECTIONS.

AFTER READING THE FOLLOWING NOTE, type in your labels, as illustrated in Figure 1, retaining exact row and column locations of all information.

**NOTE**

Before entering each label, you must first press the space bar once.

**NOTE**

When entering a label that contains more characters than the width of the column allows, you must move the cursor to the next adjacent column and continue typing the label.

After you have entered your labels, you will enter the dashed line in row 2.

Place your cursor on A2 and press:

- F7** starts SYSTEM command
- starts — COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
- character to be repeated

The column your cursor is on will now have a dashed line across its width.

To extend the dashed line, in the same row, across the next column,

Leave your cursor on A2 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command

### 3 EXERCISE Maintaining a Stock Portfolio

**R** selects Replicate option and displays Source Range From A2

**RETURN RETURN** displays Target Range From

**B2 RETURN** displays Target Range From B2

**N2** displays Target Range From B2 To N2

**RETURN** executes the command

To enter the dashed line on row 5,

Place your cursor on A5 and press:

**F7** starts SYSTEM command

**—** starts — COMMAND

**—** character to be repeated

**RETURN** executes the command

To copy the dashed line across the row,

Leave your cursor on A5 and press:

**F7** starts SYSTEM commands

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From A5

**RETURN RETURN** displays Target Range From

**B5 RETURN** displays Target Range From B5 To

**N5** displays Target Range From B5 To N5

**RETURN** executes the command

Row 5 now has a dashed line extended across the columns.

To enter the double-dashed lines in rows 14 and 17, repeat the above operations, only substituting = as the character to be repeated.

Your worksheet should now look like Figure 1.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N		
1	Risk Free Return															
2	-----															
3	Company	Purchase	Market	Purchase	Market										Expected	Return
4	Name	Ticker	Shares	Price	Gross	Gross	Gain	\$	Gain	%	Beta	Return	Ratio	Low		
5	-----															
6																
7																
8																
9																
10																
11																
12																
13																
14	=====															
15	Sub Totals															
16	Cash On Hand															
17	=====															
18	Totals															

Figure 1

## ENTERING MATHEMATICAL FORMULAS

Now that you have entered your labels and the dashed and double-dashed lines, you will enter the mathematical formulas which will establish the relationship between column and row locations. The formulas and their locations are illustrated in Figure 2.

### NOTE

If you make a mistake when entering a formula, you must first erase it, by using the BLANK command, before reentering your formula. To do this:

With your cursor on the cell you wish to erase, press:

**F7** starts SYSTEM command

**B** starts BLANK command

The cell your cursor is on will be empty, and you may reenter your formula.

### NOTE

You must first enter zero values into the cells which will not contain formulas, so that later, when you enter formulas into other cells, the formulas will calculate correctly.

To do this,

Place your cursor on C6 and type:

0 value

**RETURN** enters the value

Place your cursor on D6 and type:

0 value

**RETURN** enters the value

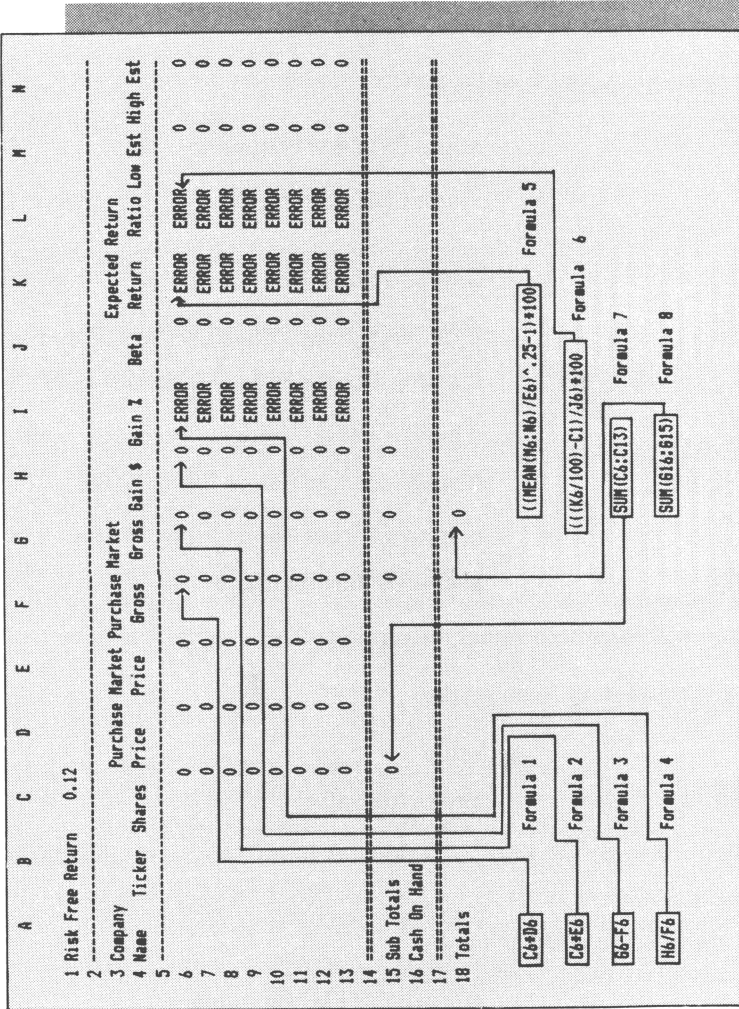


Figure 2

### 3 EXERCISE Maintaining a Stock Portfolio

Place your cursor on E6 and type:

**0** value

**RETURN** enters the value

Now you will copy the zero values you have just entered down their respective columns, to the double-dashed line.

Place your cursor on C6 and press:

**F7** starts SYSTEM command

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From C6 To

**RETURN** displays Source Range From C6 To

**E6** displays Source Range From C6 To E6

**RETURN** displays Target Range From

**C7 RETURN** displays Target Range From C7 To

**C13** displays Target Range From C7 To C13

**RETURN** executes the command

Now you will enter zero values into column J.

Place your cursor on J6 and type:

**0** value

**RETURN** enters the value

Now you will copy the zero value down column J to the double-dashed line.

Leave your cursor on J6 and press:

**F7** starts SYSTEM command

**E** starts EDIT command

- R** selects Replicate option and displays Source Range From J6 To
- RETURN** **RETURN** displays Target Range From
- J7** **RETURN** displays Target Range From J7 To
- J13** displays Target Range From J7 To J13
- RETURN** executes the command

Next enter zero values into M6 and N6.

To copy the zero values down their respective columns,

Place your cursor on M6 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From M6 To
- RETURN** displays Source Range From M6 To
- N6** displays Source Range From M6 to N6
- RETURN** displays Target Range From
- M7** **RETURN** displays Target Range From M7 To
- M13** displays Target Range From M7 To M13
- RETURN** executes the command

Before entering the formulas, you must enter the value of .12 to the right of Risk Free Return.

Place your cursor on C1 and type:

- 0.12** risk free return
- RETURN** enters the value

Now you may begin entering formulas.

Formula one, in the Purchase Gross column, multiplies the Shares by the Purchase Price.

### 3 EXERCISE Maintaining a Stock Portfolio

Place your cursor on F6 and type:

**C6 \* D6** formula

**RETURN** enters the formula

Formula two, in the Market Gross column, multiplies the Shares by the Market Price.

Place your cursor on G6 and type:

**C6 \* E6** formula

**RETURN** enters the formula

Formula three, in the Gain \$ column, subtracts the Purchase Price from the Market Gross.

Place your cursor on H6 and type:

**G6 — F6** formula

**RETURN** enters the formula

Formula four, in the Gain % column, gives you the percent of dollars gained, by dividing Gain \$ by Purchase Gross.

Place your cursor on I6 and type:

**H6 / F6** formula

**RETURN** enters the formula

Formula five, in the Expected Return column, generates the mean of the High and Low Estimates, then divides that by the Market Price. Then the result is taken to the .25 power and 1 is subtracted from it, which gives you the percentage per year of a four-year period.

The High and the Low Estimates, in this exercise, were taken from the Value Line Investment Survey newsletter, which gives you the high and low for a four-year period.

Place your cursor on K6 and type:

**(( MEAN ( M6 : N6 ) / E6 ) **UP ARROW** .25 — 1 ) \* 100** formula

**RETURN** enters the formula

Now you will format the cell into which you have just entered the formula so that it will later be displayed with two decimal places.

Leave your cursor on K6 and press:

- F7** starts SYSTEM command
- F** starts FORMAT command
- \$** selects \$ option, to display with two decimal places

Formula six, in the Return Ratio column, subtracts the Risk Free Return from the Expected Return percentage, which is then divided by the Beta percentage.

The Beta percentage was taken from the Value Line Investment Survey newsletter.

Place your cursor on L6 and type:

$(( ( K6 / 100 ) - C1 ) / J6 ) * 100$  formula

**RETURN** enters the formula

Now you will format the cell into which you have just entered the formula so that it will be displayed with two decimal places.

Leave your cursor on L6 and press:

- F7** starts SYSTEM command
- F** starts FORMAT command
- \$** selects \$ option, to display with two decimal places.

The next operation is to copy the formulas just entered down their respective columns, between the single and double-dashed lines.

Place your cursor on F6 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command

### 3 EXERCISE Maintaining a Stock Portfolio

**R** selects Replicate option and displays Source Range From F6 To

**RETURN** displays Source Range From F6 To

**L6** displays Source Range From F6 To L6

**RETURN** displays Target Range From

**F7** **RETURN** displays Target Range From F7 To  
NOTE: Do not press the F7 function key. Just type in F7.

**F13** displays Target Range From F7 To F13

**RETURN** prepares to receive additional information

**R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location

**R**  
**R**  
**R**  
**R**  
**R**  
**R**  
**R**  
**R**  
**R**  
**R**  
**R**

**A** selects Absolute, which tells the command to copy the cell address in the formula into its new location without change

**R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location

Formula seven, in the Sub Total row in the Shares column, adds the total shares.

Place your cursor on C15 and type:

**SUM ( C6 : C13 )** formula

**RETURN** enters the formula

Now copy formula seven, which you have just entered, across its row into the Purchase Gross, Market Gross and Gain \$ columns.

Leave your cursor on C15 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From C15
- RETURN RETURN** displays Target Range From
- F15 RETURN** displays Target Range From F15 To
- H15** displays Target Range From F15 To H15
- RETURN** executes the command and prepares to receive additional instructions
- R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location

Formula eight, in the Totals row, Market Gross column, adds the Market Gross subtotal to the Cash On Hand.

Place your cursor on G18 and type:

- SUM ( G16 : G15 )** formula
- RETURN** enters the formula

Your worksheet should now look like Figure 2.

## MAKING WORKSHEET ENTRIES

### NOTE

If you accidentally type in a value into a cell containing a formula, Calc Result will display ERROR on your screen.

Now type in the entries, as illustrated in Figure 3, into the following columns:

3 EXERCISE Maintaining a Stock Portfolio

	A	B	C	D	E	F	G	H	I	J	K	L	M	N						
1	Risk Free Return		0.12																	
2	-----																			
3	Company		Purchase Market Purchase Market																	
4	Name	Ticker	Shares	Price	Price	Gross	Gross	Gain	\$	Gain	%	Beta	Expected	Return	%	Ratio	%	Low	High	
5	-----																			
6		b11	300	21	26.25	6300	7875	1575	0.25	0.8	37.01	31.26	85	100						
7		cty	325	42	30	13650	9750	-3900	-0.2857	0.9	13.62	1.80	40	60						
8		dtr	450	17	34	7650	15300	7650	1	0.5	-7.87	-39.73	17	32						
9		sdt	400	30	34	12000	13600	1600	0.13333	0.9	41.55	32.85	127	146						
10		ibm	600	56	25	33600	15000	-18600	-0.5536	0.7	34.78	32.54	68	97						
11		vbn	450	78	25	35100	11250	-23850	-0.6795	0.5	5.10	-13.81	29	32						
12		lnd	200	60	17	12000	3400	-8600	-0.7167	0.6	59.85	79.75	72	150						
13		abu	475	75	82	35625	38950	3325	0.09333	0.8	-20.96	-41.20	28	36						
14	-----																			
15	Sub Totals					3200			155925			115125			-40800					
16	Cash On Hand																			12000
17	-----																			
18	Totals																			127125
-----																				

Figure 3

Ticker, Shares, Purchase Price, Market Price, Beta, Low Est and High Est.

Also be sure to enter the Cash On Hand amount.

Now press the up arrow (not the cursor arrow), and recalculation will begin.

Your worksheet should look like Figure 3.

## GRAPHING (Figure 4)

Now, in order to graph particular information on your screen, in this case, column D, Purchase Price, as illustrated in Figure 4,

Place your cursor on D6 and press:

<b>F7</b>	starts SYSTEM command
<b>E</b>	starts EDIT command
<b>G</b>	selects Graph command
<b>C</b>	indicates column

The screen now clears and displays LOWER LIMIT and UPPER LIMIT ranges.

Type:

<b>0</b>	lower limit
<b>RETURN</b>	moves cursor to UPPER LIMIT
<b>80</b>	upper limit

### NOTE

The upper and lower limits are determined by the lowest and highest value in the column or row to be graphed. In this case, the limits of 0 to 80 are a reasonable coverage of the values in column D.

**RETURN** displays a blank screen

**RETURN** displays the graph

3 EXERCISE Maintaining a Stock Portfolio

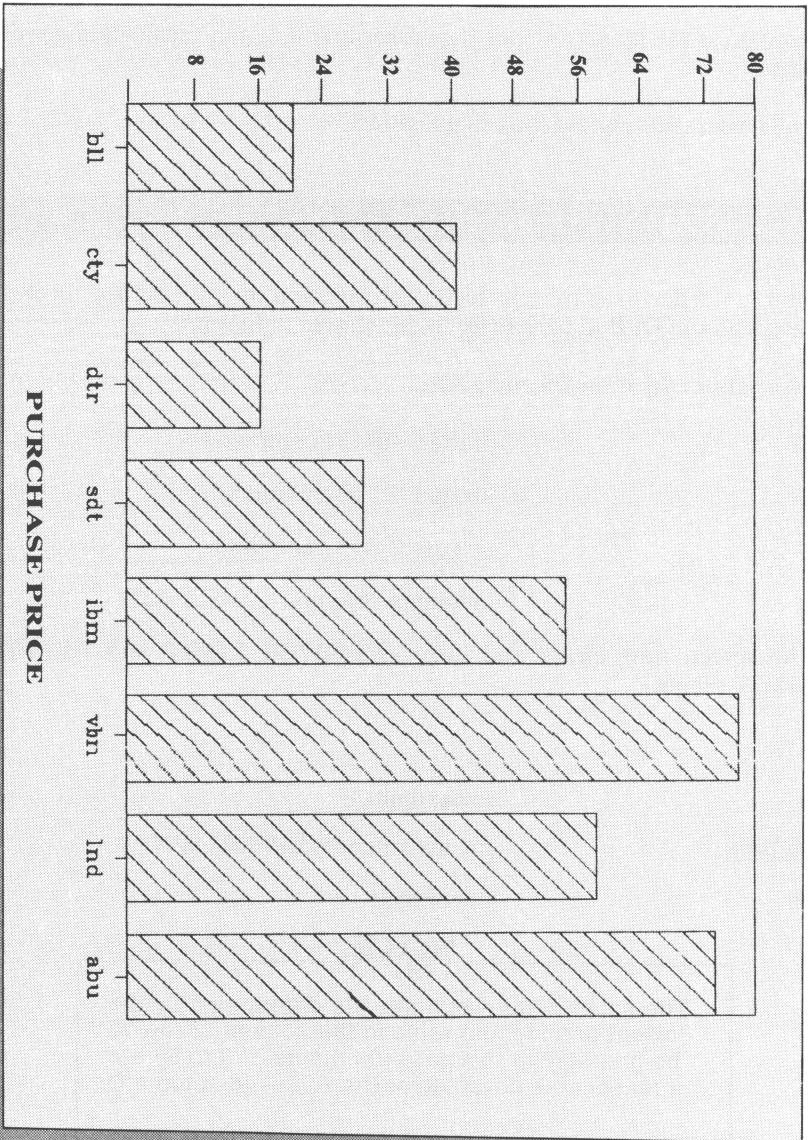


Figure 4



### 3 EXERCISE Maintaining a Stock Portfolio

## SAVING

Now save your worksheet for future use, so that the next time you wish to figure these computations all you will need to do is enter in your new known values, and you will not need to retype in the labels or enter the formulas.

To save your worksheet,

Place a formatted data diskette in Drive A.

Leave your cursor on any location and press:

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>S</b>	selects SAVE option
<b>RETURN</b>	prepares to receive additional information

Type in name of file.

<b>RETURN</b>	executes the command
---------------	----------------------

If the worksheet has been saved previously, you will see **Replace?** displayed on your screen. You will then type **Y**, for Yes.

If you see **Save All Pages?** displayed on your screen, type **Y**, for Yes.

