Xerox ViewPoint

VP Office Accessories Training

XEROX

VP Office Accessories
Training

Publication 610E10230

Printed in the United States of America

Changes are periodically made to this document. Changes, technical inaccuracies, and typographical errors will be corrected in subsequent editions.

This book was created on the Xerox 6085 Professional Computer System.

Table of contents

1. Getting started

Xerox ViewPoint Office Accessories is an optional software application for the 6085 Professional Computer System and 8010 Information System. Using VP Office Accessories, you have access to a set of desktop accessories to help you with your daily work. The set includes a clock; a personal appointment calendar; a programmable calculator; a collection of tools, templates, and transfer documents; and keyboard accelerators.

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

- Set the clock.

- Create an appointment calendar.

- Use the calculator.

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

Training guide exercises

This training guide provides exercises that illustrate typical ways of working with VP Office Accessories. You can apply the techniques presented here when setting up a clock or personal appointment calendar, or for using the calculator.

For complete information on VP Office Accessories, refer to the *VP Spreadsheet and VP Office Accessories Reference* volume of the *VP Series Reference Library*. That volume also discusses the office accessories not covered in this training guide: the collection of tools, templates, and transfer documents; and keyboard accelerators.

Hardware and software you need to begin training

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

- An operating 6085 or 8010 workstation with a desktop, a fully qualified user name, and a password. If you have a 6085 or 8010 workstation that is part of a network, you can get help from your system administrator. If your workstation is a Standalone or Documenter, you can get help from the *Workstation Administration and System Resources Reference* volume.

- Default User Profile settings. The User Profile lists the settings that control your desktop. The procedures in this training guide are designed for desktops using the default User Profile settings. Check with your system administrator to make sure your desktop has the default User Profile settings, or refer to the *General User Reference* volume.

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

Checking the status of applications

1. **Open** the Directory icon.

2. **Open** the Workstation divider.

3. **Open** the Loader.

4. **Compare** the list of applications in the Loader window with the list of applications here.

    - VP Document Editor

    - VP Office Accessories: Calculator, Personal Calendar, Clock

Additional applications may be running.

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

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

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

Running applications

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

1. **Select** the application.

2. **Select** [Run] in the Loader window header.

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

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

Two final notes before you begin:

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

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

You are now ready to start training.

2. Setting the clock
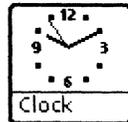
When the Clock icon is visible on your desktop, it is a functioning clock.

In this chapter, you set up a clock on your desktop and use the alarm feature. Then you set up another clock and set it for Tokyo time.

Displaying a clock set to the local time

In this exercise, you create a 12-hour digital clock and set the alarm.

Changing the clock display from analog to digital
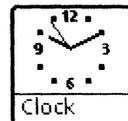
1. **Copy** the Clock icon from the Office Accessories divider to the desktop.

   The Office Accessories divider is located in the Workstation divider of the Directory.

2. **Select** [Close All] to close the divider and Directory windows.

3. **Select** the Clock icon, and **press** <PROP'S> to display the Clock Properties sheet.

4. **Select** [Digital] for the Clock Display property.

   Additional options appear.

5. **Select** [AM/PM Displayed] for the Show hours and property.

The Clock Properties sheet now looks like this.
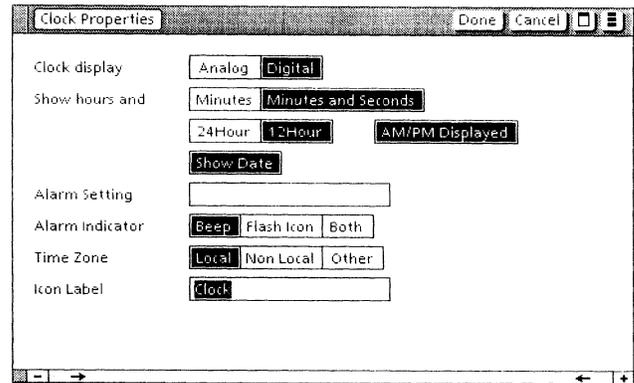
6. **Select** [Done].

The clock display changes from analog to digital.

Setting the alarm

1. **Press** < PROP'S > to display the Clock Properties sheet again.

2. **Select** anywhere inside the Alarm Setting property box.

3. **Type** the time for two minutes from the current time.

Use the format *hours:minutes*, followed by "AM" or "PM;" for example, 2:22 PM. Remember to leave a single space between the time and "AM" or "PM." Do not insert periods.

4. **Select** [Both] for the Alarm Indicator property.

The property sheet now looks something like this.

| Clock Properties | | Done | Cancel | ☐ | ☰ |

Clock display   Analog | Digital

Show hours and   Minutes | Minutes and Seconds

24Hour | 12Hour   AM/PM Displayed

Show Date

Alarm Setting   4:34PM

Alarm Indicator   Beep | Flash Icon | Both

Time Zone   Local | Non Local | Other

Icon Label   Clock
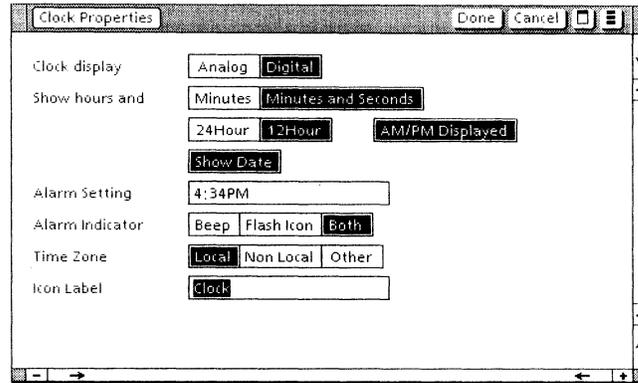
5. **Select** [Done].

In two minutes, the alarm beeps and the Clock icon flashes.

Displaying a clock set to a different time zone

10:12:36
10-27-87
AM
Clock

1. **Copy** the Clock icon to another location on the desktop.

2. **Press** <PROP'S> to display the property sheet for the new clock.

3. **Delete** the entry for the Alarm Setting property.

4. **Select** [Non Local] for the Time Zone property.

The daylight savings and time zone auxiliary menus appear.

5. Select [Japan] from the time zone auxiliary menu.
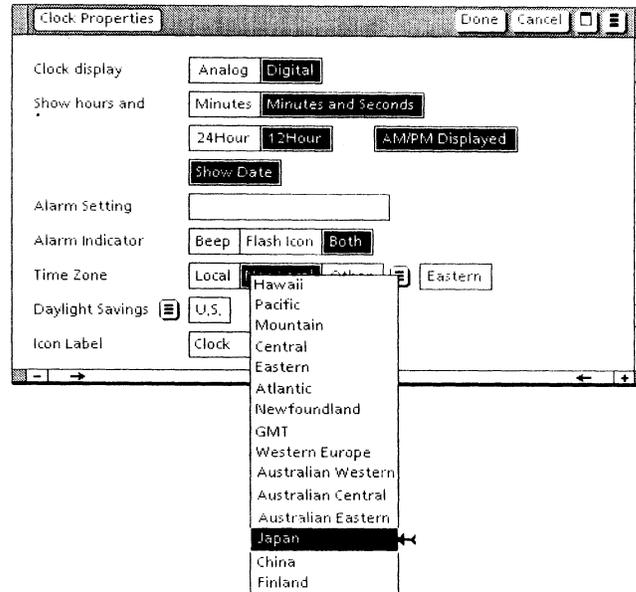
Unless you have already edited the name of the clock, Tokyo automatically appears in the box for the Icon Label property and will appear on the Clock icon itself.

During months when daylight savings time is in effect, the workstation beeps and displays the following message: "Please check the daylight savings time value on the clock. It may need to be changed." You can then change the Daylight Savings property to correspond with the time zone.

6. Select [Not observed] from the daylight savings auxiliary menu.

The property sheet now looks like this.

