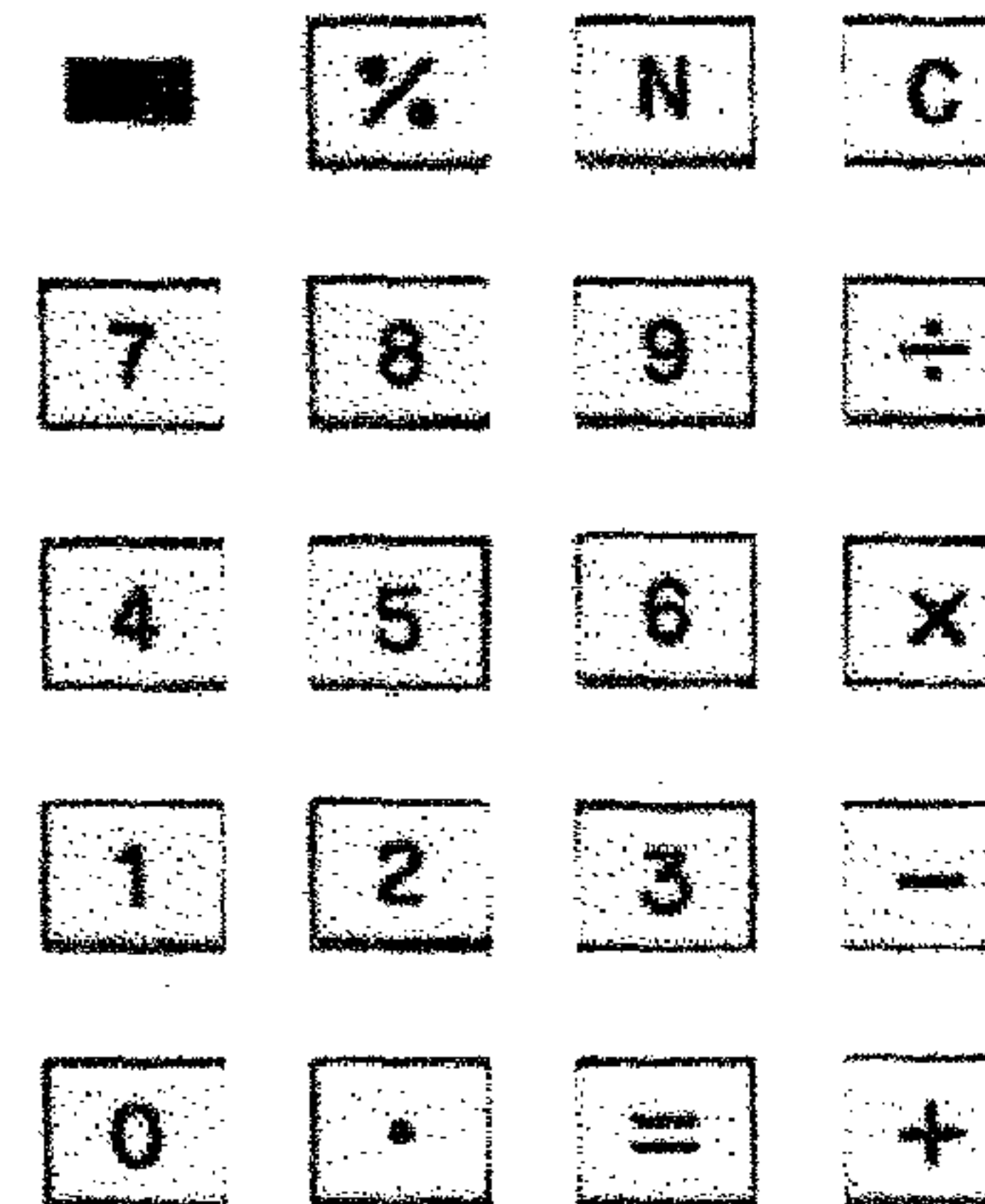


**CORVUS**  
CORPORATION  
DALLAS, TEXAS

**CORVUS** /400 PERSONAL  
POCKET  
CALCULATOR

**CORVUS**  
PAROBY  
SARADA



OWNERS MANUAL



## INTRODUCTION

Congratulations on your selection of the Corvus 400 Personal Pocket Calculator. You've made an excellent choice. The 400 combines compact size and portability with reliable, time-saving calculation capability needed to serve your day to day math needs.