## PRINTING

To print out your worksheet, place your cursor on A1 and press:

<b>F7</b>	starts SYSTEM command
<b>E</b>	starts EDIT command
<b>P</b>	starts PRINT command
<b>D</b>	selects Direct print option
<b>RETURN</b>	displays Print A1 To:

Type in the lower right-hand cell address of the worksheet area rectangle that you wish to print.

**RETURN** executes the command

## LOADING YOUR WORKSHEET BACK INTO CALC RESULT

It is not necessary to clear your screen before loading a worksheet into Calc Result. Just make sure you have saved whatever is on your screen before loading in a new worksheet.

Place the data diskette from which you wish to load into Drive A.

Leave your cursor on any location, press:

**F7** starts SYSTEM command

**D** starts DISK command

**L** selects Load option

**RETURN** prepares to receive additional information

Type in name of file to be loaded.

**RETURN** executes the command

If you see Load All pages? displayed on your screen, type Y, for Yes.

### NOTE

After following the above instructions for loading, press F1, which guarantees the loading of all the pages in the file.



## EXERCISE FOUR

# FINANCING AND PURCHASING A HOME

### DESCRIPTION

When considering the purchasing and financing of a home, several factors need to be considered: The minimum loan payment and maximum loan payment (min. loan payment plus tax and insurance, if applicable), the amount of the loan, the total purchase price and the down payment required.

In determining these factors, it will be necessary to know the buyer's gross monthly income, and what percent of his gross income the lending institution will allow him to apply to the monthly mortgage payment. It is necessary to also determine the annual interest rate, the number of compounding periods per year, the term (years) of the loan, the percent of down payment and the percent of tax and insurance required.

## EXAMPLE

A prospective buyer of a home has a monthly income of \$2700 and the bank requires that he apply 25% of that to his monthly mortgage payment. The interest rate is 12%, the number of compounding periods is 12, the term is 30 years. The bank also requires that a down payment of 15% be applied. The tax and insurance is 30%.

The buyer needs to know what his minimum loan payment, and also what his maximum loan payment would be. He also wants to know how large a loan amount he can afford, which will determine how much he can pay for a house (purchase price), and how much he would have to apply as a down payment on the house.

## OPERATIONS PERFORMED

Setting Up The Format

Entering Mathematical Formulas

Making Worksheet Entries

Saving

Printing

Loading The Worksheet Back Into Memory

## COMMANDS USED

### SYSTEM COMMAND

BLANK  
DISK  
FORMAT

—

### DISK COMMAND

LOAD  
SAVE

### EDIT COMMAND

PRINT

### FORMAT COMMAND

\$

## SETTING UP THE FORMAT

To set up your worksheet, USE THE FOLLOWING DIRECTIONS.

AFTER READING THE FOLLOWING NOTE, type in your labels, as illustrated in Figure 1, retaining exact row and column locations of all information.

	A	B	C
1	Gross Income	Z	
2	Monthly Income		
3	Interest Rate	Z	
4	No. of Comp. Periods		
5	Term		
6	Down Payment	Z	
7	Tax & Insurance	Z	
8			=====
9	Min. Loan Payment		
10	Max. Loan Payment		
11	Loan Amount		
12	Purchase Price		
13	Down Payment		

Figure 1

### NOTE

Before entering each label, you must first press the space bar once.

4 EXERCISE Financing and Purchasing a Home

**NOTE**

When entering a label that contains more characters than the width of the column allows, you must move the cursor to the next adjacent column and continue typing the label.

After you have entered your labels, you will enter the double-dashed line in row 8.

Place your cursor on C8 and press:

- F7** starts SYSTEM commands
- starts — COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
- =** character to be repeated

Column C now has a dashed line in row 8.

Your worksheet should now look like Figure 1.

**ENTERING MATHEMATICAL FORMULAS**

**NOTE**

If you make a mistake when entering a formula, you must first erase it, by using the BLANK command, before reentering your formula. To do this:

With your cursor on the cell you wish to erase, press:

- F7** starts SYSTEM command
- B** starts BLANK command

The cell your cursor is on will be empty, and you may reenter your formula.

You will now begin entering mathematical formulas which will establish the relationships between column and row positions. The formulas and their locations are illustrated in Figure 2.

	A	B	C
1	Gross Income %		0
2	Monthly Income		0
3	Interest Rate %		0
4	No. of Comp. Per.		0
5	Term		0
6	Down Payment %		0
7	Tax & Insurance %		0
8		=====	
9	Min. Loan Payment	0.00	$C1 * C2 * (1 / (1 + C7))$
10	Max. Loan Payment	0.00	$C9 * (1 + C7)$
11	Loan Amount	0.00	
12	Purchase Price	0.00	$1 / (1 - C6) * C11$
13	Down Payment	0.00	$C12 - C11$
			$C9 * ((1 - (1 + C3 / C4) ^ (-C5 * C4)) / (C3 / C4))$

Figure 2

**NOTE**

You must first enter zero values into the cells which will not contain formulas, so that later, when you enter formulas into other cells, the formulas will calculate correctly.

#### 4 EXERCISE Financing and Purchasing a Home

To do this,

Place your cursor on C1 and type:

**0** value

**RETURN** enters the value

Now you will copy the zero value down the column to the double-dashed line.

Leave your cursor on C1 and press:

**F7** starts SYSTEM command

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From C1 To

**RETURN RETURN** displays Target Range From

**C2 RETURN** displays Target Range From C2 To

**C7** displays Target Range From C2 To C7

**RETURN** executes the command

Now that you have entered all the necessary zero values, you may begin entering the formulas.

Formula one, to the right of Min. Loan Payment, calculates the minimum loan payment, using the following information: percent of gross income, monthly gross income and the tax and insurance percentage.

Place your cursor on C9 and type:

**C 1 \* C 2 \* ( 1 / ( 1 + C 7 ) )** formula

**RETURN** enters the formula

Formula two, to the right of Max. Loan Payment, calculates the maximum loan payment, which is the minimum loan payment plus tax and insurance.

Place your cursor on C10 and type:

**C9 \* (1 + C7)** formula

**RETURN** enters the formula

Formula three, to the right of Loan Amount, calculates the amount of the loan.

### NOTE

The up arrow used in this formula is NOT the cursor arrow. It is the same arrow used to recalculate. When used in a formula, it represents “to the power of.”

Place your cursor on C11 and type:

**C9 \* ((1 - (1 + C3/C4)<sup>UP ARROW</sup> (- C5 \* C4)) / (C3/C4))** formula

**RETURN** enters the formula

Formula four, to the right of Purchase Price, calculates the total purchase price.

Place your cursor on C12 and type:

**1 / (1 - C6) \* C11** formula

**RETURN** enters the formula

Formula five, to the right of Down Payment, determines the amount of down payment.

Place your cursor on C13 and type:

**C12 - C11** formula

**RETURN** enters the formula

Now you will format some of the cells so that later they will be displayed with two decimal places.

## 4 EXERCISE Financing and Purchasing a Home

Place your cursor on C9 and press:

- F7** starts SYSTEM commands
- F** starts FORMAT command
- \$** selects \$ option, to display in two decimal places

Place your cursor on C10 and press:

- F7** starts SYSTEM command
- F** starts FORMAT command
- \$** selects \$ option, to display in two decimal places

Continue on down the column, using the above procedure, to format the cells in C11, C12 and C13, so that they will later be displayed with two decimal places.

Your worksheet should look like Figure 2.

### **MAKING WORKSHEET ENTRIES**

Now type in the entries, as illustrated in Figure 3, into column C, rows 1 through 7.

Your worksheet should now look like Figure 3.

Now that your worksheet is complete, all you need to do is enter your own set of known values.

	A	B	C
1	Gross Income %		0.25
2	Monthly Income		2700
3	Interest Rate %		0.12
4	No. of Comp. Per.		12
5	Term		30
6	Down Payment %		0.15
7	Tax & Insurance %		0.3
8			=====
9	Min. Loan Payment		519.23
10	Max. Loan Payment		675.00
11	Loan Amount		50478.8
12	Purchase Price		59386.8
13	Down Payment		8908.02

Figure 3

## SAVING

Be sure you have a formatted data diskette in Drive A.

Leave your cursor on any location and press:

- F7** starts SYSTEM command
  - D** starts DISK command
  - S** selects SAVE option
  - RETURN** prepares to receive additional information
- Type in file name.
- RETURN** executes the command

## 4 EXERCISE Financing and Purchasing a Home

If the worksheet has been saved previously, you will see Replace? displayed on your screen. You will then type Y, for Yes.

If you see Save All Pages? displayed on your screen, type Y, for Yes.

### PRINTING

To print out your worksheet, place your cursor on A1 and press:

- F7 starts SYSTEM command
- E starts EDIT command
- P starts PRINT command
- D selects Direct print option

**RETURN** displays Print A1 To:

Type in the lower right-hand cell address of the worksheet area rectangle that you wish to print.

**RETURN** executes the command

### LOADING YOUR WORKSHEET BACK INTO CALC RESULT

It is not necessary to clear your screen before loading a worksheet into Calc Result. Just make sure you have saved whatever is on your screen before loading in a new worksheet.

With your cursor on any location, press:

- F7** starts SYSTEM command
- D** starts DISK command
- L** selects Load option
- RETURN** prepares to receive additional information

Type in name of file to be loaded.

- RETURN** executes the command

If you see Load All Pages? displayed on your screen, type Y, for Yes.

### NOTE

After following the above instructions for loading, press F1, which guarantees the loading of all the pages in the file.



# EXERCISE FIVE

## AMORTIZATION SCHEDULE

### DESCRIPTION

An amortized loan is one which is liquidated on an installment basis, i.e., the principal amount of the loan is repaid in installments during the life of the loan.

This amortization schedule will find an unknown payment amount from a known principal amount. It will also calculate an unknown principal amount from a known payment amount.

From this information, a report is generated which contains the term, the interest payment, principal payment, the principal still owing, and the interest and the principal paid to date on the loan.

## EXAMPLE

### FINDING THE UNKNOWN PAYMENT FROM A KNOWN PRINCIPAL (Illustrated in Figure 1, 2 and 3)

The principal of a loan is \$3,145. The interest rate is 12%, the number of compounding periods per year is 12, the number of payments per year is 12, and the total payments are 20.

What is the amount of each payment?

### FINDING THE UNKNOWN PRINCIPAL FROM A KNOWN PAYMENT (Illustrated in Figure 4)

The payment on a loan is \$200. The interest is 14%, the number of compounding periods per year is 12, the number of payments per year is 12, and the total payments are 10.

What is the amount of the principal?

## OPERATIONS PERFORMED

Setting Up The Format

Entering Mathematical Formulas

Making Worksheet Entries

Saving

Printing

Loading Your Worksheet Back Into Memory

## FUNCTIONS USED

ELSE

IF

MAX

SUM

THEN

## COMMANDS USED

### SYSTEM COMMAND

DISK  
EDIT  
FORMAT  
GLOBAL  
RECALCULATE

—

### DISK COMMAND

LOAD  
SAVE

### EDIT COMMAND

COPY  
PRINT  
REPLICATE

### FORMAT COMMAND

\$

### GLOBAL

COLUMN WIDTH  
FORMAT  
RECALCULATION

## SETTING UP THE FORMAT

(For Figure 1, Finding the Unknown Payment from a Known Principal)

To set up your worksheet, USE THE FOLLOWING DIRECTIONS.

The Calc Result worksheet format contains columns 8 spaces wide (the default) when it is first entered into the computer.

You will now expand all the column widths to 10 spaces , and press:

<b>F7</b>	starts SYSTEM commands
<b>G</b>	starts GLOBAL command
<b>C</b>	selects Column Width option
<b>10</b>	number of spaces in each column
<b>RETURN</b>	executes the command

AFTER READING THE FOLLOWING NOTES, type in your labels, as illustrated in Figure 1, retaining exact row and column locations of all information.

**5 EXERCISE** Amortization Schedule

	A	B	C	D	E	F
1	Payment Known					
2	Principal Known					
3	Interest					
4	Comp. Periods/Yr					
5	# Payments/Yr					
6	Total Payments					
7			=====			
8	Part 1, Formula One					
9	Payment Unknown					
10	Principal Unknown					
11						
12	Term	Interest	Principal	Principal	Interest	Principal
13		Payment	Payment	Owing	Pd.To Date	Pd.ToDate
14	-----					
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						

**Figure 1**

**NOTE**

Before entering each label, you must first press the space bar once.

**NOTE**

When entering a label that contains more characters than the width of the column allows, you must move the cursor to the next adjacent column and continue typing the label.

After you have entered your labels, you will enter the double-dashed line in row 7.

Place your cursor on C7 and press:

<b>F7</b>	starts SYSTEM command
—	starts — COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
=	character to be repeated
<b>RETURN</b>	executes the command

The column your cursor is on will now have a double-dashed line across its width.

Now enter the dashed line in row 14.

Place your cursor on A14 and press:

<b>F7</b>	starts SYSTEM command
—	starts — COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
—	character to be repeated

## 5 EXERCISE Amortization Schedule

The column your cursor is on will now have a dashed line across its width.

To extend the dashed line, in the same row, across the other columns,

Leave your cursor on A14 and press:

<b>F7</b>		starts SYSTEM commands
<b>E</b>		starts EDIT command
<b>R</b>		selects Replicate option and displays Source Range From A14
<b>RETURN</b>	<b>RETURN</b>	displays Target Range From
<b>B14</b>	<b>RETURN</b>	displays Target Range From B14 To
<b>F14</b>		displays Target Range From B14 To F14
<b>RETURN</b>		executes the command

Your worksheet should now look like Figure 1.

## ENTERING MATHEMATICAL FORMULAS

Now that you have entered your labels and the dashed and double-dashed lines, you will enter the mathematical formulas which will establish the relationship between column and row locations. The formulas and their locations are illustrated in Figure 2.

### NOTE

If you make a mistake when entering a formula, you must first erase it, by using the BLANK command, before reentering your formula. To do this:

With your cursor on the cell you wish to erase, press:

**F7** starts SYSTEM commands

**B** starts BLANK command

The cell your cursor is on will be empty, and you may reenter your formula.

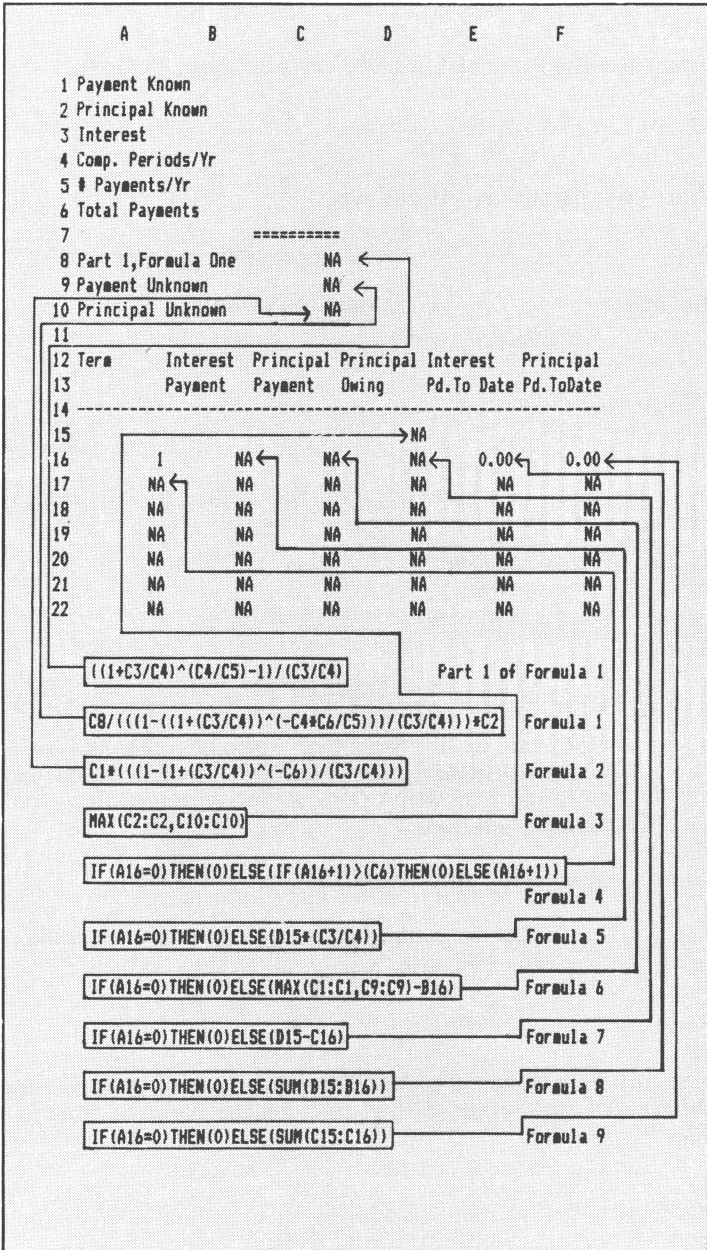


Figure 2

**5 EXERCISE** Amortization Schedule

First enter the value of 1 into the Term column. To do this,

Place your cursor on A16 and type:

1 value representing Term 1

**RETURN** enters the value

Formula one, in column C, to the right of Payment Unknown, calculates the unknown payment.