Clock Properties		Done	Cancel
Clock display	Analog **Digital**		
Show hours and	Minutes **Minutes and Seconds**		
	24Hour **12Hour** **AM/PM Displayed**		
	Show Date		
Alarm Setting			
Alarm Indicator	Beep Flash Icon **Both**		
Time Zone	Local **Non Local** Other ▤ Japan		
Daylight Savings ▤	Not observed		
Icon Label	Tokyo		

```
11:59:32
10-27-87
        PM
Tokyo
```
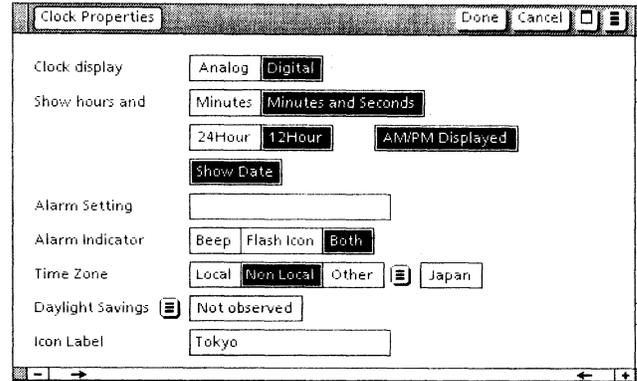
7. Select [Done].

The icon label on the clock changes to "Tokyo."

Do not be surprised if the date on the Tokyo clock differs from today's date. The clock automatically shows the date for the time zone you select.

You can set the clock to any time zone. Use [Other] for the Time Zone property to specify a time zone that is not on the time zone auxiliary menu.

You are now ready to set your own clock. For more information, refer to the *VP Spreadsheet and VP Office Accessories Reference* volume.

3. Creating an appointment calendar

In this chapter, you schedule events, change the schedule, schedule a weekly class, set up a reminder of forthcoming events, and print part of your schedule.
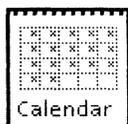
View The Calendar window has four *views*: event, day, month, and year. Each view shows a different aspect of the calendar.

EVENT VIEW

Calendar	Close	Show Next	Show Previous	Show Day	Reset

Repeat ▤ None

Time October 27, 1987 7:00 AM

Place Victor's

Title Breakfast - Don

Duration 90 Minutes Hours Days

Details

Reminder By Mail Window Both None

MONTH VIEW

Calendar	Close	Show Next	Show Previous	Show Year

October 1987

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17

DAY VIEW

Calendar	Close	Show Next	Show Previous	Show Month

Tuesday October 27, 1987

Place	Time	Duration	Title
Victor's	7:00	90 m	Breakfast - Don
	8:00		
	9:00		
	10:00		
	11:00		
	12:00		
	1:00		
	2:00		
	3:00		
	4:00		
	5:00		

YEAR VIEW

Calendar	Close	Show Next	Show Previous

1987

January	February	March
1 2 3	1 2 3 4 5 6 7	1 2 3 4 5 6 7
4 5 6 7 8 9 10	8 9 10 11 12 13 14	8 9 10 11 12 13 14
11 12 13 14 15 16 17	15 16 17 18 19 20 21	15 16 17 18 19 20 21
18 19 20 21 22 23 24	22 23 24 25 26 27 28	22 23 24 25 26 27 28
25 26 27 28 29 30 31		29 30 31

April	May	June
1 2 3 4	1 2	1 2 3 4 5 6
5 6 7 8 9 10 11	3 4 5 6 7 8 9	7 8 9 10 11 12 13
12 13 14 15 16 17 18	10 11 12 13 14 15 16	14 15 16 17 18 19 20
19 20 21 22 23 24 25	17 18 19 20 21 22 23	21 22 23 24 25 26 27
26 27 28 29 30	24 25 26 27 28 29 30	28 29 30
	31	

Scheduling events

The personal calendar is a desktop accessory similar to an appointment book. To schedule an event, you first open a time slot in the day view for the day of the event. The event view appears. Then you complete the event view.

Scheduling a lunch appointment

1. **Copy** the Calendar icon from the Office Accessories divider to the desktop.

   The Office Accessories divider is located in the Workstation divider of the Directory.

2. **Select** [Close All] to close the divider and Directory windows.

3. **Open** the Calendar icon.

   You see the month view.

4. **Select** today's square.

   Note that it has a shaded header.

5. **Press** <OPEN> to display the day view for today.

6. **Select** the 12:00 time slot, and **press** <OPEN> to display the event view for noon.

7. In the box for the Place option, **type**: Scott's Seafood, and **press** <NEXT>.

8. In the box for the Title option, **type**: Lunch, and **press** <NEXT>.

9. **Press** <NEXT> to leave the value 30 in the box for the Duration option.

10. In the box for the Details option, **type**: <u>Meet with new</u> <u>boss</u>.

The event view now looks like this.
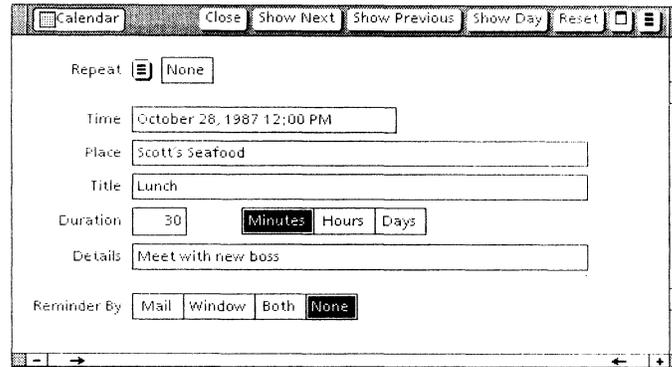
If you need to change your entries, select them using the mouse.

11. Select [Show Day] in the window header.

The day view looks like this.

If the day view does not appear, check to make sure that your event view matches the event view pictured in step 10.

Scheduling a medical checkup

1. **Select** and **open** the 2:00 time slot.

2. In the box for the Time option, **delete** 2:00, and **type**: 2:30.

   Remember to leave a single space between "2:30" and "PM."

3. **Press** <NEXT>.

4. In the box for the Place option, **type**: University Hospital, and **press** <NEXT>.

5. In the box for the Title option, **type**: Appt. with Dr. Smith, and **press** <NEXT>.

6. **Delete** the entry in the box for the Duration option, and **type**: 1.

7. For the Duration option, **select** [Hours]; then **press** <NEXT>.

8. In the box for the Details option, **type**: Checkup.

   The event view now looks like this.
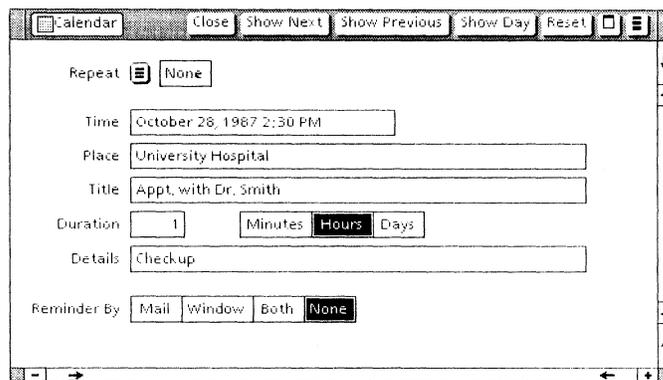
9. **Select** [Show Day] in the window header.

Note the new 2:30 time slot on the day view.
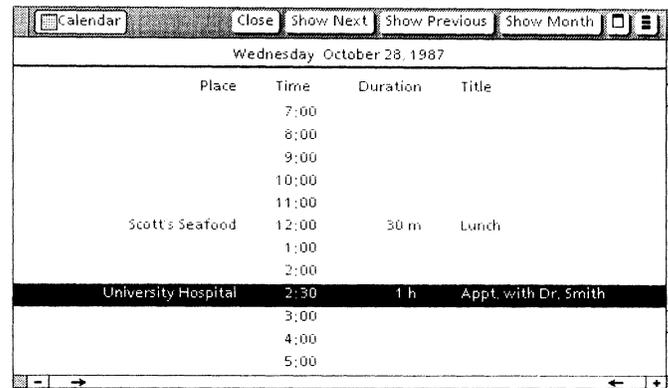
If the day view does not appear, check to make sure your event view matches the event view pictured in step 8.