Six functions including Percentage (%) and Average (N), plus floating decimal and automatic constant provide instant answers to your math problems in the home, office or in the classroom. Anywhere. And operation is elementary, even for the children.

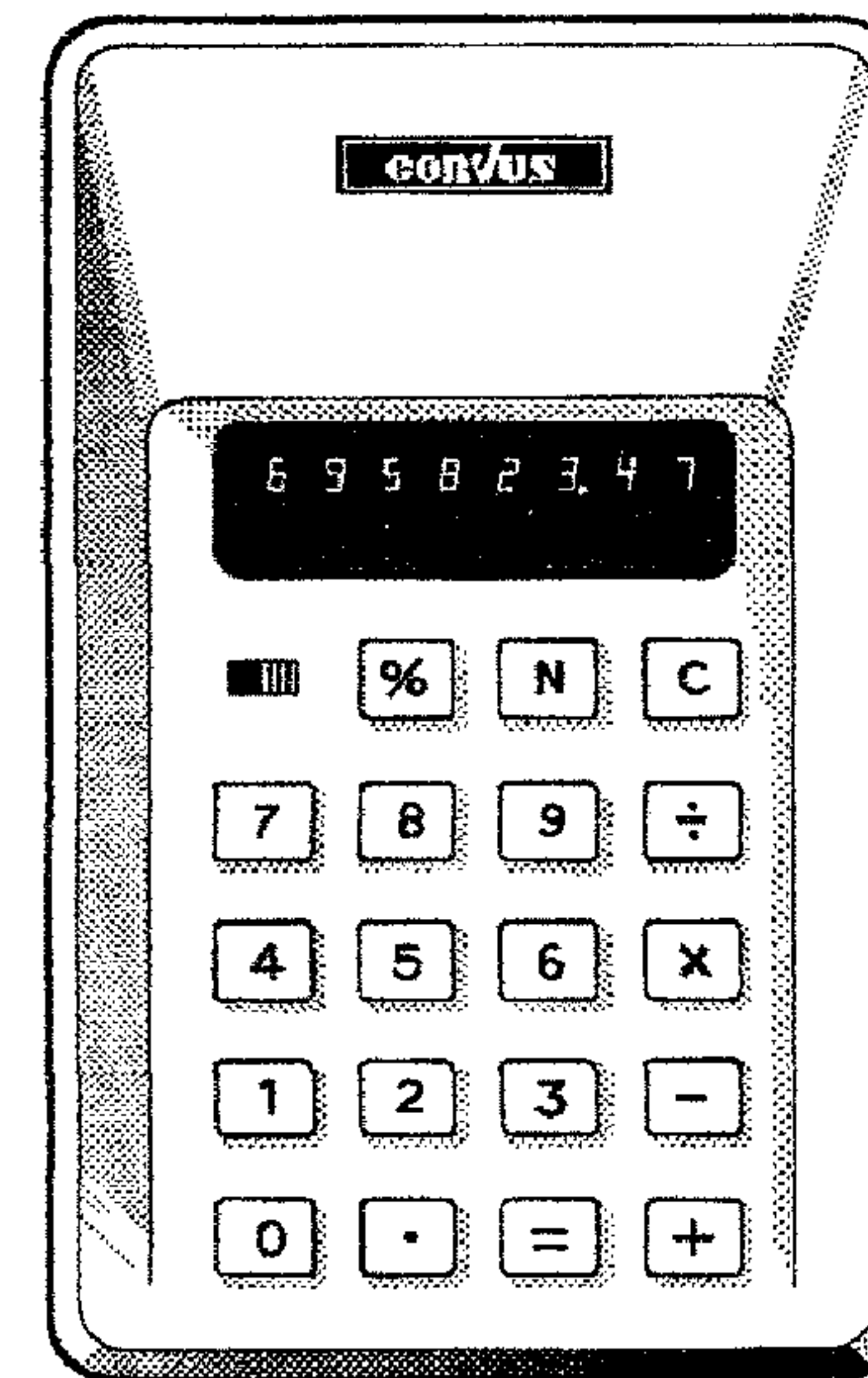
A single "calculator on a chip" integrated circuit from MOSTEK Corporation and Corvus' quality-assured manufacturing will provide you long trouble-free calculator life.