**NOTE**

Because of the length of Formula One, you will enter it in two parts. Therefore, the procedure for entering FORMULA ONE will be different from the usual procedure.

Follow the step-by-step directions carefully.

First you will enter Part 1 of formula one, in column C, immediately underneath the double-dashed line, to the right of Part 1, Formula One. To do this,

**NOTE**

The up arrow used in this formula is NOT the cursor arrow. It is the same arrow used for a recalculation. When used in a formula, it represents "to the power of."

Place your cursor on C8 and type:

$(1 + C3/C4)$  **UP ARROW**  $(C4/C5) - 1) / (C3/C4)$  part one of formula one

**RETURN** enters the first part of formula one

Now you are ready to enter Formula One, which will calculate the unknown payment.

Place your cursor on C9 and type:

$C8 / ((1 - ((1 + (C3/C4))$  **UP ARROW**  $(-C4 * C6/C5)) / (C3/C4))) * C2$   
formula

**RETURN** enters the formula

You now need to format the cell so that it will be displayed with two decimal places. To do this,

Leave your cursor on C9 and press:

**F7** starts SYSTEM command

## 5 EXERCISE Amortization Schedule

- F starts FORMAT command
- \$ selects \$ option, to display in two decimal places

Formula two in column C, to the right of Principal Unknown, will calculate the unknown principal.

### NOTE

This formula will be utilized later in the exercise, when calculating the unknown principal as shown in Figure 4.

You will enter the formula now, so that it will be ready to do the calculations necessary later in this exercise.

To enter formula two, in column C, to the right of Principal Unknown, which will calculate the unknown principal,

Place your cursor on C10 and type:

$C1 * ((1 - (1 + (C3/C4))^{UP\ ARROW}(-C6)) / (C3/C4))$  formula

**RETURN** enters the formula

Now you will format the cell into which you have just entered the formula so that later it will be displayed with two decimal places.

Leave your cursor on C10 and press:

- F7 starts SYSTEM commands
- F starts FORMAT command
- \$ selects \$ option, to display in two decimal places

Formula three, in column D, immediately underneath the single dashed line, in the Principal Owing column, is the amount of principal still owing.

Place your cursor on D15 and type:

**MAX ( C2 : C2 , C10 : C10 )** formula

**RETURN** enters the formula

Formula four, is in column A, the Term column, DIRECTLY UNDERNEATH THE NUMBER 1.

Place your cursor on A17 and type:

**IF (A16=0) THEN (0) ELSE (IF (A16+1) >(C6) THEN (0) ELSE (A16+1))**  
formula

**RETURN** enters the formula

Now you will copy formula four, which you have just entered, down the column, using the Replicate option.

Leave your cursor on A17 and press:

**F7** starts SYSTEM commands

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From A17

**RETURN RETURN** displays Target Range From

**A18 RETURN** displays Target Range From A18 To

**A40** displays Target Range From A18 To A40

**RETURN** executes the command and prepares to receive additional instructions

**R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location  
**R**

**A** selects Absolute, which tells the command to copy the cell address in the formula to its new location without change

**R** selects Relative which tells the command to copy the cell address in the formula relative to its new location

Now you will need to format the cells into which you will be entering formulas 5, 6, 7, 8 and 9, in Row 16, so that later they will be displayed with two decimal places.

## 5 EXERCISE Amortization Schedule

First you will format the cell in which you will be entering formula five. To do this,

Place your cursor on B16 and press:

- F7** starts SYSTEM commands
- F** starts FORMAT command
- \$** selects \$ option, to display in two decimal places

Using the above formatting procedure, continue formatting the cells in C16, D16, E16, and F16, so that later they will be displayed with two decimal places.

Formula five is in column B, in the Interest Payment column.

Place your cursor on B16 and type:

**IF (A16 = 0) THEN (0) ELSE (D15 \* (C3/C4))** formula

**RETURN** enters the formula

Now you will copy formula five, which you have just entered, down the column, using the Replicate option.

Leave your cursor on B16 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From B16 To
- RETURN** **RETURN** displays Target Range From
- B17** **RETURN** displays Target Range From B17 To
- B40** displays Target Range From B17 To B40
- RETURN** executes the command and prepares to receive additional instructions
- R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location
- R**

**A** selects Absolute, which tells the command  
**A** to copy the cell address in the formula into  
 its new location without change

Formula six is in column C, the Principal Payment column.

Place your cursor on C16 and type:

**IF A16 =0 ) THEN (0) ELSE ( MAX ( C1 : C1,C9 : C9 ) — B16 )** formula

**RETURN** enters the formula

Now you will copy formula six, which you have just entered, down the column, using the Replicate option.

Leave your cursor on C16 and press:

**F7** starts SYSTEM commands

**E** starts EDIT command

**R** selects Replicate option and displays  
 Source Range From C16

**RETURN** **RETURN** displays Target Range From

**C17** **RETURN** displays Target Range From C17 To

**C40** displays Target Range From C17 To C40

**RETURN** executes the command and prepares to  
 receive additional instructions

**R** selects Relative, which tells the command  
 to copy the cell address in the formula  
 relative to its new location

**A**  
**A** selects Absolute, which tells the command  
**A** to copy the cell address in the formula into  
**A** its new location without change

**R** selects Relative, which tells the command  
 to copy the cell address in the formula  
 relative to its new location

Formula seven is in column D, the Principal Owing column.

Place your cursor on D16 and type:

**5 EXERCISE** Amortization Schedule

**IF (A16=0) THEN (0) ELSE (D15 — C16)** formula

**RETURN** enters the formula

Now you will copy formula seven, which you have just entered, down the column, using the Replicate option.

Leave your cursor on D16 and press:

**F7** starts SYSTEM commands

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From D16

**RETURN RETURN** displays Target Range From

**D17 RETURN** displays Target Range From D17 To

**D40** displays Target Range From D17 To D40

**RETURN** executes the command and prepares to receive additional instructions

**R** selects Relative, which tells the command  
**R** to copy the cell address in the formula  
**R** relative to its new location

Formula eight, is in the Interest Pd. To Date column.

Place your cursor on E16 and type:

**IF (A16=0) THEN (0) ELSE (SUM (B15 : B16))** formula

**RETURN** enters the formula

Now you will copy formula eight, which you have just entered, down the column, using the Replicate option.

Leave your cursor on E16 and press:

**F7** starts SYSTEM commands

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From E16

**RETURN RETURN** displays Target Range From

- E17** **RETURN** displays Target Range From E17 To
- E40** displays Target Range From E17 To E40
- RETURN** executes the command and prepares to receive additional instructions
- R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location
- A** selects Absolute, which tells the command to copy the cell address in the formula to its new location without change
- R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location

Formula nine is in column F, the Principal Paid To Date column.

Place your cursor on F16 and type:

**IF (A16=0) THEN (0) ELSE (SUM (C15 : C16) )** formula

**RETURN** enters the formula

Now you will copy formula nine, which you have just entered, down the column, using the Replicate option.

Leave your cursor on F16 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From F16
- RETURN** **RETURN** displays Target Range From
- F17** **RETURN** displays Target Range From F17 To
- F40** displays Target Range From F17 To F40
- RETURN** executes the command and prepares to receive additional instructions
- R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location

**5** EXERCISE Amortization Schedule

- A** selects Absolute, which tells the command to copy the cell address in the formula to its new location without change
- R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location

Your worksheet should now look like Figure 2. For reasons of space limitation, we have displayed Figure 2 through Row 22 only.

**MAKING WORKSHEET ENTRIES**

**NOTE**

If you accidentally type in a value into a cell containing a formula, Calc Result will display ERROR on your screen.

Now type in the entries, as illustrated in Figure 3, into column C, STARTING IN ROW 2, and continuing down until you reach the double-dashed line.

After your entries have been typed in, you will start the Recalculation command. To do this,

Leave your cursor on any location and press:

- F7** starts SYSTEM command
- R** starts RECALCULATION command
- N** selects Numbers Of?
- 25** number of rows you wish recalculated
- RETURN** executes the command

Now just sit back and watch the computer recalculate all values.

	A	B	C	D	E	F
1	Payment Known					
2	Principal Known		3145			
3	Interest		0.12			
4	Comp. Periods/Yr		12			
5	# Payments/Yr		12			
6	Total Payments		20			
7			=====			
8	Part 1, Formula One	1.000007				
9	Payment Unknown		174.28			
10	Principal Unknown		NA			
11						
12	Term	Interest	Principal	Principal	Interest	Principal
13		Payment	Payment	Owing	Pd.To Date	Pd.ToDate
14	-----					
15				3145		
16	1	31.45	142.83	3002.17	31.45	142.83
17	2	30.02	144.26	2857.91	61.47	287.09
18	3	28.58	145.70	2712.21	90.05	432.79
19	4	27.12	147.16	2565.05	117.17	579.95
20	5	25.65	148.63	2416.42	142.82	728.58
21	6	24.16	150.12	2266.30	166.99	878.70
22	7	22.66	151.62	2114.68	189.65	1030.32
23	8	21.15	153.13	1961.55	210.80	1183.45
24	9	19.62	154.67	1806.88	230.41	1338.12
25	10	18.07	156.21	1650.67	248.48	1494.33
26	11	16.51	157.77	1492.89	264.99	1652.11
27	12	14.93	159.35	1333.54	279.92	1811.46
28	13	13.34	160.95	1172.60	293.25	1972.40
29	14	11.73	162.56	1010.04	304.98	2134.96
30	15	10.10	164.18	845.86	315.08	2299.14
31	16	8.46	165.82	680.04	323.54	2464.96
32	17	6.80	167.48	512.56	330.34	2632.44
33	18	5.13	169.16	343.40	335.46	2801.60
34	19	3.43	170.85	172.55	338.90	2972.45
35	20	1.73	172.56	-0.00	340.62	3145.00
36	0	0.00	0.00	0.00	0.00	0.00
37	0	0.00	0.00	0.00	0.00	0.00
38	0	0.00	0.00	0.00	0.00	0.00
39	0	0.00	0.00	0.00	0.00	0.00
40	0	0.00	0.00	0.00	0.00	0.00

Figure 3

## 5 EXERCISE Amortization Schedule

When the recalculation is finished, your worksheet should look like Figure 3.

You may now wish to save your worksheet.

With your cursor on any location, press:

- F7** starts SYSTEM command
- D** starts DISK command
- S** selects SAVE option
- RETURN** prepares to receive additional information

Type in name of file.

- RETURN** executes the command

If the worksheet has been saved previously, you will see Replace? displayed on your screen. You will then type Y, for Yes.

If you see Save All Pages? displayed on your screen, type Y, for Yes.

### NOTE

To proceed with Figure 4, DO NOT CLEAR THE MEMORY.

## FINDING THE UNKNOWN PRINCIPAL FROM A KNOWN PAYMENT (Figure 4)

USE THE FOLLOWING STEP-BY-STEP DIRECTIONS FOR FINDING THE UNKNOWN PRINCIPAL, as illustrated in Figure 4.

Your worksheet has already been set up with labels and formulas entered.

	A	B	C	D	E	F
1	Payment Known		200			
2	Principal Known					
3	Interest		0.14			
4	Comp. Periods/Yr		12			
5	# Payments/Yr		12			
6	Total Payments		10			
7			=====			
8	Part 1, Formula One	1.0000033				
9	Payment Unknown		NA			
10	Principal Unknown		1877.44			
11						
12	Term	Interest	Principal	Principal	Interest	Principal
13		Payment	Payment	Owing	Pd.To Date	Pd.ToDate
14	-----					
15				1877.44		
16	1	21.90	178.10	1699.34	21.90	178.10
17	2	19.83	180.17	1519.17	41.73	358.27
18	3	17.72	182.28	1336.89	59.45	540.55
19	4	15.60	184.40	1152.49	75.05	724.95
20	5	13.45	186.55	965.94	88.50	911.50
21	6	11.27	188.73	777.21	99.76	1100.24
22	7	9.07	190.93	586.27	108.83	1291.17
23	8	6.84	193.16	393.11	115.67	1484.33
24	9	4.59	195.41	197.70	120.26	1679.74
25	10	2.31	197.69	0.01	122.57	1877.43
26	0	0.00	0.00	0.00	0.00	0.00
27	0	0.00	0.00	0.00	0.00	0.00
28	0	0.00	0.00	0.00	0.00	0.00
29	0	0.00	0.00	0.00	0.00	0.00
30	0	0.00	0.00	0.00	0.00	0.00
31	0	0.00	0.00	0.00	0.00	0.00
32	0	0.00	0.00	0.00	0.00	0.00
33	0	0.00	0.00	0.00	0.00	0.00
34	0	0.00	0.00	0.00	0.00	0.00
35	0	0.00	0.00	0.00	0.00	0.00
36	0	0.00	0.00	0.00	0.00	0.00
37	0	0.00	0.00	0.00	0.00	0.00
38	0	0.00	0.00	0.00	0.00	0.00
39	0	0.00	0.00	0.00	0.00	0.00
40	0	0.00	0.00	0.00	0.00	0.00

Figure 4

## 5 EXERCISE Amortization Schedule

First you will blank out the Principal Known value, in column C, to the right of Principal Known.

Place your cursor on C2 and press:

- F7** starts SYSTEM commands
- B** starts BLANK command and blanks the cell your cursor is on

Now you will enter the Payment Known value of \$200, in column C, to the right of Payment Known.

(If you wish you may enter your own payment known value.)

To enter this Payment Known value,

Place your cursor on C1 and type:

- 200** Payment Known
- RETURN** enters the value

You can also change the other values, i.e.:

- The interest rate.
- The number of compounding periods per year
- The number of payments per year
- The total payments

We have changed the Interest Rate to 14%, and changed the Total Payments to 10 payments, for purposes of demonstration.

Next, you will start the Recalculation command. To do this,

Leave your cursor on any location and press:

- F7** starts SYSTEM command
- R** starts RECALCULATION command
- N** selects Numbers Of?
- 10** number of rows you wish recalculated
- RETURN** executes the command

Now just sit back and watch the computer recalculate all values.

If you have used the same values as we have shown in Figure 4, when the recalculation is finished, your worksheet should look like Figure 4 (Finding the Unknown Principal From a Known Payment.)

## SAVING YOUR WORKSHEET

Now save your worksheet for future use, so that the next time you wish to figure these computations all you will need to do is enter in your new known values, and you will not need to retype in the labels or enter the formulas.

To save your worksheet,

Place a formatted data diskette in Drive A.

Leave your cursor on any location and press:

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>S</b>	selects SAVE option
<b>RETURN</b>	prepares to receive additional information

Type in name of file.

<b>RETURN</b>	executes the command
---------------	----------------------

If the worksheet has been saved previously, you will see Replace? displayed on your screen. You will then type Y, for Yes.

If you see Save All Pages? displayed on your screen, type Y, for Yes.

## PRINTING

To print out your worksheet, place your cursor on A1 and press:

<b>F7</b>	starts SYSTEM command
<b>E</b>	starts EDIT command

## 5 EXERCISE Amortization Schedule

- P** starts PRINT command
- D** selects Direct print option
- RETURN** displays Print A1 To:

Type in the lower right-hand cell address of the worksheet area rectangle that you wish to print.

- RETURN** executes the command

### LOADING YOUR WORKSHEET BACK INTO CALC RESULT

It is not necessary to clear your screen before loading a worksheet into Calc Result. Just make sure you have saved whatever is on your screen before loading in a new worksheet.

Place the data diskette from which you wish to load into Drive A.

Leave your cursor on any location, press:

- F7** starts SYSTEM command
- D** starts DISK command
- L** selects Load option
- RETURN** prepares to receive additional information

Type in name of file to be loaded.

- RETURN** executes the command

If you see Load All pages? displayed on your screen, type Y, for Yes.

#### NOTE

After following the above instructions for loading, press F1, which guarantees the loading of all the pages in the file.

## EXERCISE SIX

# COMPUTATION OF REBATE DUE (Rule of 78's)

### DESCRIPTION

When a borrower considers paying off a loan before the end of its original life, he wants to know how much of an interest rebate he will receive, and how much money he will need in order to pay off the loan. The “Rule of 78’s” is a formula commonly used in calculating rebate due. Once the rebate due is determined, it is easy to find the payoff amount.

Finding the payoff amount is solved in this exercise in three stages: First the total interest due on the original loan is calculated. Second, using the Rule of 78’s, the rebate received for early payoff is computed. Finally, the payoff amount is determined by multiplying the number of payments left by the payment amount, and then subtracting the rebate. The answer is the amount of the payoff.

## EXAMPLE

After making 18 payments on his three-year (36-month) car loan, a borrower is contemplating paying off his three-year (36-month) car loan. He originally borrowed \$5000 at 5% add-on annual interest, and his monthly payments are \$159.72.

If he pays off his loan, how much interest will be rebated, and what amount will pay off his loan?

## OPERATIONS PERFORMED

Setting Up The Format

Entering Mathematical Formulas

Making Worksheet Entries

Saving

Printing

Loading Your Worksheet Back Into Calc Result

## COMMANDS USED

SYSTEM COMMAND  
DISK  
FORMAT  
DISK COMMAND  
LOAD  
SAVE  
FORMAT COMMAND  
\$

## SETTING UP THE FORMAT

To set up your worksheet, USE THE FOLLOWING DIRECTIONS.