Scheduling a staff meeting for tomorrow

1. **Select** [Show Next] in the window header to display the day view for tomorrow.

2. **Open** the event view for 10:00.

3. In the box for the Place option, **type**: Conference Room.

4. In the box for the Title option, **type**: Staff Meeting.

5. **Delete** the entry in the box for the Duration option, and **type**: 90.

6. In the box for the Details option, **type**: <u>Discuss training</u>
<u>needs</u>.

The event view now looks like this.

7. Select [Show Day] in the window header.

The day view looks like this.

If the day view does not appear, check to make sure your event view
matches the event view pictured in step 6.

Changing the schedule

You display the day view to move or cancel appointments. You use standard ViewPoint techniques to perform these operations.
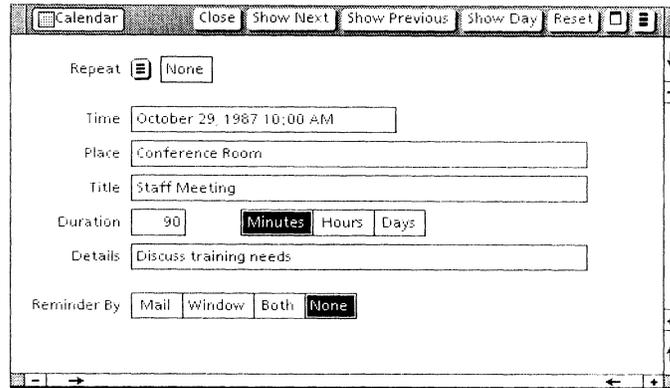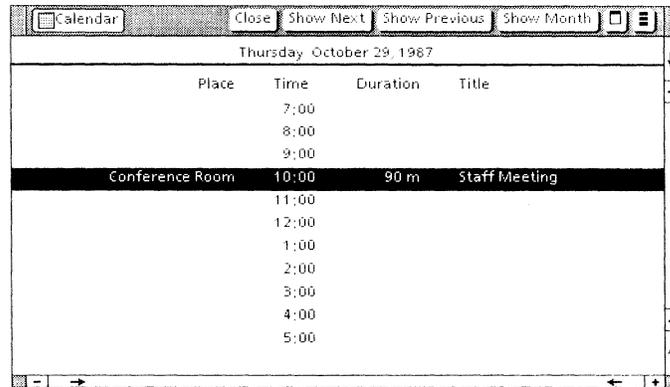
To change the location or other aspects of the appointment, you display the event view.

Rescheduling the staff meeting from 10:00 to 8:00

1. With the 10:00 time slot still selected, **press** <MOVE>.

2. **Select** the 8:00 time slot.

   The event scheduled for 10:00 moves to the 8:00 time slot. The 10:00 time slot becomes empty.
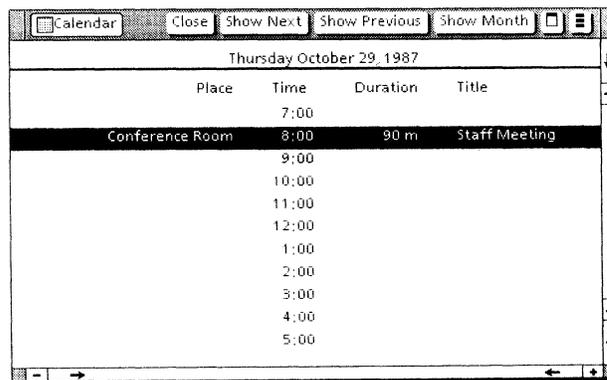
```
┌────────────────────────────────────────────────────────┐
│ ▒▒ □Calendar ▒▒  Close │ Show Next │ Show Previous │ Show Month │ □ │ ≣ │ ▒ │
│ ┌──────────────────────────────────────────────────────┐ │
│ │            Thursday October 29, 1987                 │↓│
│ │        Place      Time     Duration    Title         │─│
│ │                   7:00                               │ │
│ │ ▓Conference Room  8:00      90 m      Staff Meeting▓ │ │
│ │                   9:00                               │ │
│ │                  10:00                               │ │
│ │                  11:00                               │ │
│ │                  12:00                               │ │
│ │                   1:00                               │ │
│ │                   2:00                               │ │
│ │                   3:00                               │ │
│ │                   4:00                               │+│
│ │                   5:00                               │↑│
│ └──────────────────────────────────────────────────────┘ │
│ ▒ - │ → │                              ← │ + │ ▒ │
└────────────────────────────────────────────────────────┘
```

Changing the staff meeting location

1. **Open** the event view for 8:00.

2. **Delete** the entry in the box for the Place option, and **type**: <u>Room 100</u>.

   The event view now looks like this.
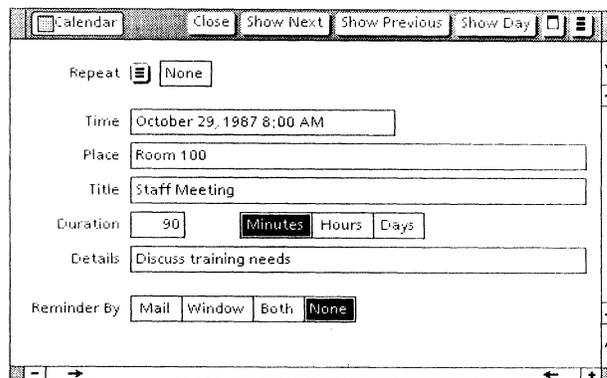
3. **Select** [Show Day] to return to the day view.

Deleting the luncheon appointment

1. **Select** [Show Previous] from the window header to display the day view for today.

2. **Select** the 12:00 time slot (where lunch is scheduled).

3. Press <DEL>.

The day view for today now looks like this.

Calendar			Close	Show Next	Show Previous	Show Month	□	≡

Wednesday October 28, 1987
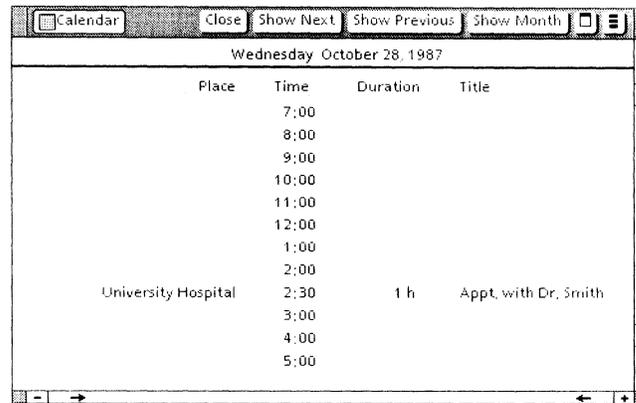
Place	Time	Duration	Title
	7:00		
	8:00		
	9:00		
	10:00		
	11:00		
	12:00		
	1:00		
	2:00		
University Hospital	2:30	1 h	Appt. with Dr. Smith
	3:00		
	4:00		
	5:00		

Scheduling a repeating event

You can schedule an event that occurs at regular intervals; for example, daily, weekly, monthly, or even yearly (such as birthdays and anniversaries).

After you schedule a repeating event, it appears on your calendar indefinitely, saving you from having to record the event more than once. You stop the event from appearing by removing it from the first day that the event no longer occurs.

Scheduling a weekly class

1. **Select** [Show Month] in the window header to display the month view.

   Notice that each day with scheduled events now has an auxiliary menu in its header. Selecting the auxiliary menu displays all events scheduled for the day.

2. **Open** the day view for the first Friday of the month.

3. **Open** the event view for 5:00.

4. **Select** [Weekly] from the auxiliary menu next to the Repeat option.
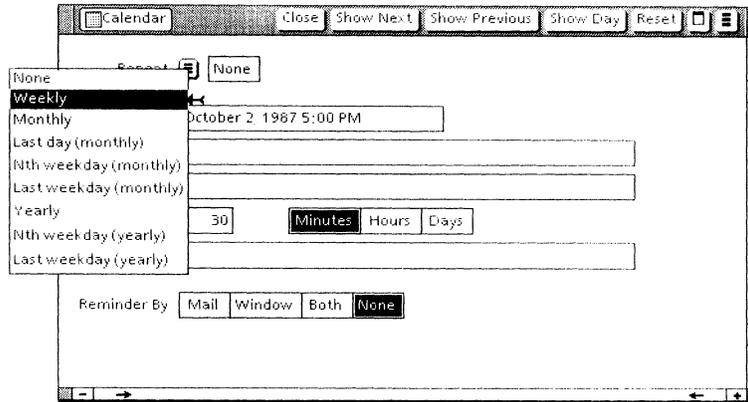
5. In the box for the Title option, **type**: <u>Communications class</u>.