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## FEATURES

- ✓ Eight digit, light emitting display
- ✓ Six functions include add (+), subtract (-), multiply (x), divide (÷), percentage (%), and average (N)
- ✓ Full floating decimal
- ✓ Automatic constant in 5 functions, always second number entered
- ✓ Chain and mixed calculations
- ✓ Simple problem entry
- ✓ Positive touch keyboard
- ✓ Replaceable battery operation
- ✓ Low power consumption for longer battery life
- ✓ Compact and lightweight design



## CALCULATOR OPERATION

### ON-OFF SWITCH

The on-off switch is located at the top left corner of the keyboard (see figure 1).

### NUMERIC KEYS

**0-9** Used to enter the numbers.

### DECIMAL KEY

**.** In decimal fractions, this key is used to enter the decimal point in its proper place.

### CLEARING KEY

**C** Clears all information stored in the calculator including any displayed number, in preparation for a new problem. Returns display to a single zero "0".

The clear key can also "erase" incorrectly entered numbers, if pressed before striking a function key without interrupting chain calculations. Display returns to "0".

### FUNCTION KEYS

**×** **Multiplication.** Instructs the calculator to multiply the displayed number by the next numeric entry. During chain calculations it will simultaneously complete any previous calculation.

**÷** **Division.** Instructs the calculator to divide the displayed number by the next numeric entry. During chain calculations it will simultaneously complete any previous calculation.

**+** **Addition.** Instructs the calculator to add the displayed number to the next numeric entry. During chain calculations it will simultaneously complete any previous calculation.

**-** **Subtraction.** Instructs the calculator to subtract the next entry from the displayed number. During chain calculations it will simultaneously complete any previous calculation.

**%** **Percentage** Instructs the calculator to automatically multiply the displayed number by 1/100th resulting in a percentage. See page 8.

**N** **Average** Instructs the calculator to display a count of entries made in a chain. Used in obtaining averages. See page 10 for example.

**=** Instructs the calculator to total and terminate calculations previously entered (division, multiplication, etc.) It is the operative key when calculating with constants. See page 7 for calculation examples.

### NUMERIC AND SYMBOL DISPLAY

Your calculator displays up to 8 digits using a light emitting diode readout. The decimal point floats in eight places.

**[-]** Negative sign floats to the left of displayed number.

### FLOATING DECIMAL

Your calculator is equipped with full floating decimal capabilities and will carry results of calculations to the maximum number of places (decimal points) required by the answer, within the units 8-digit capacity. It does not round off fractions to the nearest number, but rather truncates them. For example,  $10 \div 3$  would display 3.3333333 rather than 3.3333334.

### RECIPROCAL

Another feature of this calculator is its ability to obtain reciprocals ( $1/x$ : the quotient of a number divided into one) without clearing and re-entering the number. Simply press **1/x** key sequence following number entry or during chain calculation. See page 8 for example.



### CONSTANT FEATURE

An automatic built-in constant allows you to use a constant factor in addition, subtraction, multiplication, division, and percentage calculations. The second number entered is always the constant. See examples on page 9.

### POWERS

Powers of whole numbers may be obtained by entering the number, depressing the  $\times$  key, and then the  $=$  key. The calculator will now display the square or second power of the number entered. Successive powers are obtained by continuing to depress the  $=$  key. The exponent may be a positive or negative whole number. See page 10 for example.

### SIMPLICITY OF ENTRY

Entering problems is a simple operation. Just enter the problem in the same order as you would write it; for example,  $10 - 5 =$

### BATTERY OPERATION

Included with your calculator are 4 disposable N-cell batteries which provide the equivalent of 20 hours continuous calculation under normal conditions. For battery replacement see page 13.

### OVERFLOW CONDITIONS

- **ENTRY**—When an attempt is made to enter a number beyond the capacity of the calculator (8 digits), a flashing display will result. This condition is removed by pressing the **C** key.
- **CALCULATION**—When the results of a calculation exceed the calculator's internal capacity, a flashing display will result. The displayed answer will only be approximately correct. This condition is removed by pressing the **C** key.