AFTER READING THE FOLLOWING NOTE, type in your labels, as illustrated in Figure 1, retaining exact row and column locations of all information.

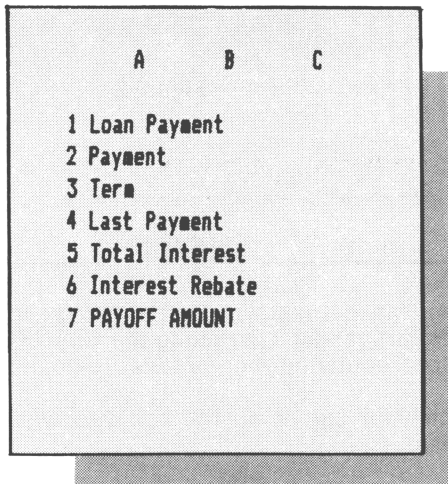
### NOTE

Before entering each label, you must first press the space bar once.

### NOTE

When entering a label that contains more characters than the width of the column allows, you must move the cursor to the next adjacent column and continue typing the label.

After your labels are typed in, your worksheet should look like Figure 1.



	A	B	C
1	Loan	Payment	
2	Payment		
3	Term		
4	Last	Payment	
5	Total	Interest	
6	Interest	Rebate	
7	PAYOFF	AMOUNT	

Figure 1

## ENTERING MATHEMATICAL FORMULAS

Now that you have entered your labels, you will enter the mathematical formulas which will establish the relationship between column and row locations. The formulas and their locations are illustrated in Figure 2.

	A	B	C
1	Loan Payment		0
2	Payment		0
3	Term		0
4	Last Payment		0
5	Total Interest	0.00←	$C2 * C3 - C1$
6	Interest Rebate	0.00←	$((C3 - (C4 + 1)) * (C3 - C4)) / ((C3^2) + C3) * C5$
7	PAYOFF AMOUNT	0.00←	$C1 - ((C2 * C4) - (C5 - C6))$

Figure 2

**Figure 2**

### NOTE

If you make a mistake when entering a formula, you must first erase it, by using the BLANK command, before reentering your formula. To do this:

With your cursor on the cell you wish to erase, press:

**F7** starts SYSTEM command

**B** starts BLANK command

The cell your cursor is on will be empty, and you may reenter your formula.

## NOTE

You must first enter zero values into the cells which will not contain formulas, so that later, when you enter formulas into other cells, the formulas will calculate correctly.

To do this,

Place your cursor on C1 and type:

**0** value  
**RETURN** enters the value

Now you will copy the zero value down the column, into rows 2, 3 and 4.

Leave your cursor on C1 and press:

**F7** starts SYSTEM command  
**E** starts EDIT command  
**R** selects Replicate option and displays Source Range From C1 To  
**RETURN RETURN** displays Target Range From To  
**C2 RETURN** displays Target Range From C2 To  
**C4** displays Target Range From C2 To C4  
**RETURN** executes the command

Formula one, in column C, to the right of Total Interest, will calculate the total interest due on the original loan.

Place your cursor on C5 and type:

**C2 \* C3 — C1** formula  
**RETURN** enters the formula

Formula two, in column C, to the right of Interest Rebate, calculates the rebate received for early payoff.

**6** EXERCISE Computation of Rebate Due

Place your cursor on C6 and type:

$((C3 - (C4 + 1)) * (C3 - C4)) / ((C3 \uparrow 2) + C3) * C5$  formula

**RETURN** enters the formula

Formula three, in column C, to the right of PAYOFF AMOUNT, multiplies the number of payments left by the payment, and then subtracts the rebate, to determine the Payoff Amount.

Place your cursor on C7 and type:

$C1 - ((C2 * C4) - (C5 - C6))$  formula

**RETURN** enters the formula

Now you will format the cells into which you have just entered the formulas, so that they will be displayed with two decimal places.

Place your cursor on C5 and press:

**F7** starts SYSTEM command

**F** starts FORMAT command

**\$** selects \$ option, to display in two decimal places.

Place your cursor on C6 and repeat the above procedure.

Place your cursor on C7 and repeat the above procedure

Your worksheet should now look like Figure 2.

## MAKING WORKSHEET ENTRIES

### NOTE

If you accidentally type in a value into a cell containing a formula, Calc Result will display ERROR on your screen.

Now type in the entries, as illustrated in Figure 3, into column C, in rows 1 through 4.

Your worksheet should now look like Figure 3.

	A	B	C
1	Loan Payment		5000.00
2	Payment		159.72
3	Term		36
4	Last Payment		18
5	Total Interest		749.92
6	Interest Rebate		172.28
7	PAYOFF AMOUNT		2702.68

Figure 3

## SAVING

Now save your worksheet for future use, so that the next time you wish to figure these computations all you will need to do is enter in your new known values, and you will not need to retype in the labels or enter the formulas.

## 6 EXERCISE Computation of Rebate Due

To save your worksheet,

Place a formatted data diskette in Drive A.

Leave your cursor on any location and press:

**F7** starts SYSTEM command

**D** starts DISK command

**S** selects SAVE option

**RETURN** prepares to receive additional information

Type in file name.

**RETURN** executes the command

If the worksheet has been saved previously, you will see Replace? displayed on your screen. You will then type Y, for Yes.

If you see Save All Pages? displayed on your screen, type Y, for Yes.

## PRINTING

To print out your worksheet, place your cursor on A1 and press:

**F7** starts SYSTEM command

**E** starts EDIT command

**P** starts PRINT command

**D** selects Direct print option

**RETURN** displays Print A1 To:

Type in the lower right-hand cell address of the worksheet area rectangle that you wish to print.

**RETURN** executes the command

## LOADING YOUR WORKSHEET BACK INTO CALC RESULT

It is not necessary to clear your screen before loading a worksheet into Calc Result. Just make sure you have saved whatever is on your screen before loading in a new worksheet.

With your cursor on any location, press:

- F7** starts SYSTEM command
- D** starts DISK command
- L** selects Load option
- RETURN** prepares to receive additional information

Type in name of file to be loaded.

- RETURN** executes the command

If you see Load All Pages? displayed on your screen, type Y, for Yes.

### NOTE

After following the above instructions for loading, press F1, which guarantees the loading of all the pages in the file.



## EXERCISE SEVEN

# CHECKBOOK LEDGER

### DESCRIPTION

The Calc Result ability to store selected values onto disk storage and reenter them on a worksheet for accumulating is employed in this exercise. Ledger posting, with the ability to accumulate the postings and add or subtract the resulting value from a balance figure is demonstrated. A method for displaying a zero value in a column prior to ledger entry is featured.

To demonstrate Calc Result's abilities, a Checkbook Ledger has been designed. Deposit and payment entries are made in the checkbook, and the resulting checkbook balance and the totals of all the columns containing entries are automatically calculated. On a monthly schedule, the year-to-date total is transferred to a disk file for later reentry and repositioned as a cumulative total on the following month's worksheet.

## OPERATIONS PERFORMED

Setting Up The Format

Entering Mathematical Formulas

Posting Entries

Monthly Updating

Saving

Printing

Loading Your Worksheet Back Into Calc Result

## FUNCTIONS USED

MIN  
SUM

## COMMANDS USED

### SYSTEM COMMAND

BLANK  
DISK  
EDIT  
FORMAT  
GLOBAL  
RECALCULATE

### DISK COMMAND

DIF-File  
LOAD  
SAVE

### EDIT COMMAND

COPY  
PRINT  
REPLICATE

### FORMAT COMMAND

\$  
GLOBAL  
COLUMN WIDTH  
FORMAT  
RECALCULATION

## SETTING UP THE FORMAT

To set up your worksheet, USE THE FOLLOWING DIRECTIONS.

First you will format all locations to display the values with two decimal places.

Leave your cursor on any location and press:

<b>F7</b>	starts SYSTEM commands
<b>G</b>	starts GLOBAL command
<b>F</b>	starts FORMAT command
<b>\$</b>	selects \$ option, to display in two decimal places

AFTER READING THE FOLLOWING NOTE, type in your labels, as illustrated in Figure 1, retaining exact row and column locations of all information.

### NOTE

Before entering each label, you must first press the space bar once.

### NOTE

When entering a label that contains more characters than the width of the column allows, you must move the cursor to the next adjacent column and continue typing the label.

7 EXERCISE Checkbook Ledger

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Last Month's YTD Total::												
2	-----												
3	Date	Check #	Paid To Deposit	Check	Ch. Book	Savings	Cash On	Rent	Phone	Supplies	Misc.	Purchase	
4				Amount	Balance		Hand						
5	-----												
6													
7													
8													
9													
10													
11													
12													
13													
14	=====												
15	Current Month's Total::												
16	New Year To Date Total::												

Figure 1

After you have entered your labels, you will enter the dashed line in row 2.

Place your cursor on A2 and press:

- F7** starts SYSTEM command
- starts — COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
- character to be repeated

The column your cursor is on will now have a dashed line across its width.

To extend the dashed line, in the same row, across the other columns,

Leave your cursor on A2 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From A2
- RETURN** **RETURN** displays Target Range From
- B2** **RETURN** displays Target Range From B2 To
- M2** displays Target Range From B2 To M2
- RETURN** executes the command

To enter the dashed line in row 5, repeat the above procedure, beginning with your cursor on A5.

To enter the double-dashed line on the checkbook,

Place your cursor on A14 and repeat the operation above, using the symbol = as your character to be repeated.

Your worksheet should now look like Figure 1.

## ENTERING MATHEMATICAL FORMULAS

Now that you have entered your labels and the dashed and double-dashed lines, you will enter the mathematical formulas which will establish the relationship between column and row locations. The formulas and their locations are illustrated in Figure 2.

### NOTE

If you make a mistake when entering a formula, you must first erase it, by using the BLANK command, before reentering your formula. To do this:

With your cursor on the cell you wish to erase, press:

F7                      starts SYSTEM command

B                         starts BLANK command

The cell your cursor is on will be empty, and you may reenter your formula.

### NOTE

You must first enter zero values into the cells which will not contain formulas, so that later, when you enter formulas into other cells, the formulas will calculate correctly.



## 7 EXERCISE Checkbook Ledger

To do this,

Place your cursor on D1 and type:

**0** value  
**RETURN** enters the value

Now you will copy the zero value across row 1 to column M.

Leave your cursor on D1 and press:

**F7** starts SYSTEM command  
**E** starts EDIT command  
**R** selects Replicate option and displays Source Range From D1  
**RETURN RETURN** displays Target Range From  
**E1 RETURN** displays Target Range From E1 To  
**M1** displays Target Range From E1 To M1  
**RETURN** executes the command

Now place your cursor on D6 and type:

**0** value  
**RETURN** enters the value

Next you will copy the zero value down column D to the double-dashed line.

Leave your cursor on D6 and press:

**F7** starts SYSTEM command  
**E** starts EDIT command  
**R** selects Replicate option and displays Source Range From D6  
**RETURN RETURN** displays Target Range From  
**D7 RETURN** displays Target Range From D7 To

**D13** displays Target Range From D7 To D13

**RETURN** executes the command

Place your cursor on G6 and type:

**0** value

**RETURN** enters the value

Continue entering zeros across row 6, into columns H, I, J, K, L and M.

Now you will copy the zeros down their respective columns.

Place your cursor on G6 and press:

**F7** starts SYSTEM command

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From G6

**RETURN** displays Source Range From G6 To

**M6** displays Source Range From G6 To M6

**RETURN** displays Target Range From

**G7 RETURN** displays Target Range G7 To

**G13** displays Target Range From G7 To G13

**RETURN** executes the command

Formula one, in the Check Amount column, adds the total of the postings from the Rent column across to the Purchase column.

Place your cursor on E6 and type:

**SUM ( I 6 : M 6 )** formula

**RETURN** enters the formula

Formula two determines the Checkbook Balance. The IF function is used to select the lesser of the values, 1, or the total of the Deposit and Check Amount for the Ch. Book Balance. The resulting value is multiplied by the total of the Deposits, Last Month's YTD Total for the Ch. Book Balance, minus the Check Amounts to date for the month.

## 7 EXERCISE Checkbook Ledger

Place your cursor on F6 and type:

**(IF(D6 + E6) > 0 THEN (1) ELSE (0)) \* (SUM(D6:D6) + (D1 - E1) - SUM(E6:E6))**  
formula

**RETURN** enters the formula

Now copy the formulas you have just entered into the Check Amount and the Ch. Book Balance columns, down their respective columns to the double-dashed line.

Place your cursor on E6 and press:

**F7** starts SYSTEM commands

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From E6 To

**RETURN** displays Source Range From E6 To

**F6** displays Source Range From E6 To F6

**RETURN** displays Target Range From

**E7 RETURN** displays Target Range From E7 To

**E13** displays Target Range From E7 To E13

**RETURN** prepares to receive additional information

**R**  
**R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location  
**R**  
**R**

**A** selects Absolute, which tells the command to copy the cell address in the formula into its new location without change

**R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location

**A**  
**A** selects Absolute, which tells the command to copy the cell address in the formula into its new location without change  
**A**

**R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location

Formula three, in the Deposit column, adds the Current Month's Total in the Deposit column.

Place your cursor on D15 and type:

**SUM ( D 5 : D 1 4 )** formula

**RETURN** enters the formula

Formula four will add the Last Month's YTD Total in the Deposit column to the Current Month's Total in that same column, to provide the New Year-To-Date Total.

Place your cursor on D16 and type:

**D 1 + D 1 5** formula

**RETURN** enters the formula

Now copy the two formulas you have just entered, across their respective rows, in the remaining columns to the right.

Place your cursor on D15 and press:

**F7** starts SYSTEM commands

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From D15 To

**RETURN** displays Source Range From D15 To

**D16** displays Source Range From D15 To D16

**RETURN** displays Target Range From

**E15 RETURN** displays Target Range From E15 To

**M15** displays Target Range From E15 To M15

**RETURN** prepares to receive additional information

## 7 EXERCISE Checkbook Ledger

**R**  
**R** selects Relative, which tells the command  
**R** to copy the cell address in the formula  
**R** relative to its new location

Formulas five through eight, in the Ch. Book Balance and Cash On Hand columns, obtain totals on their Current Month's Total and New Year-To-Date Total lines.

You will now replace the formulas in those locations.

Before replacing formula five, you must first blank the formula which is already there.

Place your cursor on F15 and press:

**F7** starts SYSTEM commands

**B** starts BLANK command

To enter formula five,

Leave your cursor on F15 and type:

**D 15 + F1 — E15** formula

**RETURN** enters the formula

Before replacing formula six, you must first blank the formula which is already there.

Place your cursor on F16 and press:

**F7** starts SYSTEM commands

**B** starts BLANK command

To enter formula six,

Leave your cursor on F16 and type:

**F15** formula

**RETURN** enters the formula

Before replacing formula seven, you must first blank the formula which is already there.

Place your cursor on H15 and press:

**F7** starts SYSTEM command

**B** starts BLANK command

To enter formula seven,

Leave your cursor on H15 and type:

**SUM ( F15 : G15 , G1 : G1 )** formula

**RETURN** enters the formula

Before replacing formula eight, you must first blank the formula which is already there.

Place your cursor on H16 and press:

**F7** starts SYSTEM command

**B** starts BLANK command

To enter formula eight,

Leave your cursor on H16 and type:

**H15** formula

**RETURN** enters the formula

Your worksheet should now look like Figure 2.

Your blank checkbook worksheet is now complete, containing all the formulas necessary for its operation. Prior to posting entries, save the entire worksheet by transferring it to a disk file for later use.

Place a formatted data diskette in Drive A.

## 7 EXERCISE Checkbook Ledger

Leave your cursor on any cell and press:

<b>F7</b>	starts SYSTEM commands
<b>D</b>	starts DISK command
<b>S</b>	selects Save option
<b>RETURN</b>	prepares to receive additional information
<b>CHECKBOOK</b>	name of worksheet
<b>RETURN</b>	executes the command

### POSTING ENTRIES

Before posting entries, read the following note:

#### NOTE

When entering the check numbers, in column B, enter them as labels. Be sure to press the space bar before each entry in this column (as well as for each entry in the Date column and the Paid To column).

DO NOT ENTER THE CHECK AMOUNTS DIRECTLY INTO THE CHECK AMOUNT COLUMN. Enter the check amounts in the adjacent columns to the right, from the Rent through the Purchase columns. After entering the Check Amounts into these adjacent columns, they will appear in the Check Amount column because of the formula entered there.

Now make your entries as illustrated in Figure 3, into columns A, B, C, D, and G through M. DO NOT MAKE ENTRIES INTO COLUMNS E AND F.