The event view now looks like this.
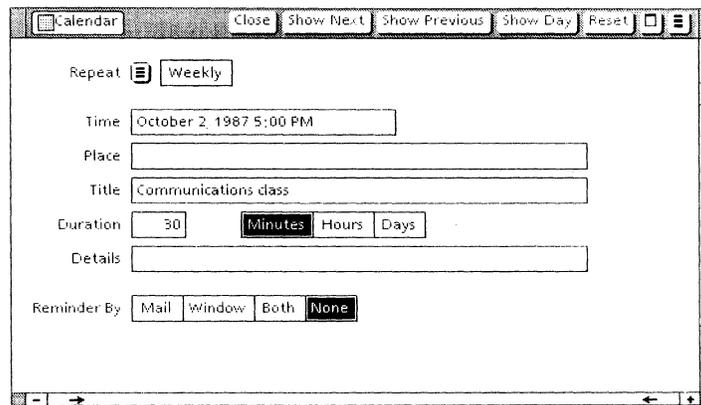
6. **Display** the day view.

7. **Display** the month view.

The month view looks like the calendar below. Note that the class appears every Friday.
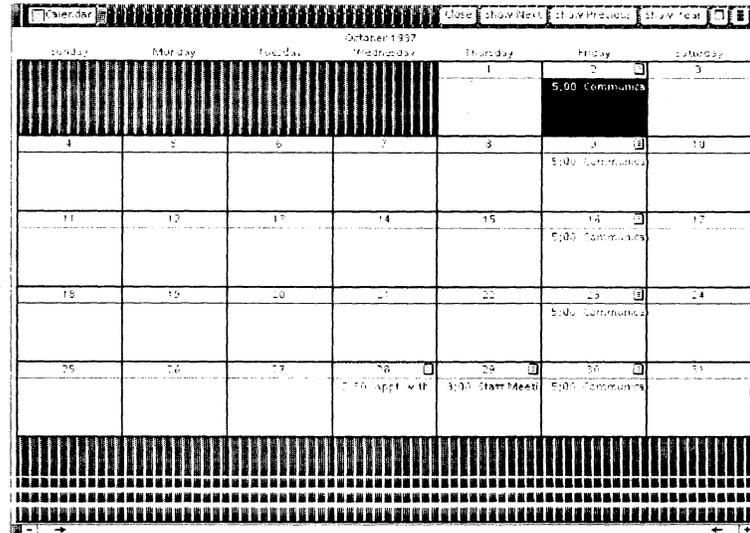
Stopping the weekly class

You now stop the class on the first Friday two months from now.

1. **Select** [Show Next] twice to display the month view for two months after the current month.

2. **Open** the day view for the second Friday of the month.

3. **Delete** the 5:00 time slot (when the class is scheduled).

4. Select [Show Month] to view the results.

The month view looks like the calendar below. All subsequent occurrences of the class are removed from the calendar.
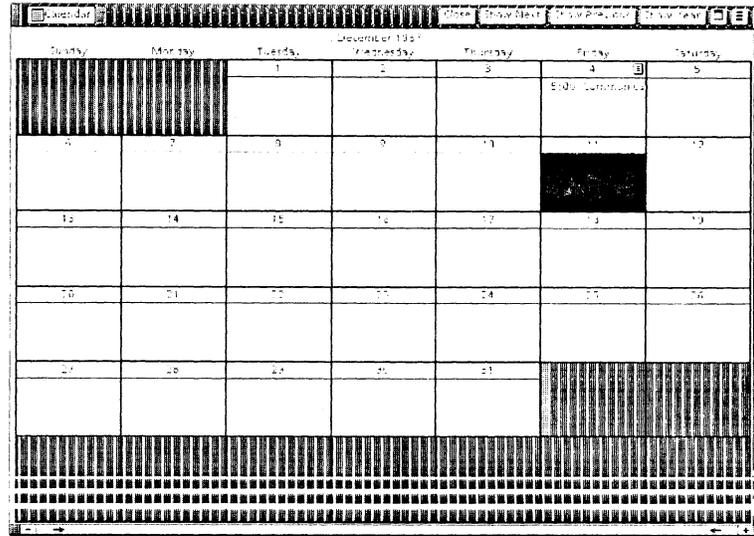
5. Select [Show Previous] twice to display the current month.

Setting up and viewing a reminder of an event

The event view lets you select an event reminder. You can have the reminder displayed on your desktop. If your workstation can send electronic mail, you can mail the reminder to a list of recipients, including yourself.

1. Open the day view for tomorrow.

2. Open the event view for 8:00 (when the staff meeting is scheduled).

3. Select [Window] for the Reminder By option.

The Remind At option appears.

4. **Delete** the entry in the box for the Remind At option, and **type**: <u>1</u>.

5. **Select** [Days] for the Remind At option.

The reminder is set to take place one day before the day of the event, or today. The event view now looks like this.
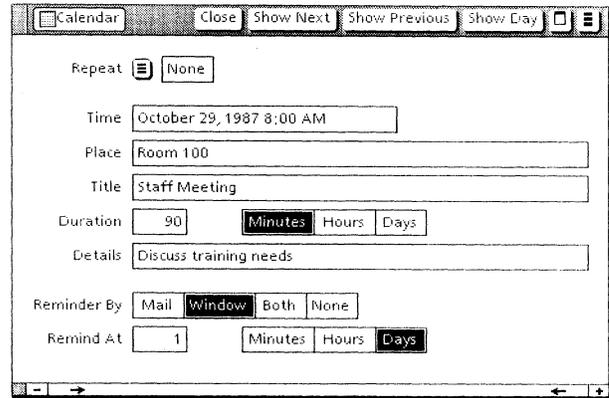
6. **Display** the day view.

Note the reminder window. It looks like this.

7. **Select** [Close] to close the reminder window.

8. **Select** [Close] to close the calendar.

Printing a calendar view

When you print a calendar view, the last calendar view displayed is automatically printed. However, if the last view is an event view, the day view is printed instead. In this exercise, you print the day view.