After you have made your entries, your worksheet should look like Figure 3.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Last Month's YTD Total::												
2				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Date	Check #	Paid To Deposit		Check	Ch. Book	Savings	Cash On	Rent	Phone	Supplies	Misc.	Purchase
4					Amount	Balance	Hand						
5	-----												
6	Jun 2,81		15000.0	0.00	15000.0	1200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Jun 25	101	Rentals	0.00	550.00	14450.0	0.00	0.00	550.00	0.00	0.00	0.00	0.00
8	Jun 25	102	NW Bell	0.00	250.00	14200.0	0.00	0.00	0.00	250.00	0.00	0.00	0.00
9	Jun 30	103	Acme	0.00	125.00	14075.0	0.00	0.00	0.00	0.00	125.00	0.00	0.00
10	Jun 30	104	Hardware	0.00	4500.00	9575.00	0.00	0.00	0.00	0.00	0.00	0.00	4500.00
11				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	=====												
15	Current Month's Totals:: 15000.0 5425.00 9575.00 1200.00 10775.0 550.00 250.00 125.00 0.00 4500.00												
16	New Year To Date Total:: 15000.0 5425.00 9575.00 1200.00 10775.0 550.00 250.00 125.00 0.00 4500.00												

Figure 3

## MONTHLY UPDATING

To perform the updating process, you will transfer the values in the New Year-To-Date Total row to a DIF-File. You will later reenter these values into a worksheet for the new month by recalling them from the file.

Place your cursor on D16, the left-most cell of the row you wish to copy into the DIF-File, and press:

- F7** starts SYSTEM command
- D** starts DISK command
- D** selects DIF-File command
- S** selects Save option
- RETURN** prepares to receive additional information
- CHBKTOTALS** name of file to be saved
- RETURN** displays From D16 To
- RETURN** prepares to receive additional information
- M16** last cell in row to be saved
- RETURN** displays By Rows or By Columns
- R** executes the command and saves the values in row format

Next load your blank checkbook worksheet, saved previously, from your storage file.

With your cursor on any location, press:

- F7** starts SYSTEM command
- D** starts DISK command
- L** selects Load option
- RETURN** prepares to receive additional information
- CHECKBOOK** name of worksheet
- RETURN** executes the command

If you see All Pages? type Y, to confirm.

Now load the New Year-To-Date Total values (saved on a DIF-File) from the old checkbook worksheet into the Last Month's YTD Total row on the new worksheet.

Place your cursor on D1, the left-most cell of the row where you wish the values to be reentered, and press:

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>D</b>	starts DIF-File command
<b>L</b>	selects Load option
<b>RETURN</b>	prepares to receive additional information
<b>CHBKTOTALS</b>	name of file to be loaded
<b>RETURN</b>	displays From D1
<b>RETURN</b>	displays By Row or By Column
<b>R</b>	executes the command and loads the value in row format

Now press the up arrow (not the cursor arrow) to recalculate all the values.

Your worksheet should now look like Figure 4.

You have now completed your monthly update and have entered the cumulative totals in your next checkbook worksheet.

You are ready to begin posting entries for the new month.

7 EXERCISE Checkbook Ledger

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Last Month's YTD Total:: 15000.0 5425.00 9575.00 1200.00 10775.0 550.00 250.00 125.00 0.00 4500.00												
2	-----												
3	Date	Check #	Paid To	Deposit	Check	Ch. Book	Savings	Cash On	Rent	Phone	Supplies	Misc.	Purchase
4					Amount	Balance		Hand					
5	-----												
6					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	=====												
15	Current Month's Totals:: 0.00 0.00 9575.00 0.00 10775.0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00												
16	New Year To Date Total:: 15000.0 5425.00 9575.00 1200.00 10775.0 550.00 250.00 125.00 0.00 4500.00												

Figure 4

Figure 4

## SAVING

Now save your worksheet for future use, so that the next time you wish to figure these computations all you will need to do is enter in your new known values, and you will not need to retype in the labels or enter the formulas.

To save your worksheet,

Place a formatted data diskette in Drive A.

Leave your cursor on any location and press:

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>S</b>	selects Save option
<b>RETURN</b>	prepares to receive additional information
Type in file name.	
<b>RETURN</b>	executes the command

## PRINTING

To print out your worksheet, place your cursor on A1 and press:

<b>F7</b>	starts SYSTEM command
<b>E</b>	starts EDIT command
<b>P</b>	starts PRINT command
<b>D</b>	selects Direct print option
<b>RETURN</b>	displays Print A1 To:

Type in the lower right-hand cell address of the worksheet area rectangle that you wish to print.

<b>RETURN</b>	executes the command
---------------	----------------------

## LOADING YOUR WORKSHEET BACK INTO CALC RESULT

It is not necessary to clear your screen before loading a worksheet into Calc Result. Just make sure you have saved whatever is on your screen before loading in a new worksheet.

With your cursor on any location, press:

**F7** starts SYSTEM command

**D** starts DISK command

**L** selects Load option

**RETURN** prepares to receive additional information

Type in name of file to be loaded.

**RETURN** executes the command

### NOTE

After following the above instructions for loading, press F1, which guarantees the loading of all the pages in the file.

## EXERCISE EIGHT

# DAILY INVENTORY

### DESCRIPTION

To demonstrate Calc Result's ability, a Daily Inventory report worksheet has been set up. Updating functions are performed on a daily basis and the entire Total Cases column is saved at the end of each day. Then the Cases Rec'd and the Cases Sold columns are cleared. The Total Cases column values are then reentered in the Cases On Hand column, which makes the worksheet ready for the next day's inventory process.

The Reorder Time column indicates when it is time to reorder by displaying the number 1 when the Reorder Quantity column reaches its minimum stocking amount. At all other times, the Reorder Time column will display a zero, indicating it is not yet time to reorder.

## OPERATIONS PERFORMED

Setting Up The Format

Entering Mathematical Formulas

Making Worksheet Entries

Daily Updating

Saving

Printing

Loading Your Worksheet Back Into Calc Result

## FUNCTIONS USED

ELSE  
IF  
SUM  
THEN

## COMMANDS USED

SYSTEM COMMAND  
BLANK  
DISK  
EDIT  
FORMAT  
—  
DISK COMMAND  
DIF-File  
LOAD  
SAVE  
EDIT COMMAND  
COPY  
PRINT  
REPLICATE  
FORMAT COMMAND  
\$

## SETTING UP THE FORMAT

To set up your worksheet, USE THE FOLLOWING DIRECTIONS.

AFTER READING THE FOLLOWING NOTES, type in your labels, as illustrated in Figure 1, retaining exact row and column locations of all information.

### NOTE

Before entering each label, you must first press the space bar once.

### NOTE

When entering a label which contains more characters than the width of the column allows, you must move the cursor to the next adjacent column and continue typing the label.

	A	B	C	D	E	F	G	H	I
1	Item	Reorder	Cost	Cases	Cases	Cases	Total	Total	Reorder
2	Number	Quantity	PerCase	Rec'd	Sold	On Hand	Cases	Cost	Time
3	-----								
4									
5									
6									
7									
8									
9									
10									
11									
12	-----								
13									

Figure 1

## 8 EXERCISE Daily Inventory

After you have entered your labels, you will enter the dashed line in row 3.

Place your cursor on A3 and press:

- F7** starts SYSTEM command
- starts **—** COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
- character to be repeated

The column your cursor is on will now have a dashed line across its width.

To extend the dashed line, in the same row, across the other columns,

Leave your cursor on A3 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From A3
- RETURN** **RETURN** displays Target Range From
- B3** **RETURN** displays Target Range From B3 To
- I3** displays Target Range From B3 To I3
- RETURN** executes the command

To enter the dashed line in row 12, place your cursor on A12 and repeat the above procedure, indicating the Target Range as being From B12 to I12.

Your worksheet should now look like Figure 1.

## ENTERING MATHEMATICAL FORMULAS

Now that you have entered your labels and the dashed line, you will enter the mathematical formulas which will establish the relationship between column and row locations. The formulas and their locations are illustrated in Figure 2.

### NOTE

If you make a mistake when entering a formula, you must first erase it, by using the BLANK command, before reentering your formula. To do this:

With your cursor on the cell you wish to erase, press:

**F7** starts SYSTEM command

**B** starts BLANK command

The cell your cursor is on will be empty, and you may reenter your formula.

### NOTE

You must first enter zero values into the cells which will not contain formulas, so that later, when you enter formulas into other cells, the formulas will calculate correctly.

8 EXERCISE Daily Inventory

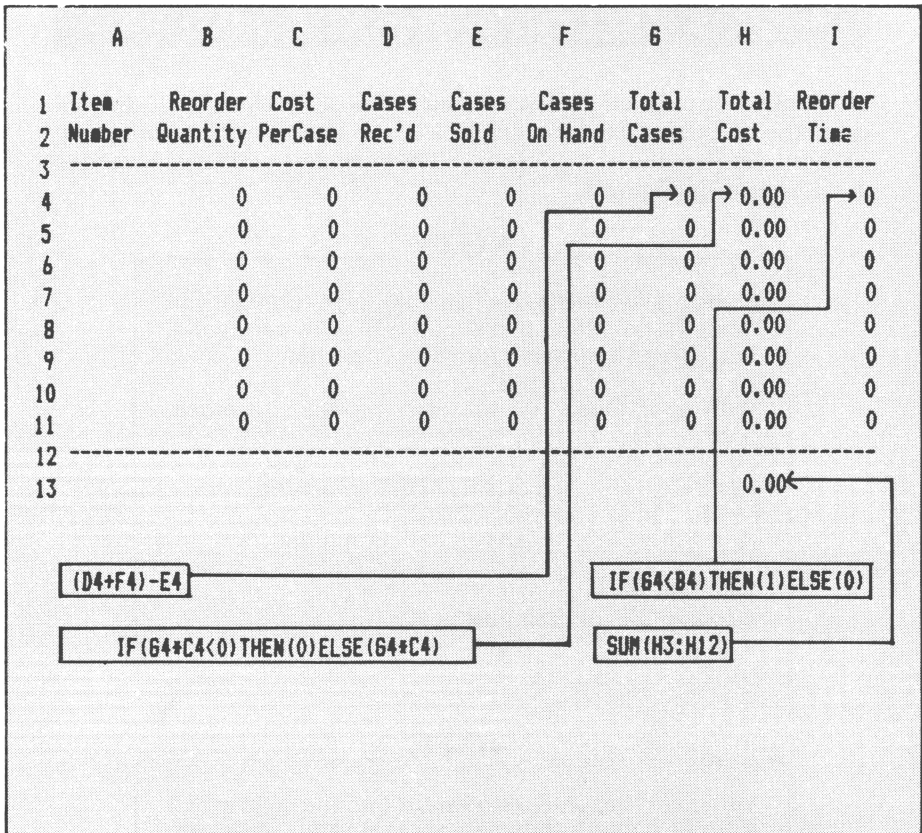


Figure 2

To do this,

Place your cursor on B4 and type:

0

value

**RETURN**

enters the value

Place your cursor on C4 and type:

**0** value  
**RETURN** enters the value

Continue entering zero values into cells D4, E4 and F4.

Now you will copy the zero values down their respective columns, to the dashed line.

Place your cursor on B4 and press:

**F7** starts SYSTEM command  
**E** starts EDIT command  
**R** selects Replicate option and displays Source Range From B4 To  
**RETURN** displays Source Range From B4 To  
**F4** displays Source Range From B4 To F4  
**RETURN** displays Target Range From  
**B5 RETURN** displays Target Range From B5 To  
**B11** displays Target Range From B5 To B11  
**RETURN** executes the command

Now that you have entered all the necessary zero values, you may begin entering the formulas.

Formula one, in the Total Cases column, adds, in the same row, the Cases Rec'd and the Cases On Hand. From that total, the Cases Sold, in the same row is subtracted. The value generated is then displayed in the Total Cases column of the same row.

Place your cursor on G4 and type:

**( D4 + F4 ) — E4** formula  
**RETURN** enters the formula

Formula two in the Total Cost column, determines the total cost of each inventory item. The IF, THEN and ELSE functions are used to display a zero value if the item is out of stock.

## 8 EXERCISE Daily Inventory

Place your cursor on H4 and type:

**IF ( G4\*C4 < 0 ) THEN ( 0 ) ELSE ( G4 \* C4 )** formula

**RETURN** enters the formula

Now you will format the cell into which you have just entered the formula so that later it will be displayed with two decimal places.

Leave your cursor on H4 and press:

**F7** starts SYSTEM command

**F** starts FORMAT command

**\$** selects \$ option, to display with two decimal places

Formula three, in the Reorder Time column, uses the IF, THEN and ELSE functions to determine if it is time to reorder an item. If it is time to reorder, a zero value will be displayed; if not, then a value of 1 will be displayed.

Place your cursor on I4 and type:

**IF ( G4 < B4 ) THEN ( 1 ) ELSE ( 0 )** formula

**RETURN** enters the formula

Now you copy the formulas just entered down their respective columns, to the dashed line.

Place your cursor on G4 and press:

**F7** starts SYSTEM commands

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From G4 To

**RETURN** displays Source Range From G4 To

**I4** displays Source Range From G4 To I4

**RETURN** displays Target Range From

**G5 RETURN** displays Target Range From G5 To

**G11** displays Target Range From G5 To G11

**RETURN** prepares to receive additional information

**R**

**R**

**R**

**R**

**R**

**R**

**R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location

**R**

**R**

Formula four, at the bottom of the Total Cost column, underneath the dashed line, totals the cost of the entire inventory, and displays that amount in dollars and cents.

Place your cursor on H13 and type:

**SUM ( H3 : H12 )** formula

**RETURN** enters the formula

Now you will format the cell into which you have just entered the formula so that it will be displayed with two decimal places.

Leave your cursor on H13 and press:

**F7** starts SYSTEM command

**F** starts FORMAT command

**\$** selects \$ option, to display with two decimal places

Your worksheet should now look like Figure 2.

## MAKING WORKSHEET ENTRIES

### NOTE

If you accidentally type in a value into a cell containing a formula, Calc Result will display ERROR on your screen.

Now type in the entries, as illustrated in Figure 3, into columns A, B, C, D and E, between the dashed lines.

Your worksheet should now look like Figure 3.

The worksheet is now complete for the day, and you may wish to save it for later use, or print it for distribution.

	A	B	C	D	E	F	G	H	I
1	Item	Reorder	Cost	Cases	Cases	Cases	Total	Total	Reorder
2	Number	Quantity	PerCase	Rec'd	Sold	On Hand	Cases	Cost	Time
3	-----								
4	400	10	3.35	20	5	0	15	50.25	0
5	100	15	6.35	20	2	0	18	114.30	0
6	700	25	9.55	30	5	0	25	238.75	0
7	200	10	12.55	12	8	0	4	50.20	1
8	500	20	8.75	10	1	0	9	78.75	1
9	800	30	21.25	30	9	0	21	446.25	1
10	600	5	3.15	3	1	0	2	6.30	1
11	300	35	12.75	5	4	0	1	12.75	1
12	-----								
13								997.55	

**Figure 3**

## SAVING

To save your worksheet,

Place a formatted data diskette in Drive A.

Leave your cursor on any location and press:

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>S</b>	selects SAVE option
<b>RETURN</b>	prepares to receive additional information

Type in name of file.

<b>RETURN</b>	executes the command
---------------	----------------------

If the worksheet has been saved previously, you will see Replace? displayed on your screen. You will then type Y, for Yes.

## PRINTING

To print out your worksheet, place your cursor on A1 and press:

<b>F7</b>	starts SYSTEM command
<b>E</b>	starts EDIT command
<b>P</b>	starts PRINT command
<b>D</b>	selects Direct print option
<b>RETURN</b>	displays Print A1 To:

Type in the lower right-hand cell address of the worksheet area rectangle that you wish to print.

<b>RETURN</b>	executes the command
---------------	----------------------

## DAILY UPDATING

The first operation in the daily updating process, is to save the totals in the Total Cases column of the current Daily Inventory Report, into a DIF (Data Interchange Format) file. Later these totals will be reentered into the Cases On Hand column, and the totals will accumulate accurately in the Total Cases column of the new Daily Inventory Report, as illustrated in Figure 4.

	A	B	C	D	E	F	G	H	I
1	Item	Reorder	Cost	Cases	Cases	Cases	Total	Total	Reorder
2	Number	Quantity	PerCase	Rec'd	Sold	On Hand	Cases	Cost	Time
3	-----								
4	400	10	3.35	0	0	15	15	50.25	0
5	100	15	6.35	0	0	18	18	114.3	0
6	700	25	9.55	0	0	25	25	238.75	0
7	200	10	12.55	0	0	4	4	50.2	1
8	500	20	8.75	0	0	9	9	78.75	1
9	80	30	21.25	0	0	21	21	446.25	1
10	600	5	3.15	0	0	2	2	6.3	1
11	300	35	12.75	0	0	1	1	12.75	1
12	-----								
13								997.55	

**Figure 4**

Place your cursor on G4 and press:

- F7** starts SYSTEM command
- D** starts DISK command
- D** selects DIF-File option
- S** selects Save option
- RETURN** prepares to receive additional information

<b>TOTALCASES</b>	name of column to be saved
<b>RETURN</b> <b>RETURN</b>	displays From G4 To
<b>G11</b>	displays From G4 To G11
<b>RETURN</b>	displays By Rows or By Columns
<b>C</b>	executes the command and saves values in column format

The second operation, in preparing for tomorrow's entries is to enter the Total Cases column, which you have just saved in the DIF-File, into the Cases On Hand column, as illustrated in Figure 4.

Place your cursor on F4 and press:

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>D</b>	selects DIF-File option
<b>L</b>	selects Load option
<b>RETURN</b>	prepares to receive additional information
<b>TOTALCASES</b>	name of column to be loaded
<b>RETURN</b>	displays From F4 To
<b>RETURN</b>	displays By Rows or By Columns
<b>C</b>	executes the command and loads values in column format

The third operation is to replace the entries in the Cases Rec'd and Cases Sold columns with zeros, to allow for tomorrow entries into those columns.

Place your cursor on D4 and type:

<b>0</b>	zero value
<b>RETURN</b>	enters the value

Place your cursor on E4 and type:

<b>0</b>	zero value
<b>RETURN</b>	enters the value

## 8 EXERCISE Daily Inventory

Now copy the zero values down their respective columns.

Place your cursor on D4 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From D4 To
- RETURN** displays Source Range From D4 To
- E4** displays Source Range From D4 To E4
- RETURN** displays Target Range From
- D5 RETURN** displays Target Range From D5 To
- D11** displays Target Range From D5 To D11
- RETURN** executes the command

Your worksheet should now look like Figure 4.

Your Daily Inventory Report worksheet is now updated, and you may now make your new entries.

You will then save your worksheet, and repeat the updating process in preparation for the next day.

### **SAVING YOUR WORKSHEET**

Now save your worksheet for future use, so that the next time you wish to figure these computations all you will need to do is enter in your new known values, and you will not need to retype in the labels or enter the formulas.

To save your worksheet,

Place a formatted data diskette in Drive A.

Leave your cursor on any location and press:

- F7** starts SYSTEM command
- D** starts DISK command
- S** selects SAVE option
- RETURN** prepares to receive additional information

Type in name of file.

- RETURN** executes the command

If the worksheet has been saved previously, you will see Replace? displayed on your screen. You will then type Y, for Yes.

If you see Save All Pages? displayed on your screen, type Y, for Yes.

## PRINTING

To print out your worksheet, place your cursor on A1 and press:

- F7** starts SYSTEM command
- E** starts EDIT command
- P** starts PRINT command
- D** selects Direct print option
- RETURN** displays Print A1 To:

Type in the lower right-hand cell address of the worksheet area rectangle that you wish to print.

- RETURN** executes the command

## LOADING YOUR WORKSHEET BACK INTO CALC RESULT

It is not necessary to clear your screen before loading a worksheet into Calc Result. Just make sure you have saved whatever is on your screen before loading in a new worksheet.

Place the data diskette from which you wish to load into Drive A.

Leave your cursor on any location, press:

- F7** starts SYSTEM command
- D** starts DISK command
- L** selects Load option
- RETURN** prepares to receive additional information

Type in name of file to be loaded.

- RETURN** executes the command

If you see Load All pages? displayed on your screen, type Y, for Yes.

### NOTE

After following the above instructions for loading, press F1, which guarantees the loading of all the pages in the file.

# EXERCISE NINE

## SALES REPORTING

### DESCRIPTION

To demonstrate Calc Result's ability to store pages in memory, using the PAGE command, and then quickly recall each one, a Weekly Sales report worksheet has been set up for two salespersons, which adds the daily sales, calculates the sales needed per day to reach the commission base, calculates the average sales per day, and then projects the total sales figure for the week.

## OPERATIONS PERFORMED

Setting Up The Format

Entering Mathematical Formulas

Making Worksheet Entries

Saving

Printing

Loading Your Worksheet Back Into Calc Result

## FUNCTIONS USED

MEAN  
SUM

## COMMANDS USED

SYSTEM COMMAND  
BLANK  
DISK  
EDIT  
FORMAT  
GLOBAL  
PAGE  
—  
DISK COMMAND  
LOAD  
SAVE  
EDIT COMMAND  
PRINT  
REPLICATE  
FORMAT COMMAND  
INTEGER  
\$  
GLOBAL  
FORMAT  
PAGE  
GET

## SETTING UP THE FORMAT

To set up your worksheet, USE THE FOLLOWING DIRECTIONS.

To format the worksheet to display values with two decimal places,

Leave your cursor on any location and press:

<b>F7</b>	starts SYSTEM command
<b>G</b>	starts GLOBAL command
<b>F</b>	starts FORMAT command
<b>\$</b>	selects \$ option, to display in two decimal places

AFTER READING THE FOLLOWING NOTES, type in your labels, as illustrated in Figure 1, retaining exact row and column locations of all information.

### NOTE

Before entering each label, you must first press the space bar once.

### NOTE

When entering a label that contains more characters than the width of the column allows, you must move the cursor to the next adjacent column and continue typing the label.

After you have entered your labels, you will enter the dashed line in row 6.

9 EXERCISE Sales Reporting

	A	B	C	D	E	F	G	H
1	Salesperson Name							
2	Days in Week							
3	Commission Base							
4					Total Sales	Average	Pro-	
5	Day	Prod.A	Prod.B	Prod.C	Sales	Need/Day	Sale/Day	jection
6	-----							
7								
8								
9								
10								
11								
12								
13								
14	=====							
15								

Figure 1

Place your cursor on A6 and press:

- F7 starts SYSTEM command
- starts — COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
- character to be repeated

The column your cursor is on will now have a dashed line across its width.

To extend the dashed line, in the same row, across the other columns,

Leave your cursor on A6 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From A6
- RETURN** **RETURN** displays Target Range From
- B6** **RETURN** displays Target Range From B6 To
- H6** displays Target Range From B6 To H6
- RETURN** executes the command

To enter the double-dashed line in row 14, place your cursor on A14, and repeat the above procedure, substituting = as the character to be repeated.

Your worksheet should now look like Figure 1.

## ENTERING MATHEMATICAL FORMULAS

Now that you have entered your labels and the dashed and double-dashed lines, you will enter the mathematical formulas which will establish the relationship between column and row locations. The formulas and their locations are illustrated in Figure 2.

### NOTE

If you make a mistake when entering a formula, you must first erase it, by using the BLANK command, before reentering your formula. To do this:

With your cursor on the cell you wish to erase, press:

- F7** starts COMMAND system
- B** starts BLANK command

The cell your cursor is on will be empty, and you may reenter your formula.

9 EXERCISE Sales Reporting

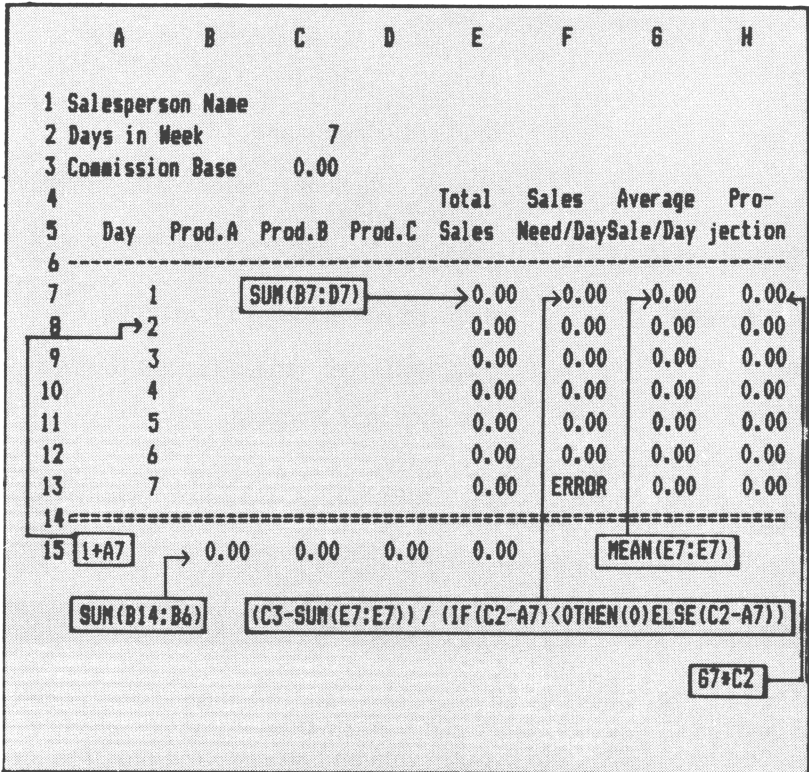


Figure 2

BEFORE ENTERING THE FORMULAS, you must first enter a zero value into C3, to the right of Commission Base.

Place your cursor on C3 and type:

0 value

**RETURN** enters the value

Now you must enter the value of 7 into C2, to the right of Days in Week.

Place your cursor on C2 and type:

**7** number of days in week

**RETURN** enters the value

Next you will format the value just entered so that it will be displayed as an integer.

Leave your cursor on C2 and press:

**F7** starts SYSTEM command

**F** starts FORMAT command

**I** selects Integer option

Next you must enter the value of 1 into A7.

Place your cursor on A7 and type:

**1** value

**RETURN** enters the value

You will now format the cell into which you have just entered the value, so that it will be displayed as an integer.

Leave your cursor on A7 and press:

**F7** starts SYSTEM command

**F** starts FORMAT command

**I** selects Integer option

Now you may enter formula one.

Formula one, in the Day column, immediately underneath the value of 1 which you have just entered, sequentially increases the day, from the top to the bottom of the column.

Place your cursor on A8 and type:

**1 + A7** formula

**RETURN** enters the formula

## 9 EXERCISE Sales Reporting

Now you will format the cell into which you have just entered the formula, so that it will be displayed as an integer.

Leave your cursor on A8 and press:

- F7** starts SYSTEM command
- F** starts FORMAT command
- I** selects Integer option

Your next operation is to copy the formula you have just entered, down the column to the double-dashed line.

Leave your cursor on A8 and press:

- F7** starts SYSTEM command
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From A8
- RETURN** **RETURN** displays Target Range From
- A9** **RETURN** displays Target Range From A9 To
- A13** displays Target Range From A9 To A13
- RETURN** executes the command and prepares to receive additional instructions
  
- R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location

Formula two, in the Prod. A column, immediately underneath the double-dashed line, totals the values in that column.

Place your cursor on B15 and type:

- SUM ( B14 : B6 )** formula
- RETURN** enters the formula

You will now copy the formula just entered across the row, into columns C, D and E.

Leave your cursor on B15 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From B15 To
- RETURN RETURN** displays Target Range From
- C15 RETURN** displays Target Range From C15 To
- E15** displays Target Range From C15 To E15
- RETURN** prepares to receive additional information
- R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location
- R**

Formula three, in the Total Sales column, immediately underneath the dashed line, totals the sales for Prod. A, Prod. B and Prod. C.

Place your cursor on E7 and type:

- SUM ( B7 : D7 )** formula
- RETURN** enters the formula

Formula four, in the Sales Need/Day column, immediately underneath the dashed line, calculates the sales needed per day to reach the commission base.

Place your cursor on F7 and type:

- (C3—SUM(E7:E7) ) / (IF(C2—A7)<0THEN(0)ELSE(C2—A7) )** formula
- RETURN** enters the formula

Formula five, in the Average Sale/Day column, immediately underneath the dashed line, calculates the average amount of sales per day.

Place your cursor on G7 and type:

- MEAN ( E7 : E7 )** formula
- RETURN** enters the formula

## 9 EXERCISE Sales Reporting

Formula six, in the Projection column, immediately underneath the dashed line, takes the average sales per day and multiplies it by the number of working days in the month to determine a projected total sales figure for the month.

Place your cursor on H7 and type:

**G7 \* C2** formula  
**RETURN** enters the formula

Now you will copy formulas three, four, five and six, which you have just entered, down their respective columns.

Place your cursor on E7 and press:

**F7** starts SYSTEM commands  
**E** starts EDIT command  
**R** selects Replicate option and displays Source Range From E7 To  
**RETURN** displays Source Range From E7 To  
**H7** displays Source Range From E7 To H7  
**RETURN** displays Target Range From  
**E8 RETURN** displays Target Range From E8 To  
**E13** displays Target Range From E8 To E13  
**RETURN** prepares to receive additional information  
**R** selects Relative, which tells the command  
**R** to copy the cell address in the formula relative to its new location

A selects Absolute, which tells the command  
 A to copy the cell address in the formula into  
 its new location without change

R  
 A  
 R  
 A  
 R  
 A  
 R  
 R  
 A

Your worksheet should now look like Figure 2.

## MAKING WORKSHEET ENTRIES

### NOTE

If you accidentally type in a value into a cell containing a formula, Calc Result will display ERROR on your screen.

First enter Jones' name in column C, row 1, as illustrated in Figure 3.

Now make the commission base entry, to the right of Commission Base.

Place your cursor on C3 and type:

**4000** commission base for Jones

**RETURN** enters the value

Now type in the entries, as illustrated in Figure 3, into columns B, C and D (Prod. A, Prod. B, and Prod. C), beginning in row 7, and continuing down to the double-dashed line.

Your worksheet should now look like Figure 3.

9 EXERCISE Sales Reporting

	A	B	C	D	E	F	G	H
1	Salesperson Name: Jones							
2	Days in Week 7							
3	Commission Base 4000.00							
4					Total Sales	Average	Pro-	
5	Day	Prod.A	Prod.B	Prod.C	Sales	Need/Day	Sale/Day	jection
6	-----							
7	1	125.00	75.00	25.00	225.00	629.17	225.00	1575.00
8	2	50.00	68.00	90.00	208.00	713.40	216.50	1515.50
9	3	95.00	20.00	65.00	180.00	846.75	204.33	1430.33
10	4	300.00	0.00	0.00	300.00	1029.00	228.25	1597.75
11	5	70.00	0.00	100.00	170.00	1458.50	216.60	1516.20
12	6	80.00	400.00	100.00	580.00	2337.00	277.17	1940.17
13	7	250.00	20.00	300.00	570.00	ERROR	319.00	2233.00
14	=====							
15		970.00	583.00	680.00	2233.00			

Figure 3

The next operation is to save your entire worksheet.

With your cursor on any location, press:

- F7** starts SYSTEM command
- D** starts DISK command
- S** selects Save option
- RETURN** prepares to receive additional information
- JONES** name of file to be saved
- RETURN** executes the command

If the worksheet has been saved previously, you will see **Replace?** displayed on your screen. You will then type **Y**, for **Yes**.

If you see **Save All Pages?** displayed on your screen, type **Y**, for **Yes**.

Now you will set up the worksheet for salesperson Adams, as illustrated in Figure 4.

Your labels and formulas are already typed in. All you need to do is perform the following operations and your new worksheet will be set up for salesperson Adams.

First you will blank out the name of Jones.

Place your cursor on C1 and press:

**F7** starts **SYSTEM** command

**B** starts **BLANK** command and erases Jones' name

Now you will enter Adams name to the right of Salesperson Name.

Leave your cursor on C1 and type:

**ADAMS** name of salesperson

Now you will change the commission base for Adams.

Place your cursor on C3 and type:

**3000** commission base for Adams

**RETURN** enters the value

The next step is to enter into columns B, C and D (Prod. A, Prod. B and Prod. C) the sales amounts for Adams.

After these entries have been made, your worksheet should look like Figure 4.

You will now save the worksheet for salesperson Adams.

With your cursor on any location, press:

**F7** starts **SYSTEM** command

## 9 EXERCISE Sales Reporting

<b>D</b>	starts DISK command
<b>S</b>	selects Save option
<b>RETURN</b>	prepares to receive additional information
<b>ADAMS</b>	name of file
<b>RETURN</b>	executes the command

If the worksheet has been saved previously, you will see Replace? displayed on your screen. You will then type Y, for Yes.

If you see Save All Pages? displayed on your screen, type Y, for Yes.

### UTILIZING CALC RESULT'S PAGE COMMAND

#### NOTE

The PAGE command works only with the Advanced Version of Calc Result.

If you are using Calc Results Easy, proceed next with the section titled PRINTING.

To do a comparison of the commission bases for Jones (Figure 3) and Adams (Figure 4) we will utilize Calc Result's PAGE command.

The procedure is as follows:

First you will clear the memory. Press:

**F7** starts SYSTEM command

Hold down the shift key and press the CLR key.

**Y** Yes, to confirm

	A	B	C	D	E	F	G	H
1	Salesperson Name: Adams							
2	Days in Week 7							
3	Commission Base 3000.00							
4					Total Sales	Average	Pro-	
5	Day	Prod.A	Prod.B	Prod.C	Sales	Need/Day	Sale/Day	jection
6	-----							
7	1	25.00	100.00	75.00	200.00	466.67	200.00	1400.00
8	2	80.00	65.00	20.00	165.00	527.00	182.50	1277.50
9	3	100.00	60.00	30.00	190.00	611.25	185.00	1295.00
10	4	100.00	600.00	0.00	700.00	581.67	313.75	2196.25
11	5	20.00	45.00	20.00	85.00	830.00	268.00	1876.00
12	6	300.00	900.00	800.00	2000.00	-340.00	556.67	3896.67
13	7	700.00	600.00	20.00	1320.00	ERROR	665.71	4660.00
14	=====							
15		1325.00	2370.00	965.00	4660.00			

Figure 4

Your cleared screen will display P1 at the upper left-hand corner.