1. Copy the Calendar icon to a printer icon.

A special version of the Printing option sheet appears when you copy the Calendar icon to a printer icon. For this exercise, do not change any of the settings on t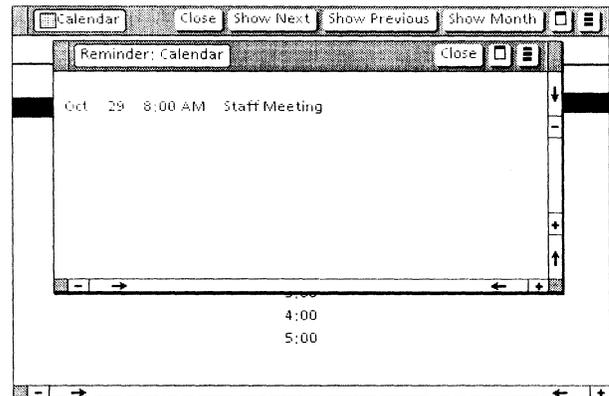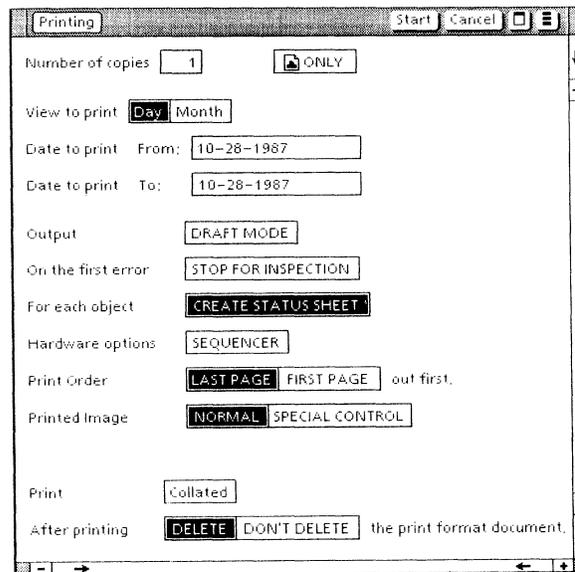he Printing option sheet. For more information, refer to the *VP Spreadsheet and VP Office Accessories Reference* volume.

```
┌──────────────────────────────────────────────────────┐
│ [Printing]                          Start  Cancel □ ≡ │
├──────────────────────────────────────────────────────┤
│ Number of copies  [  1  ]        [▣ ONLY]            ↕│
│                                                        │
│ View to print  [Day] Month                             │
│                                                        │
│ Date to print   From:  [10-28-1987    ]                │
│                                                        │
│ Date to print   To:    [10-28-1987    ]                │
│                                                        │
│ Output            [DRAFT MODE]                         │
│                                                        │
│ On the first error    [STOP FOR INSPECTION]            │
│                                                        │
│ For each object       [CREATE STATUS SHEET]            │
│                                                        │
│ Hardware options      [SEQUENCER]                      │
│                                                        │
│ Print Order           [LAST PAGE] FIRST PAGE   out first. │
│                                                        │
│ Printed Image         [NORMAL] SPECIAL CONTROL         │
│                                                        │
│                                                        │
│ Print          [Collated]                             +│
│                                                        │
│ After printing  [DELETE] DON'T DELETE   the print format document. ↑│
│ ─  →                                      ←    +      │
└──────────────────────────────────────────────────────┘
```

2. Select [Start].

The printer prints the day view for tomorrow.

Now that you've used some of the calendar features, you can try some of these other tasks for more practice.

- Set up your own calendar, and schedule your appointments for next week.

- Set a reminder for one of tomorrow's appointments.

- Schedule the birthdays of your friends and relatives as repeating events.

You are now ready to use the personal calendar to schedule events for yourself. For more information about the features of the personal calendar, refer to the *VP Spreadsheet and VP Office Accessories Reference* volume.

4.   Using the calculator
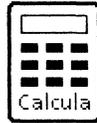
The calculator is a desktop accessory that performs both simple and complex calculations.

In this chapter, you calculate simple mathematical expressions, use calculator functions and registers, use variables, and create a new function. If you will not be using variables and user-created functions in your calculations, you do not need to complete those exercises.

Performing simple calculations

Even for simple operations, the calculator provides features that other calculators do not have. With the VP Office Accessories calculator, you can edit and copy previously entered calculations to use in new calculations, reducing input errors.

Retrieving and renaming the Calculator icon

1. **Copy** the Calculator icon from the Office Accessories divider to the desktop.

   The Office Accessories divider is located in the Workstation divider of the Directory.

2. **Select** [Close All] to close the divider and Directory windows.

3. **Select** the Calculator icon, and **press** <PROP'S> to display the property sheet for the calculator.

4. **Delete** the entry in the box for the Label property, and **type**: Calc1.

The property sheet for Calc1 now looks like this.
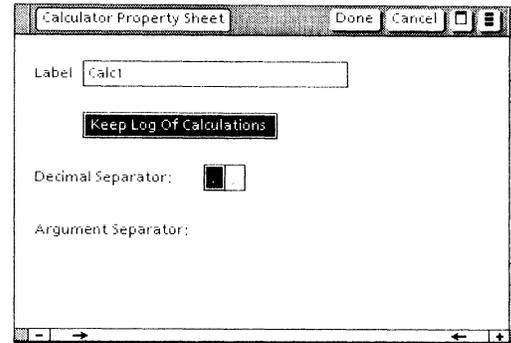

5. **Select** [Done].

Using the log window to evaluate a simple expression

When you type numbers and symbols, you can press keys on the top row of the keyboard and, on 6085 workstations, the keypad on the right, or you can select keys from the keypad window.

1. **Open** Calc1.

The calculator window opens, and the following message appears: "Type an arithmetic expression at the flashing caret, and press <NEXT> for the result."

The expressions you type appear in the log window of the calculator. The log window looks like this.
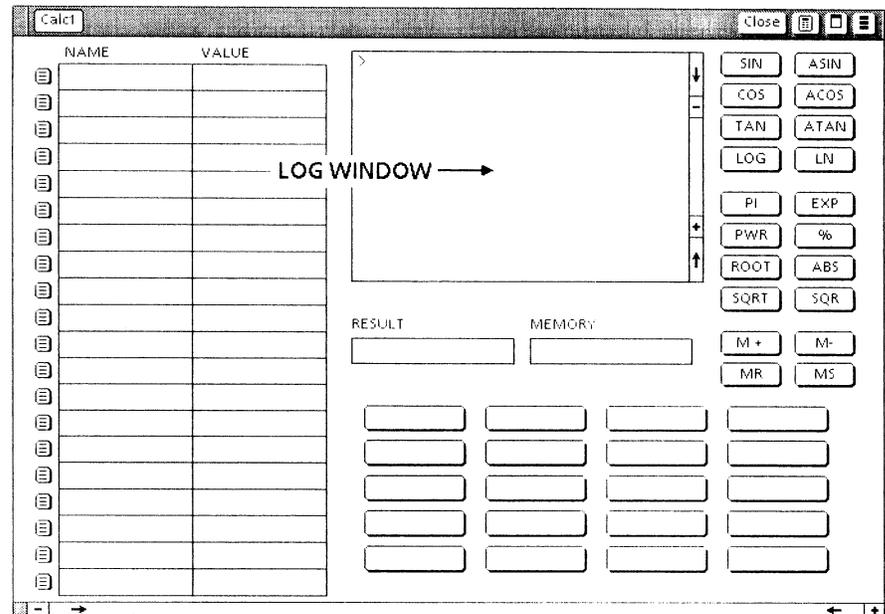

Log window

The *log window* is like a roll of paper in a desktop calculator or adding machine. The line on which you are entering a calculation is the current line. When you press or select < NEXT >, the result appears on a new current line in the log window.

2. Type: 2 + 2 + 2.

If you make a mistake, you can edit the current line using standard editing techniques.

3. **Press** <NEXT> to evaluate the expression.

The result, 6, appears both on the new line in the log window and in the RESULT register.

```
 2 + 2 + 2
 6
```

RESULT   MEMORY

`6`
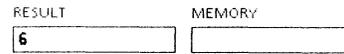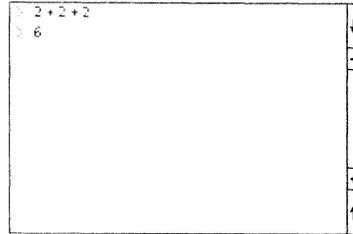
Register   A *register* is a place where the calculator holds a value. A value stays in the RESULT register until you either evaluate another expression or press <NEXT> to create a new line.

The calculator has another register called the MEMORY register. The MEMORY register stores a value so you can use it again.
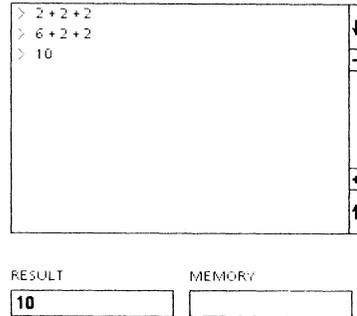
Editing the current line of the log window

You can select and copy the contents of the log window the same way you edit text.

1. **Select** " + 2 + 2," and **press** <COPY>.

2. **Select** the end of the current line, which still contains 6.

The current line now contains 6 + 2 + 2.

3. Press <NEXT> to evaluate.

The result, 10, appears in the log window, and the RESULT register looks like this.

```
> 2 + 2 + 2
> 6 + 2 + 2
> 10
```

RESULT   MEMORY
[10]   [   ]

Clearing the current line and the log window

You can remove expressions from the calculator by clearing the current line, the log window, or the RESULT register.

Clearing the current line

You clear the current line when you want to erase an entry you do not intend to use.