Now you will load in Jones Sales Report (Figure 3) onto Page 1 (P1) on your cleared screen. To do this, press:

- F7** starts SYSTEM command
- D** starts DISK command
- L** selects Load option
- RETURN** prepares to receive additional information
- JONES** name of file to be loaded
- RETURN** executes the command
- Y** If you see Load All Pages? displayed on your screen, type Y, for Yes.

## 9 EXERCISE Sales Reporting

Now you will take the information on your screen (Page 1) and copy it to Page 2, of the computer's memory, using Calc Result's PAGE command. To do this,

Leave your cursor on any location and press:

<b>F7</b>	starts SYSTEM command
<b>P</b>	starts PAGE command
<b>C</b>	selects Copy option
<b>2</b>	indicates page to copy to
<b>RETURN</b>	executes the command, and copies Page 1 onto Page 2
<b>Y</b>	Yes, to confirm

At this point, you will see P1 still displayed at the upper left-hand corner of your screen. However, the worksheet for Jones is also now contained on Page 2.

To assure that the information has been copied onto Page 2, press:

<b>F7</b>	starts SYSTEM command
<b>P</b>	starts PAGE command
<b>G</b>	selects Get option
<b>2</b>	page number to get
<b>RETURN</b>	executes the command, and gets Page 2

You will note that now P2 is displayed on the upper left-hand corner of your screen.

Now you must return to Page 1. Press:

<b>F7</b>	starts SYSTEM command
<b>P</b>	starts PAGE command

- G** selects Get option
- 1** page number to get
- RETURN** executes the command, and returns to Page 1.

The next procedure is to load in Adams' sales report.

Leave your cursor on any location and press:

- F7** starts SYSTEM command
- D** starts DISK command
- L** selects Load option
- RETURN** prepares to receive additional information
- ADAMS** name of file to be loaded
- RETURN** executes the command
- Y** If you see Load All Pages? displayed on your screen, type Y, for Yes

After Adams has been loaded, you will see P1 displayed on the upper left-hand corner of your screen.

(You do not have to restrict yourself to two sales reports. If you have other salespersons, you can have a sales report for each one, entered for comparison.)

Now you will utilize the Get option to get Jones' report on Page 2. Press:

- F7** starts SYSTEM command
- P** starts PAGE command
- G** selects Get option
- 2** indicates Page 2
- RETURN** executes the command and displays Page 2 on your screen

## 9 EXERCISE Sales Reporting

Now to return back to Adams' report on Page 1, press:

<b>F7</b>	starts SYSTEM command
<b>P</b>	starts PAGE command
<b>G</b>	selects Get option
<b>1</b>	indicates Page 1
<b>RETURN</b>	executes the command and returns Page 1 to your screen.

### PRINTING

To print out your worksheet, place your cursor on A1 and press:

<b>F7</b>	starts SYSTEM command
<b>E</b>	starts EDIT command
<b>P</b>	starts PRINT command
<b>D</b>	selects Direct Print option
<b>RETURN</b>	displays Print A1 To

Type in the lower right-hand cell address of the worksheet area rectangle that you wish to print.

<b>RETURN</b>	executes the command
---------------	----------------------

### LOADING YOUR WORKSHEET BACK INTO CALC RESULT

It is not necessary to clear your screen before loading a worksheet into Calc Result. Just make sure you have saved whatever is on your screen before loading in a new worksheet.

Leave your cursor on any location and press:

- F7** starts SYSTEM commands
- D** starts DISK command
- L** selects Load option
- RETURN** prepares to receive additional information

Type in name of file to be loaded.

- RETURN** executes the command

If you see Load All Pages? displayed on your screen, type Y, for Yes.

### NOTE

After following the above instructions for loading, Press F1, which guarantees the loading of all the pages in the file.



## EXERCISE TEN

# PAYROLL REPORTING

### DESCRIPTION

Calc Result has the ability to allow the updating, storage, retrieval and use of multiple worksheets. Calc Result allows you to draw information from one worksheet, and insert it into another worksheet, for updating and accumulating purposes.

To demonstrate Calc Result's ability, a Monthly Payroll and a Quarterly Payroll have been set up. Information for the Quarterly Payroll worksheet is updated from the Monthly Payroll worksheet, allowing you to keep updated quarterly year-to-date totals, and allowing the Monthly Payroll worksheet to receive YTD totals from the Quarterly Payroll worksheet.

## OPERATIONS PERFORMED

Setting Up The Format For the Monthly Payroll Worksheet  
Entering Mathematical Formulas for the Monthly Payroll Worksheet  
Setting Up The Format for the Quarterly Payroll Worksheet  
Entering Mathematical Formulas for the Qrtrly. Payroll Worksheet  
Making Worksheet Entries  
Updating  
Saving  
Printing  
Loading Your Worksheet Back Into Memory

## FUNCTIONS USED

ELSE  
IF  
THEN

## COMMANDS USED

SYSTEM COMMAND  
DISK  
EDIT  
FORMAT  
—  
DISK COMMAND  
DIF-File  
LOAD  
SAVE  
EDIT COMMAND  
COPY  
PRINT  
REPLICATE  
FORMAT COMMAND  
\$

## SETTING UP THE FORMAT (For the Monthly Payroll Worksheet)

To set up your worksheet, USE THE FOLLOWING DIRECTIONS.

AFTER READING THE FOLLOWING NOTES, type in your labels, as illustrated in Figure 1, retaining exact row and column locations of all information.

### NOTE

Before entering each label, you must first press the space bar once.

### NOTE

When entering a label which contains more characters than the width of the column allows, you must move the cursor to the next adjacent column and continue typing the label.

After you have entered your labels, you will enter the dashed line in row 3.

**10**    EXERCISE    Payroll Reporting

	A	B	C	D	E	F	G	H	I
1	Employee	Hourly	Reg.	Overtime	Gross	Federal	FICA	Net	YTD
2	Name	Rate	Hours	Hours	Pay	W/H		Pay	Gross
3	-----								
4									
5									
6									
7									
8									
9									
10									
11									
12	=====								
13									

**Figure 1**

Place your cursor on A3 and press:

- F7**                            starts SYSTEM command
- starts — COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
- character to be repeated

The column your cursor is on will now have a dashed line across its width.

To extend the dashed line, in the same row, across the other columns,

Leave your cursor on A3 and press:

- F7**                            starts SYSTEM commands

- E** starts EDIT command
- R** selects Replicate option and displays Source Range From A3
- RETURN RETURN** displays Target Range From
- B3 RETURN** displays Target Range From B3 To
- I3** displays Target Range From B3 To I3
- RETURN** executes the command

To enter the double-dashed line in row 12,

Place your cursor on A12 and press:

- F7** starts SYSTEM command
- starts — COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
- =** character to be repeated

The column your cursor is on will now have a double-dashed line across its width.

To extend the double-dashed line, in the same row, across the other columns,

Leave your cursor on A12 and press:

- F7** starts SYSTEM command
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From A12
- RETURN RETURN** displays Target Range From
- B12 RETURN** displays Target Range From B12 To
- I12** displays Target Range From B12 To I12
- RETURN** executes the command

Your worksheet should now look like Figure 1.

## ENTERING MATHEMATICAL FORMULAS

Now that you have entered your labels and the dashed and double-dashed lines, you will enter the mathematical formulas which will establish the relationship between column and row locations. The formulas and their locations are illustrated in Figure 2.

	A	B	C	D	E	F	G	H	I	
1	Employee	Hourly	Reg.	Overtime	Gross	Federal	FICA	Net	YTD	
2	Name	Rate	Hours	Hours	Pay	W/H		Pay	Gross	
3	-----									
4		0	0	0	0.00	0.00	0.00	0.00	0.00	
5		0	0	0	0.00	0.00	0.00	0.00	0.00	
6		0	0	0	0.00	0.00	0.00	0.00	0.00	
7		0	0	0	0.00	0.00	0.00	0.00	0.00	
8		0	0	0	0.00	0.00	0.00	0.00	0.00	
9		0	0	0	0.00	0.00	0.00	0.00	0.00	
10		0	0	0	0.00	0.00	0.00	0.00	0.00	
11		0	0	0	0.00	0.00	0.00	0.00	0.00	
12	=====									
13		SUM(E3:E12)			0.00	0.00	0.00	0.00	0.00	
		(C4*B4)+(D4*B4*1.5)							E4-F4-G4	
		IF (32400-I4)=<0 THEN (0) ELSE (E4)*.067								

Figure 2

**NOTE**

If you make a mistake when entering a formula, you must first erase it, by using the **BLANK** command, before reentering your formula. To do this:

With your cursor on the cell you wish to erase, press:

**F7** starts **SYSTEM** command

**B** starts **BLANK** command

The cell your cursor is on will be empty, and you may reenter your formula.

**NOTE**

You must first enter zero values into the cells which will not contain formulas, so that later, when you enter formulas into other cells, the formulas will calculate correctly.

To do this,

Place your cursor on **B4** and type:

**0** value

**RETURN** enters the value

Place your cursor on **C4** and type:

**0** value

**RETURN** enters the value

Place your cursor on **D4** and type:

**0** value

**RETURN** enters the value

## 10 EXERCISE Payroll Reporting

Now you will copy the zero values down their respective columns, to the double-dashed line.

Place your cursor on B4 and press:

- F7** starts SYSTEM command
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From B4 To
- RETURN** displays Source Range From B4 To
- D4** displays Source Range From B4 To D4
- RETURN** displays Target Range From
- B5 RETURN** displays Target Range From B5 To
- B11** displays Target Range From B5 To B11
- RETURN** executes the command

Now place your cursor on F4 and type:

- 0** zero value
- RETURN** enters the value

You will now format the cell into which you have just entered the zero value, so that it will be displayed with two decimal places.

Leave your cursor on F4 and press:

- F7** starts SYSTEM command
- F** starts FORMAT command
- \$** selects \$ option, to display with two decimal places

The next step is to copy the zero value down the column.

Leave your cursor on F4 and press:

- F7** starts SYSTEM command
- E** starts EDIT command

- R** selects Replicate option and displays Source Range From F4 To
- RETURN RETURN** displays Target Range From
- F5 RETURN** displays Target Range From F5 To
- F11** displays Target Range From F5 To F11
- RETURN** executes the command

Place your cursor on I4 and type:

- 0** zero value
- RETURN** enters the value

Now format the cell into which you have just entered the value so that it will be displayed with two decimal places.

Leave your cursor on I4 and press:

- F7** starts SYSTEM command
- F** starts FORMAT command
- \$** selects \$ option, to display with two decimal places.

Now you will copy the zero value down the column.

Leave your cursor on I4 and press:

- F7** starts SYSTEM command
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From I4 To
- RETURN RETURN** displays Target Range From
- I5 RETURN** displays Target Range From I5 To
- I11** displays Target Range From I5 To I11
- RETURN** executes the command

## 10 EXERCISE Payroll Reporting

Now that you have entered all the necessary zero values, you may begin entering the formulas.

Formula one, in the Gross Pay column, calculates the total gross pay by first taking the total number of regular hours worked and multiplying that amount by the hourly rate. It then takes the number of overtime hours worked, multiplies that by the hourly rate, and then multiplies that by one and one-half. It adds the two totals and displays the total amount in the Gross Pay column.

Place your cursor on E4 and type:

**( C4 \* B4 ) + ( D4 \* B4 \* 1.5 )** formula

**RETURN** enters the formula

Now you will format the cell into which you have just entered the formula so that it will be displayed with two decimal places.

Leave your cursor on E4 and press:

**F7** starts SYSTEM command

**F** starts FORMAT command

**\$** selects \$ option, to display with two decimal places.

Now you will copy the formula you have just entered down the column to the double-dashed line.

Leave your cursor on E4 and press:

**F7** starts SYSTEM commands

**E** starts EDIT command

**R** selects Replicate option and displays Source Range From E4

**RETURN RETURN** displays Target Range From

**E5 RETURN** displays Target Range From E5 To

**E11** displays Target Range From E5 To E11

**RETURN** prepares to receive additional information

**R** selects Relative, which tells the command  
**R** to copy the cell address in the formula  
**R** relative to its new location  
**R**

Formula two, in the FICA column, calculates the amount of money to be paid to FICA, up to a gross pay amount of \$32,400.

Place your cursor on G4 and type:

**IF ( 32400 — I4 ) = < 0 THEN ( 0 ) ELSE ( E4 ) \* .067** formula

**RETURN** enters the formula

Now you will format the cell into which you have just entered the formula so that it will be displayed with two decimal places.

Leave your cursor on G4 and type:

**F7** starts SYSTEM command

**F** starts FORMAT command

**\$** selects \$ option and displays with two decimal places

Formula three, in the Net Pay column, subtracts the amounts in the Federal W/H and the FICA columns from the Gross Pay amount, to arrive at a Net Pay figure.

Place your cursor on H4 and type:

**E4 — F4 — G4** formula

**RETURN** enters the formula

Now you will format the cell into which you have just entered the formula so that it will be displayed with two decimal places.

Leave your cursor on H4 and type:

**F7** starts SYSTEM command

**F** starts FORMAT command

**\$** selects \$ option, to display with two decimal places

## 10 EXERCISE Payroll Reporting

Now you will copy formulas two and three, which you have just entered, down their respective columns

Place your cursor on G4 and press:

- F7** starts SYSTEM command
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From G4
- RETURN** displays Source Range From G4 To
- H4** displays Source Range From G4 To H4
- RETURN** displays Target Range From
- G5 RETURN** displays Target Range From G5 To
- G11** displays Target Range From G5 To G11
- RETURN** prepares to receive additional information
- R**
- R**
- R** selects Relative, which tells the command to copy the cell address in the formula relative to its new location
- R**

Formula four, in the Gross Pay column, underneath the double-dashed line, calculates the total of the gross pay at the bottom of the column.

Place your cursor on E13 and type:

- SUM ( E3 : E12 )** formula
- RETURN** enters the formula

Now you will format the cell into which you have just entered the formula so that it will be displayed with two decimal places.

Leave your cursor on E13 and press:

- F7** starts SYSTEM command
- F** starts FORMAT command
- \$** selects \$ option, to display with two decimal places

Now you will copy the formula you have just entered across the row.

Leave your cursor on E13 and press:

- |                             |  |
|-----------------------------|--|
| <b>F7</b>                   | starts SYSTEM commands   |
| <b>E</b>                    | starts EDIT command  |
| <b>R</b>                    | selects Replicate option and displays Source Range From E13  |
| <b>RETURN</b> <b>RETURN</b> | displays Target Range From   |
| <b>F13</b> <b>RETURN</b>    | displays Target Range From F13 To  |
| <b>I13</b>                  | displays Target Range From F13 To I13  |
| <b>RETURN</b>               | executes the command and prepares to receive additional instructions   |
| <b>R</b>                    | selects Relative, which tells the command to copy the cell address in the formula relative to its new location |

Your worksheet should now look like Figure 2.

Now that the Monthly worksheet is completed, you must save it onto a disk for later use in this exercise.

## SAVING

To save your worksheet,

Place a formatted data diskette in Drive A.

Leave your cursor on any cell and press:

- |               |  |
|---------------|--|
| <b>F7</b>     | starts SYSTEM commands                     |
| <b>D</b>      | starts DISK command                        |
| <b>S</b>      | selects Save option                        |
| <b>RETURN</b> | prepares to receive additional information |

## 10 EXERCISE Payroll Reporting

**MONTHLY** name of file  
**RETURN** executes the command

Now you must clear the computer's memory, in order to proceed with setting up a second worksheet (the Quarterly Payroll Report).

With your cursor on any location, press:

**F7** starts SYSTEM command

Hold down the SHIFT key and press CLR.

**Y** Yes, to confirm

### **SETTING UP THE FORMAT (For the Quarterly Payroll Report, illustrated in Figure 3)**

The second worksheet that you will set up and label is the Quarterly Payroll Report.

To set up your worksheet, USE THE FOLLOWING DIRECTIONS.

First you will format all cells to display value entries in two decimal places.

Leave your cursor on any location and press:

**F7** starts SYSTEM command  
**G** starts GLOBAL command  
**F** starts FORMAT command  
**\$** selects \$ option, and formats all cells to be displayed with two decimal places

**AFTER READING THE FOLLOWING NOTES**, type in your labels, as illustrated in Figure 3, retaining exact row and column loctions of all information.

**NOTE**

Before entering each label, you must first press the space bar once.

**NOTE**

When entering a label which contains more characters than the width of the column allows, you must move the cursor to the next adjacent column and continue typing the label.

	A	B	C	D	E	F	G	H	I	J
1	QUARTERLY PAYROLL REPORT									
2	-----									
3	FIRST MONTH			SECOND MONTH			YEAR TO DATE			
4	-----									
5	GROSS	FED	FICA	GROSS	FED	FICA	GROSS	FED	FICA	TOTAL
6	PAY	W/H		PAY	W/H		PAY	W/H		FICA
7	-----									
8										
9										
10										
11										
12										
13										
14										
15										
16	=====									
17										

Figure 3

## 10 EXERCISE Payroll Reporting

After you have entered your labels, you will enter the dashed line in row 2.