1. Type: 1 + 1.

2. Press <CLEAR>.

The current line of the log window is erased. The value 10 remains in the RESULT register.

Clearing the log window

You clear the log window when you want to erase the entire contents of the log window. Clearing the log window is like tearing the tape from an adding machine.
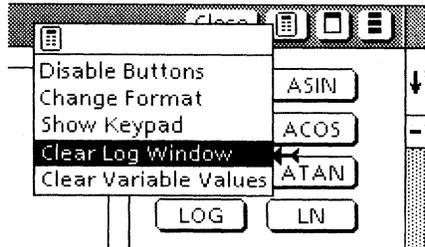
1. **Select** [Clear Log Window] from the calculator auxiliary menu.

    The following message appears: "Clear the log window YES|NO."

2. **Select** [YES] in the message area to confirm.

    The contents of the log window disappear. The value 10 remains in the RESULT register.

Clearing the RESULT register

You clear the RESULT register to start a new line while keeping the previous result visible in the log window.

1. **Type:** 9 + 1.

2. **Press** <NEXT> to evaluate.

    The value 10 appears in the current line of the log window and in the RESULT register.

3. **Press** <NEXT> again.

   A new current line appears in the log window, and the RESULT register is now empty.

Using different types of operators and functions

Operator   An *operator* specifies a mathematical operation. The calculator includes a number of built-in operators, such as the arithmetic operators +, -, ×, and ÷.

For multiplication, you cannot substitute the letter "x" for the multiplication operator. You must use the multiplication symbol

($\times$) from the keypad. You can also use the asterisk (*) from the standard keyboard for multiplication, and the slash (/) from the standard keyboard for division.

The calculator also includes built-in functions for square root, pi, percent, and others. The calculator window below shows the location of the calculator function buttons.
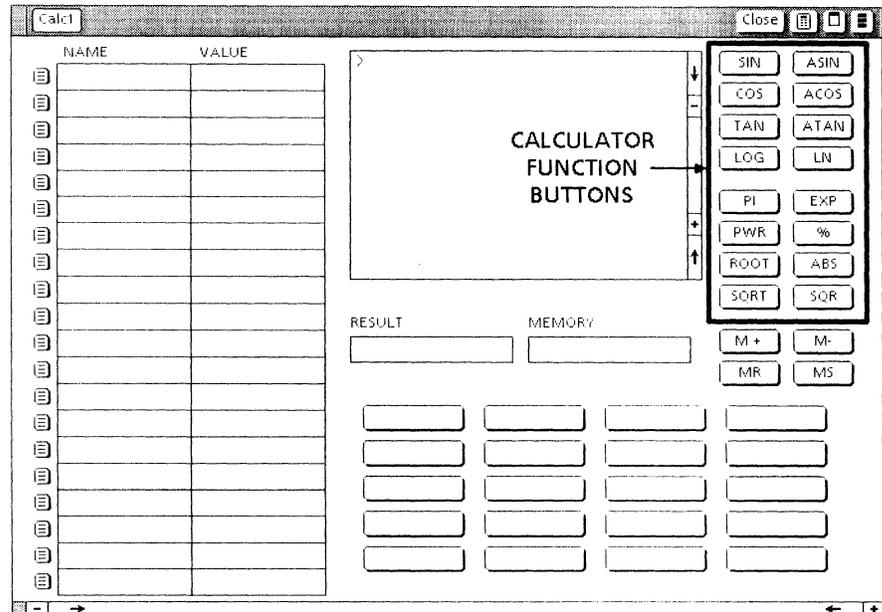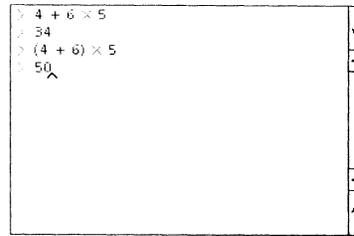

Using parentheses

Inserting a part of an expression in parentheses can change the result. The calculator evaluates the contents of the parentheses first.

1. **Select** [Clear Log Window] from the calculator auxiliary menu, and **select** [YES] to confirm.

2. **Type**: 4 + 6 × 5.

3. **Press** <NEXT> once to evaluate the expression.

4. **Press** <NEXT> again to start a new line.

5. **Type** and **evaluate**: <u>(4 + 6) × 5</u>.

> To evaluate means to press <NEXT> after typing a mathematical expression.

```
>  4 + 6 × 5
   34
>  (4 + 6) × 5
   50
```

RESULT   MEMORY
| 50 | | |

Note that the expressions in step 2 and step 5 use the same values and the same operators. The parentheses change the results of these calculations because the calculator performs them in a different order.

Refer to the *VP Spreadsheet and VP Office Accessories Reference* volume for more information on using parentheses to change the order of operations.
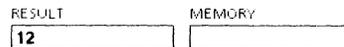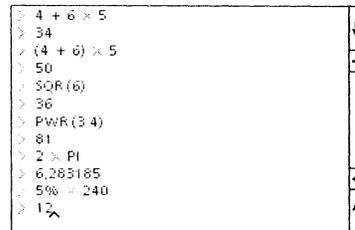
Using built-in calculator functions

You can select built-in calculator functions, such as SQR (square), from the function buttons; or you can type their names. It is usually easier to select a button when you are entering calculations in the log window, and to type the function name when you are creating your own function, as discussed in "Creating a new function" later in this chapter.

In the following steps, you calculate these values:

- 6^2 (the square of 6)
- 3^4 (3 to the fourth power)
- $2\,\pi$ (2 times pi)
- 5% of 240

1. For the square of 6, **press** <NEXT>, and **select** SQR(6).

2. **Press** <NEXT> once to evaluate the expression, and then **press** <NEXT> again to clear the line.

3. For 3 to the fourth power, **select** PWR(3,4), and **press** <NEXT> twice.

4. For 2 times pi, **select** 2 x PI, and **press** <NEXT> twice.

5. For 5 percent of 240, **select** and **evaluate** 5% × 240.

   Remember that to evaluate means to press <NEXT>.

   The log window now looks like this.

```
> 4 + 6 × 5
> 34
> (4 + 6) × 5
> 50
> SQR(6)
> 36
> PWR(3 4)
> 81
> 2 × PI
> 6.283185
> 5% × 240
> 12
```
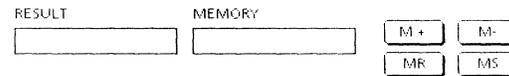
```
RESULT              MEMORY
[ 12        ]       [            ]
```

Refer to the *VP Spreadsheet and VP Office Accessories Reference* volume for more information on operators and functions.

Using the register buttons

You use the register buttons shown here to move values into and out of the MEMORY register. Using register buttons does not affect the contents of the RESULT register.
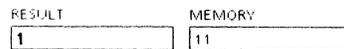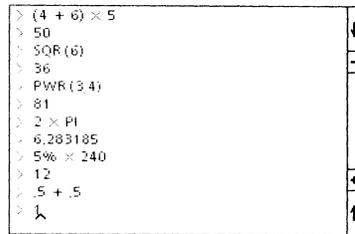
RESULT   MEMORY

                                     [M +]   [M-]

                                     [MR]   [MS]

<M+>   Adds the contents of the RESULT register to the value in the MEMORY register.

<M->   Subtracts the contents of the RESULT register from the value in the MEMORY register.

<MR>   Copies (or recalls) the contents in the MEMORY register to the current line in the log window.

<MS>   Stores the contents of the RESULT register in the MEMORY register.

1. **Press** <MS> to store the RESULT register value in the MEMORY register.

2. **Press** <NEXT>.

3. **Type:** .5 + .5, and **evaluate** the expression.

4. Select \<M-\>.

Selecting this register button subtracts 1, the value in the RESULT register, from 12, the value in the MEMORY register. The value in the MEMORY register is now 11.

The log window and the registers now look like this.

```
> (4 + 6) × 5
> 50                          ↓
> SQR(6)
> 36                          =
> PWR(3 4)
> 81
> 2 × PI
> 6.283185
> 5% × 240
> 12                          ◆
> .5 + .5
> ʎ                           ↑
```

RESULT   MEMORY
```
1                         11
```

5. Press \<NEXT\> to clear the RESULT register.

6. Type: 9 + , and select \<MR\>.

This register button copies (recalls) 11, the value in the MEMORY register, to the current line of the log window. The current line now reads 9 + 11.
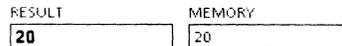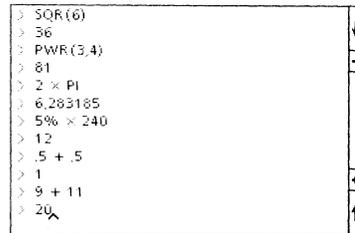
7. Evaluate the expression.

The value 20 appears on the current line and in the RESULT register.

8. Select <MS>.

This register button stores 20, the contents of the RESULT register, in the MEMORY register.

The log window and the registers now look like this.

```
> SQR(6)
> 36
> PWR(3,4)
> 81
> 2 × PI
> 6.283185
> 5% × 240
> 12
> .5 + .5
> 1
> 9 + 11
> 20
```

```
RESULT          MEMORY
20              20
```

9. Press <NEXT> to clear the RESULT register, and **select** <MS> to clear the MEMORY register.

Using variables in a calculation

You can use a variable in an expression the same way you use a number.

Variable A *variable* is a word or character that represents a value. The value can change even though the variable name stays the same.

To define a variable, you name the variable and assign a value to it in the storage variable area of the calculator window.

Most calculators do not include variables. If you will not be using variables, you can skip to "Printing a log of calculations."

The storage variable area looks like this.
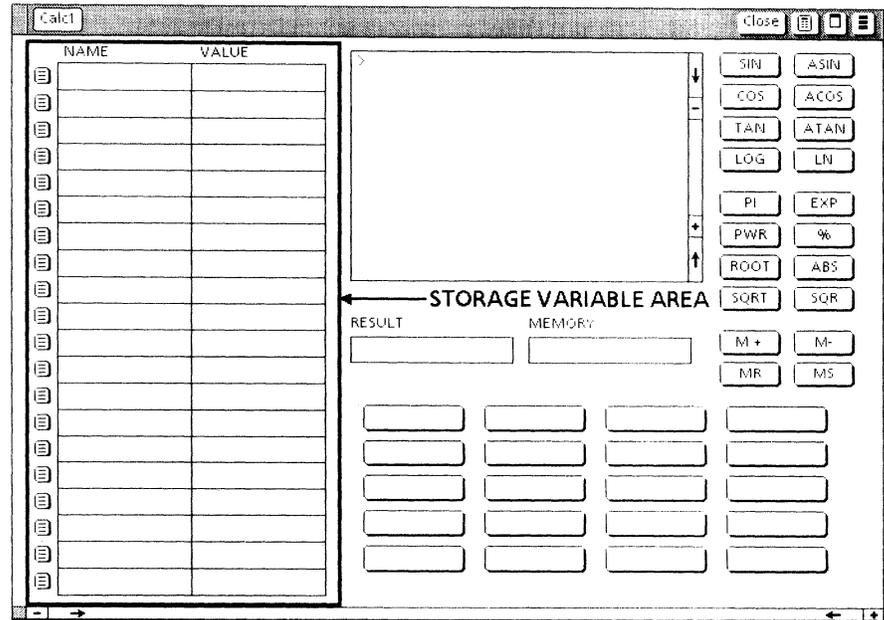
The storage variable area is divided into cells, like a table. It has two columns: NAME and VALUE. Each cell has an auxiliary menu, located to the left of the NAME column.

The auxiliary menu for each cell of the storage variable area looks like this.
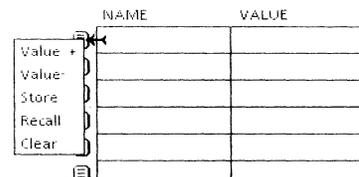
Assigning names and values to variables

In this exercise, you assign names and values to variables representing clothing items and their unit costs. Later, you will calculate the total cost, including sales tax, for a clothing order. The variables are as follows:

- PantsQty
- PantsPrice
- ShirtsQty
- ShirtsPrice
- Tax

You also assign a name, but not the value, to a variable called Total. Later, you will store the value of Total in the storage variable area.

Note that the variable names are each one word; a variable name cannot include a space.

1. **Select** the first NAME cell in the storage variable area.

2. **Type**: PantsQty.

   The storage variable area now looks like this.

NAME	VALUE
PantsQty	

3. **Press** <NEXT> to move to the corresponding VALUE cell, and **type**: 5.

4. **Press** <NEXT>.

5. **Type**: PantsPrice, and **press** <NEXT>.

6. **Type**: 30.00, and **press** <NEXT>.

7. **Enter** the following variables and values, pressing <NEXT> to move from cell to cell:

ShirtsQty	10
ShirtsPrice	20.00
Tax	.06

8. In the next NAME cell, **type**: <u>Total</u>.

The storage variable area now looks like this.

	NAME	VALUE
▤	PantsQty	5
▤	PantsPrice	30.00
▤	ShirtsQty	10
▤	ShirtsPrice	20.00
▤	Tax	.06
▤	Total	
▤		

Using variables in an expression

You now use the Store command, with the variables you just defined, to assign a value to the Total variable.

1. **Select** [Clear Log Window] from the calculator auxiliary menu, and **select** [YES] to confirm.

2. In the log window, **type**: <u>PantsQty × PantsPrice + ShirtsQty × ShirtsPrice</u>; then **evaluate** the expression.

Remember to type the "×" from the keypad. Note how the expression "wraps" to the next line.

This expression multiplies the quantity of pants (5) by the price of pants (30.00), and the quantity of shirts (10) by the price of shirts (20.00). It then adds the products together.

The result is 350.

3. Select <MS>.

The value 350 appears in the MEMORY register. The log window and the registers look like this.

```
> PantsQty × PantsPrice + ShirtsQty ×
  ShirtsPrice
> 350
```

RESULT | MEMORY
350 | 350
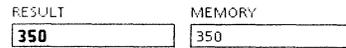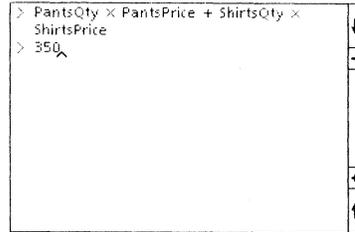
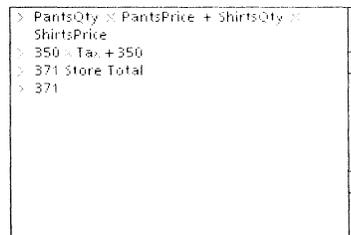### 4. Type: × Tax +, press <MR>, and press <NEXT> .

This expression multiplies the result (350) by the tax rate (.06) and adds the tax to the amount in the MEMORY register (350). The value 371 appears on the current line.

5. Insert a space, type: Store Total, and press <NEXT>.

The value 371 appears in the value cell for the Total variable.

The log window, the storage variable area, and the registers now look like this.