Place your cursor on B2 and press:

- F7** starts SYSTEM command
- starts — COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
- character to be repeated

The column your cursor is on will now have a dashed line across its width.

To copy the dashed line across the row into columns C and D,

Leave your cursor on B2 and press:

- F7** starts SYSTEM commands
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From B2
- RETURN** **RETURN** displays Target Range From
- C2** **RETURN** displays Target Range From C2 To
- D2** displays Target Range From C2 To D2
- RETURN** executes the command

To enter the dashed line in row 4,

Place your cursor on A4 and press:

- F7** starts SYSTEM command
- starts — COMMAND which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character?
- character to be repeated

The cell your cursor is on will now have a dashed line across its width.

To extend the dashed line, in the same row, across the other columns,

Leave your cursor on A4 and press:

- |               |               |  |
|---------------|---------------|--|
| <b>F7</b>     |               | starts SYSTEM command                                      |
| <b>E</b>      |               | starts EDIT command  |
| <b>R</b>      |               | selects Replicate option and displays Source Range From A4 |
| <b>RETURN</b> | <b>RETURN</b> | displays Target Range From                                 |
| <b>B4</b>     | <b>RETURN</b> | displays Target Range From B4 To                           |
| <b>J4</b>     |               | displays Target Range From B4 To J4                        |
| <b>RETURN</b> |               | executes the command                                       |

To enter the dashed line in row 7,

Place your cursor on A7 and press:

- |           |  |   |
|-----------|--|---|
| <b>F7</b> |  | starts SYSTEM command   |
| <b>—</b>  |  | starts — COMMAND which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character? |
| <b>—</b>  |  | character to be repeated  |

Now copy the dashed line across the row, using the Replicate option, as described above.

To enter the double-dashed line on row 16,

Place your cursor on A16 and press:

- |           |  |  |
|-----------|--|--|
| <b>F7</b> |  | starts SYSTEM command  |
| <b>—</b>  |  | starts — COMMAND, which causes automatic repetition of characters at cell cursor is on, and displays Repeat Character? |
| <b>=</b>  |  | character to be repeated   |

## 10 EXERCISE Payroll Reporting

The column your cursor is on will now have a double-dashed line across its width.

Now copy the double-dashed line across the row, using the Replicate option as described above.

Your worksheet should now look like Figure 3.

## ENTERING MATHEMATICAL FORMULAS

Now that you have entered your labels and the dashed and double-dashed lines, you will enter the mathematical formulas which will establish the relationship between column and row locations. The formulas and their locations are illustrated in Figure 4.

### NOTE

If you make a mistake when entering a formula, you must first erase it, by using the **BLANK** command, before reentering your formula. To do this:

With your cursor on the cell you wish to erase, press:

**F7** starts **SYSTEM** command

**B** starts **BLANK** command

The cell your cursor is on will be empty, and you may reenter your formula.

### NOTE

You must first enter zero values into the cells which will not contain formulas, so that later, when you enter formulas into other cells, the formulas will calculate correctly.

	A	B	C	D	E	F	G	H	I	J
1	QUARTERLY PAYROLL REPORT									
2	-----									
3	FIRST MONTH			SECOND MONTH			YEAR TO DATE			
4	-----									
5	GROSS	FED	FICA	GROSS	FED	FICA	GROSS	FED	FICA	TOTAL
6	PAY	W/H		PAY	W/H		PAY	W/H		FICA
7	-----									
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	=====									
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SUM (A7:A16)
A8+D8
I8\*2

Figure 4

Place your cursor on A8 and type:

0 value  
RETURN enters the value

## 10 EXERCISE Payroll Reporting

Now you will copy the zero value across the row, through the Second Month's FICA column.

Leave your cursor on A8 and press:

- F7** starts SYSTEM command
- E** starts EDIT command
- R** selects Replicate Option and displays Source Range From A8
- RETURN** **RETURN** displays Target Range From
- B8** **RETURN** displays Target Range From B8 To
- F8** displays Target Range From B8 To F8
- RETURN** executes the command

Now you will copy the zero values you have just entered, down their respective columns.

Leave your cursor on A8 and press:

- F7** starts SYSTEM command
- E** starts EDIT command
- R** selects Replicate option and displays Source Range From A8
- RETURN** displays Source Range From A8 To
- F8** displays Source Range From A8 To F8
- RETURN** displays Target Range From
- A9** displays Target Range From A9 To
- RETURN** displays Target Range From A9 To
- A15** displays Target Range From A9 To A15
- RETURN** executes the command

Now that you have entered all the necessary zero values, you may begin entering the formulas.

Formula one, in the Year to Date, Gross Pay, column, totals the amount of gross pay for the first and second months.

Place your cursor on G8 and type:

**A8 + D8** formula  
**RETURN** enters the formula

The next operation is to copy the formula you have just entered across the row into the Fed W/H and FICA columns.

Leave your cursor on G8 and press:

**F7** starts SYSTEM command  
**E** starts EDIT command  
**R** selects Replicate option and displays Source Range From G8  
**RETURN RETURN** displays Target Range From  
**H8 RETURN** displays Target Range From H8 To  
**I8** displays Target Range From H8 To I8  
**RETURN** executes the command  
**R** selects Relative, which tells the command  
**R** to copy the cell address in the formula relative to its new location.

Formula two, in the Total FICA column, calculates the total amount of FICA due, by taking the amount in the FICA column and multiplying it by two.

Place your cursor on J8 and type:

**I8 \* 2** formula  
**RETURN** enters the formula

Now you will copy the formulas you have just entered, in the Gross Pay, Fed W/H, FICA and Total FICA columns, down their respective columns.

Place your cursor on G8 and press:

**F7** starts SYSTEM command  
**E** starts EDIT command

**10**      **EXERCISE**      Payroll Reporting

**R**                                      selects Replicate option and displays Source Range From G8

**RETURN**                              displays Source Range From G8 To

**J8**                                      displays Source Range From G8 To J8

**RETURN**                              displays Target Range From

**G9**      **RETURN**                      displays Target Range From G9 To

**G15**                                      displays Target Range From G9 To G15

**RETURN**                              prepares to receive additional information

**R**  
**R**  
**R**  
**R**  
**R**  
**R**  
**R**                                      selects Relative, which tells the command to copy the cell address in the formula relative to its new location

Formula three, in the Gross Pay column, of the first month, beneath the double-dashed line, totals the Gross Pay column.

Place your cursor on A17 and type:

**SUM ( A7 : A16 )**                      formula

**RETURN**                              enters the formula

Next you need to copy the formula you have just entered across its row into the remaining columns, starting with the First Month through the Total FICA columns.

Leave your cursor on A17 and press:

**F7**                                      starts SYSTEM commands

**E**    starts EDIT command

**R**    selects Replicate option and displays Source Range From A17 To

**RETURN**      **RETURN**                      displays Target Range From

**B17**      **RETURN**                      displays Target Range From B17 To

- J17** displays Target Range From B17 To J17
- RETURN** prepares to receive additional information
- R** selects Relative, which tells the command  
**R** to copy the cell address in the formula  
 relative to its new location

Your worksheet should now look like Figure 4.

Your Quarterly Payroll Report worksheet has been set up with labels and formulas, and you will now save it for use later in this exercise. To do this,

Leave your cursor on any location and press:

- F7** starts SYSTEM command
- D** starts DISK command
- S** selects Save option
- RETURN** prepares to receive additional information
- QUARTERLY** name of file
- RETURN** executes the command

If you see on your screen Save All Pages?, type Y, to confirm.

If you wish to print your Quarterly Payroll Report,

Place your cursor on A1 and press:

- F7** starts SYSTEM command
- E** starts EDIT command
- P** starts PRINT command
- D** selects Direct Print option
- RETURN** displays Print A1 To

Type in the lower right-hand cell address of the worksheet area rectangle that you wish to print.

- RETURN** executes the command

## MAKING WORKSHEET ENTRIES

First you will load your Monthly Payroll worksheet back into memory. It will not be necessary to clear the memory first.

With your cursor on any location, press:

- F7** starts SYSTEM command
- D** starts DISK command
- L** selects Load option
- RETURN** prepares to receive additional information
- MONTHLY** name of file to be loaded
- RETURN** executes the command

If you see Load All Pages? displayed on your screen, type Y, for Yes.

Now use the following directions to make the entries into your monthly report, as illustrated in Figure 5.

Make your entries into columns A, B, C, D and F, as follows:

Start by placing your cursor on A4 and typing in the first employee's name.

Continue on down the column until the four employee's names have been entered.

Next place your cursor on B4 (the Hourly Rate column) and type:

- 3.5** Lisa's hourly rate
- RETURN** enters the value

Continue on down the column, typing in the other employees' hourly rates.

Continue typing in the values into the Reg. Hours column and the Overtime Hours column.

Then place your cursor on F4 and type in the values in the Federal W/H column.

Now that your entries have been typed in, your Monthly Report worksheet should look like Figure 5.

	A	B	C	D	E	F	G	H	I
1	Employee	Hourly	Reg.	Overtime	Gross	Federal	FICA	Net	YTD
2	Name	Rate	Hours	Hours	Pay	W/H		Pay	Gross
3	-----								
4	Lisa R	3.5	40	1	145.25	1.52	9.73	134.00	0.00
5	Maria T	5.65	40	5	268.38	4.03	17.98	246.36	0.00
6	Lucille	9.55	40	0	382.00	11.46	25.59	344.95	0.00
7	R. Henry	9.55	40	2	410.65	11.70	27.51	371.44	0.00
8		0	0	0	0.00	0.00	0.00	0.00	0.00
9		0	0	0	0.00	0.00	0.00	0.00	0.00
10		0	0	0	0.00	0.00	0.00	0.00	0.00
11		0	0	0	0.00	0.00	0.00	0.00	0.00
12	=====								
13					1206.28	28.71	80.82	1096.74	0.00

Figure 5

## UPDATING THE QUARTERLY PAYROLL REPORT

The first step is to save the values in the Gross Pay through FICA columns of the Monthly Payroll report on a DIF (Data Interchange Format) file. To do this,

Place your cursor on E4, the upper left-hand cell of the rectangular area to be saved, and press:

## 10 EXERCISE Payroll Reporting

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>D</b>	starts DIF-File command
<b>S</b>	selects Save option
<b>RETURN</b>	prepares to receive additional information
<b>UPDATE</b>	name of area to be saved
<b>RETURN</b>	displays From E4 To
<b>RETURN</b>	prepares to receive additional information
<b>G11</b>	last cell in rectangular area to be saved
<b>RETURN</b>	displays By Rows or By Columns
<b>C</b>	executes the command and saves the values in column format.

You may wish to save the entire worksheet for later use. Press:

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>S</b>	selects Save option
<b>RETURN</b>	prepares to receive additional information
<b>MTHONE</b>	name of file (for 1st Month)
<b>RETURN</b>	executes the command

The next operation is to load the Quarterly Payroll Report back into memory. It will not be necessary to clear the memory first.

With your cursor on any location, press:

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>L</b>	selects Load option
<b>RETURN</b>	prepares to receive additional information

**QUARTERLY** name of file to be loaded

**RETURN** executes the command

If you see Load All Pages? displayed on your screen, type Y, for Yes.

You are now ready to make entries into your Quarterly Payroll worksheet, as illustrated in Figure 6. You will now load the values you have previously saved in a DIF file (from your Monthly Payroll Report). To do this,

Place your cursor on A8 and press:

**F7** starts SYSTEM command

**D** starts DISK command

**D** starts DIF-File command

**L** selects Load option

**RETURN** prepares to receive additional information

**UPDATE** name of rectangular area to be loaded

**RETURN** displays From A8

**RETURN** displays By Row or By Column

**C** executes the command and loads the values in column format

Now you must recalculate your worksheet.

Press the up arrow key. (Not the arrow key).

Your worksheet should now look like Figure 6.

Now we will have to save the Gross Pay YTD total from the Quarterly Payroll Report worksheet, so that it can be entered into the new Monthly Payroll Report worksheet, which will allow for the accumulation of accurate FICA totals on the monthly worksheet.

**10** EXERCISE Payroll Reporting

	A	B	C	D	E	F	G	H	I	J
	QUARTERLY PAYROLL REPORT									
1	FIRST MONTH			SECOND MONTH			YEAR TO DATE			
2	-----									
3	GROSS	FED	FICA	GROSS	FED	FICA	GROSS	FED	FICA	TOTAL
4	PAY	W/H		PAY	W/H		PAY	W/H		FICA
5	-----									
6	145.25	1.52	9.73	0.00	0.00	0.00	145.25	1.52	9.73	19.46
7	268.38	4.03	17.98	0.00	0.00	0.00	268.38	4.03	17.98	35.96
8	382.00	11.46	25.59	0.00	0.00	0.00	382.00	11.46	25.59	51.19
9	410.65	11.70	27.51	0.00	0.00	0.00	410.65	11.70	27.51	55.03
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	=====									
15	1206.28	28.71	80.82	0.00	0.00	0.00	1206.28	28.71	80.82	161.64
16										
17										

**Figure 6**

Place your cursor on G8 and press:

- F7** starts SYSTEM command
- D** starts DISK command
- D** selects DIF-File option
- S** selects Save option
- RETURN** prepares to receive additional information

<b>YTDTOT</b>	name of column to be saved
<b>RETURN</b>	displays From G8
<b>RETURN</b>	prepares to receive additional information
<b>G15</b>	last cell in column to be saved
<b>RETURN</b>	displays By Rows or By Columns
<b>C</b>	executes the command and saves the values in column format

The next step is to load the Monthly Payroll Report worksheet. It is not necessary to clear the memory.

With your cursor on any location, press:

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>L</b>	selects Load option
<b>RETURN</b>	prepares to receive additional information
<b>MONTHLY</b>	name of file to be loaded
<b>RETURN</b>	executes the command

If you see Load All Pages? displayed on your screen, type Y, for Yes.

Before making the monthly payroll entries, you will need to load the YTDTOT file, which you have previously saved onto a DIF-File, into the YTD Gross column, so that the FICA column will calculate properly.

Place your cursor on I4 and press:

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>D</b>	selects DIF-File option
<b>L</b>	selects Load option
<b>RETURN</b>	prepares to receive additional information

**10** EXERCISE Payroll Reporting

**YTDTOT** name of column to be loaded

**RETURN** displays From I4

**RETURN** displays By Row or By Column

**C** executes the command and loads in column format

Now press the up arrow (not the cursor arrow) so that a recalculation can begin.

After the worksheet has been recalculated, your worksheet should look like Figure 7.

Your worksheet is ready for the monthly pay entries, as you start the updating process again.

	A	B	C	D	E	F	G	H	I
1	Employee	Hourly	Reg.	Overtime	Gross	Federal	FICA	Net	YTD
2	Name	Rate	Hours	Hours	Pay	W/H		Pay	Gross
3	-----								
4		0	0	0	0.00	0.00	0.00	0.00	145.25
5		0	0	0	0.00	0.00	0.00	0.00	268.38
6		0	0	0	0.00	0.00	0.00	0.00	382.00
7		0	0	0	0.00	0.00	0.00	0.00	410.65
8		0	0	0	0.00	0.00	0.00	0.00	0.00
9		0	0	0	0.00	0.00	0.00	0.00	0.00
10		0	0	0	0.00	0.00	0.00	0.00	0.00
11		0	0	0	0.00	0.00	0.00	0.00	0.00
12	=====								
13					0.00	0.00	0.00	0.00	1206.28

**Figure 7**

## SAVING

Now save your worksheet for future use, so that the next time you wish to figure these computations all you will need to do is enter in your new known values, and you will not need to retype in the labels or enter the formulas.

Place a formatted data diskette in Drive A.

Leave your cursor on any location and press:

<b>F7</b>	starts SYSTEM command
<b>D</b>	starts DISK command
<b>S</b>	selects SAVE option
<b>RETURN</b>	prepares to receive additional information

Type in file name.

<b>RETURN</b>	executes the command
---------------	----------------------

If the worksheet has been saved previously, you will see Replace? displayed on your screen. You will then type Y, for Yes.

If you see Save All Pages? displayed on your screen, type Y, for Yes.

## PRINTING

To print out your worksheet, place your cursor on A1 and press:

<b>F7</b>	starts SYSTEM command
<b>E</b>	starts EDIT command
<b>P</b>	starts PRINT command
<b>D</b>	selects Direct print option
<b>RETURN</b>	displays Print A1 To:

## 10 EXERCISE Payroll Reporting

Type in the lower right-hand cell address of the worksheet area rectangle that you wish to print.

**RETURN** executes the command

### LOADING YOUR WORKSHEET BACK INTO CALC RESULT

It is not necessary to clear your screen before loading a worksheet into Calc Result. Just make sure you have saved whatever is on your screen before loading in a new worksheet.

With your cursor on any location, press:

**F7** starts SYSTEM command

**D** starts DISK command

**L** selects Load option

**RETURN** prepares to receive additional information

Type in name of file to be loaded.

**RETURN** executes the command

If you see Load All Pages? displayed on your screen, type Y, for Yes.

#### NOTE

After following the above instructions for loading, press F1, which guarantees the loading of all the pages in the file.

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ISBN 0-13-687773-7



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