NAME	VALUE
PantsQty	5
PantsPrice	30.00
ShirtsQty	10
ShirtsPrice	20.00
Tax	.06
Total	371

```
> PantsQty × PantsPrice + ShirtsQty ×
  ShirtsPrice
> 350 × Tax + 350
> 371 Store Total
> 371
```

RESULT | MEMORY
371 | 350

Creating a new function

You can create a new function that uses all the calculator features, including operators, built-in functions, commands, registers, and variables. You create functions using the user-programmable function buttons.
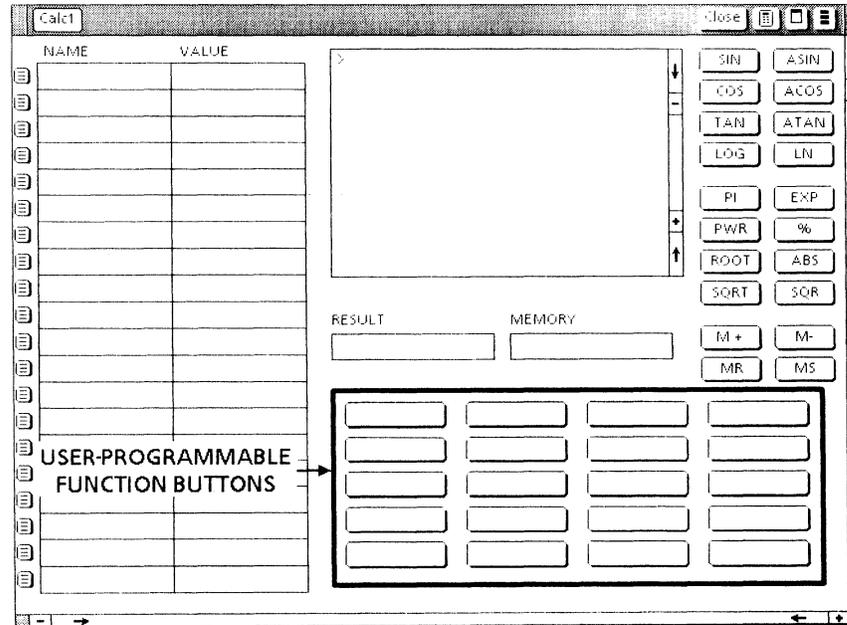
Reserved words Certain words, called **reserved words**, cannot appear in a function you define. For a list of reserved words and other information about the syntax of calculator functions, refer to the *VP Spreadsheet and VP Office Accessories Reference* volume.

Most calculators do not have user-programmable features. If you do not need to create your own functions, you can skip to "Printing a log of calculations."

Using the Store, Result, and Memory commands

These three commands are useful when you are creating a new function. You already used the Store command in the preceding exercise.

Result   The ***Result*** command represents whatever value is in the RESULT register.
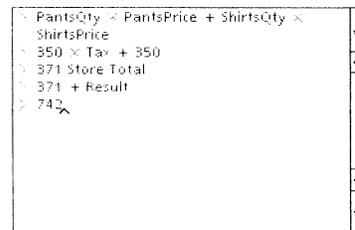
Memory   The ***Memory*** command represents whatever value is in the MEMORY register. The Memory command is the same as the <MR> register button.

Store   The ***Store*** command evaluates the expression that precedes it, and stores the result in the MEMORY register or in a storage variable.

You now use these commands.

1. Type: + Result, and **evaluate** the expression.
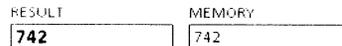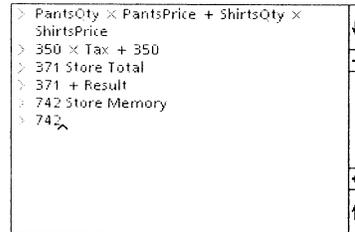
The value 742 appears on the current line and in the RESULT register.

```
 PantsQty × PantsPrice + ShirtsQty ×
 ShirtsPrice
 350 × Tax + 350
 371 Store Total
 371 + Result
 742
```

```
RESULT          MEMORY
742             350
```

2. **Insert** a space; then **type**: Store Memory, and **evaluate**
   the expression.

   This expression stores the contents of the RESULT register in the
   MEMORY register. Now the value 742 appears in the MEMORY
   register, like this.

```
> PantsQty × PantsPrice + ShirtsQty ×
  ShirtsPrice
> 350 × Tax + 350
> 371 Store Total
> 371 + Result
  742 Store Memory
> 742
```

RESULT   MEMORY
742   742

3. **Press** <NEXT>.

4. **Type**: .5 × Memory Store Memory, and **evaluate** the
   expression.

   The log window and the registers now look like this.

```
  PantsQty × PantsPrice + ShirtsQty ×
  ShirtsPrice
  350 × Tax + 350
  371 Store Total
  371 + Result
  742 Store Memory
  742
  .5 × Memory Store Memory
  371
```

RESULT   MEMORY
371   371

5. **Press** <NEXT> to clear the RESULT register and start a
   new line.

Defining the function

The function you will define performs the same calculations you performed in "Using variables in an expression."

1. **Select** [Disable Buttons] from the calculator auxiliary menu.

   The following message appears: "Function buttons disabled."

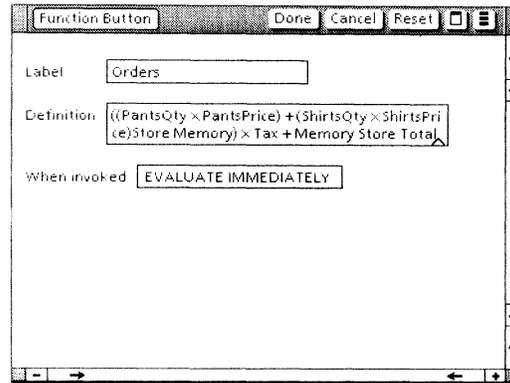2. **Select** the first blank function button.

   The Function Button property sheet appears on the desktop.
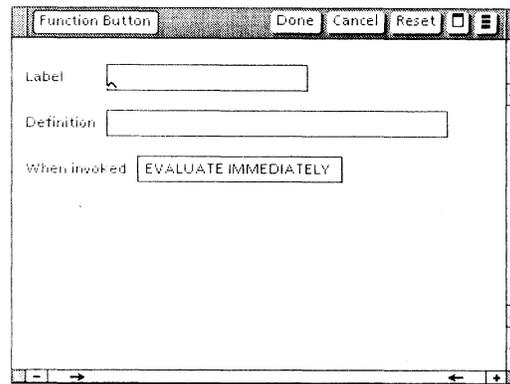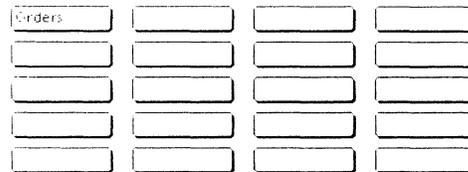

3. For the Label property, **type**: <u>Orders</u>.

4. For the Definition property, **type**: ((PantsQty × PantsPrice) + (ShirtsQty × ShirtsPrice) Store Memory) × Tax + Memory Store Total.

The Function Button property sheet now looks like this.

5. Select [Done] to close the property sheet.

The label Orders appears on the function button you programmed.

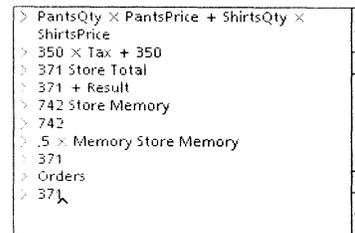**6. Select** [Enable Buttons] from the calculator auxiliary menu.

The function button is now ready for you to use. The message "Function buttons enabled." appears in the message area.

Using the new function

1. **Select** the function button labeled Orders.

2. **Press** <NEXT>.

    The result is 371, the same value that resulted when you typed the series of expressions into the log window.

    The log window now looks like this.

```
> PantsQty × PantsPrice + ShirtsQty ×
  ShirtsPrice
> 350 × Tax + 350
> 371 Store Total
> 371 + Result
> 742 Store Memory
> 742
> .5 × Memory Store Memory
> 371
> Orders
> 371
```

```
RESULT              MEMORY
371                 350
```

3. **Clear** the current line.

Temporarily substituting new values for the variables

You can instruct the calculator temporarily to use different values for the variables in a function. This substitution does not change the values assigned to the variables in the storage variable cells, except for the calculated variable Total.

1. **Select** the function button labeled Orders.

2. On the same line, next to Orders, **type**: (5, 35.00, 10, 25.00).

3. **Press** <NEXT>.

The following message appears: "Incorrect number of arguments in function call."

The Orders function has five variables; therefore, it requires five values. The Tax variable needs a value in the variable expression.

4. **Select** the Orders function button again, **type:** (5, 35.00, 10, 25.00, 6%), and **evaluate** the expression.

The result is 450.5, which also appears in the value cell for the Total variable.

5. **Select** [Close] to close the calculator window.

Printing a log of calculations

If you skipped to this section from an earlier section, be sure to close the calculator window before printing the calculation log.

1. **Copy** the Calculator icon to a printer icon.

2. **Select** [Start] on the Printing option sheet.

You are now ready to explore the many features of your desktop calculator. Refer to the *VP Spreadsheet and VP Office Accessories Reference* volume for more information.

XEROX