## BASIC CALCULATIONS

	ENTER	PRESS	DISPLAY
<b>ADDITION</b>			
$23.50 + 14.12 =$		<b>C</b>	0
	23.50	<b>+</b>	23.50
	14.12	<b>=</b>	37.62
<b>SUBTRACTION</b>			
$37.45 - 16.30 =$		<b>C</b>	0
	37.45	<b>-</b>	37.45
	16.30	<b>=</b>	21.15
<b>MULTIPLICATION</b>			
$525.30 \times 4 =$		<b>C</b>	0
	525.30	<b>\times</b>	525.30
	4	<b>=</b>	2101.2
<b>DIVISION</b>			
(1) $\frac{100}{6}$		<b>C</b>	0
	100	<b>\div</b>	100
	6	<b>=</b>	16.666666
(2) $\frac{100}{-6}$		<b>C</b>	0
	100	<b>\div</b>	100
		<b>-</b>	100
	6	<b>=</b>	-16.666666

### SAMPLE PROBLEMS

	ENTER	PRESS	DISPLAY
<b>MIXED OR CHAIN CALCULATIONS</b>			
$\frac{(1.5 \times 4) + 3}{6} - 7.4 =$		C	0
	1.5	×	1.5
	4	+	6.
	3	÷	9.
	6	-	1.5
	7.4	=	-5.9

	ENTER	PRESS	DISPLAY
<b>RECIPROCAL</b>			
(1) $1/5$ or $1 \div 5$		C	0
	5	÷ = =	0.2
(2) $\frac{35 \times 12}{75 + 175} =$		C	0
	75	+	75
Problem may also be stated:	175	÷ = = ×	0.004
	35	×	0.14
$\frac{1}{75 + 175} \times \frac{35 \times 12}{1} =$	12	=	1.68

	ENTER	PRESS	DISPLAY
<b>PERCENTAGE</b>			
(1) Determine percentage		C	0
$\$200.00 \times 15\% =$	200	×	200
	15	%	0.15
		=	30.
(2) Discount: Determine net amount after discount		C	0
$\$200 - 10\% =$	200	-	200
	10	%	20.
		=	180.
	8		

	ENTER	PRESS	DISPLAY
(3) Mark-up:		C	0
$\$200 + 15\% (200) =$	200	+	200
	15	%	30.
		=	230.

	ENTER	PRESS	DISPLAY
<b>CONSTANT</b>			
(1) Addend		C	0
$125 + 25 =$	125	+	125
$250 + 25 =$	25	=	150.
$212 + 25 =$	250	=	275.
	212	=	237.

	ENTER	PRESS	DISPLAY
(2) Subtrahend		C	0
$125 - 25 =$	125	-	125
$250 - 25 =$	25	=	100.
	250	=	225.

	ENTER	PRESS	DISPLAY
(3) Multiplier		C	0
$100 \times 20\% =$	100	×	100
$125 \times 20\% =$	20	% =	20.
$205 \times 20\% =$	125	=	25.
	205	=	41.

	ENTER	PRESS	DISPLAY
(4) Divisor		C	0
$\frac{6}{3} =$	6	÷	6
	3	=	2.
$\frac{156}{3} =$	156	=	52.
	918	=	306.
$\frac{918}{3} =$			
	9		

ENTER PRESS DISPLAY

**AVERAGES (N KEY)**

Find the average grade!			C	0
	82		+	82
82	91		+	173.
91	89		+	262.
89	82		+	344.
82	78		÷	422.
78			N	5
			=	84.4

**POWERS**

			C	0
16 <sup>n</sup>	1st power	16	×	16
	2nd power		=	256.
	3rd power		=	4096.
	4th power		=	65536.
	5th power		=	1048576.

**SQUARE ROOTS**

Finding the square root of a number is easy using the approximation method. For example, you want the square root of 38. Use 6 as the initial approximation since  $\sqrt{36} = 6$ .

A <sub>1</sub> = 1st approximation	38	÷	38
A <sub>2</sub> = 2nd approximation	6	+	6.3333333
$A_2 = \frac{X}{A_1} + A_1$	6	÷	12.3333333
$\frac{\quad}{2}$	2	=	6.1666665
	38	÷	38
Then repeat	6.1666665	+	6.1666665
$A_3 = \frac{X}{A_2} + A_2$	6.1666665	÷	12.328828
$\frac{\quad}{2}$	2	=	6.164414
A <sub>3</sub> = 6.164414		×	37.999999

**COMMON PROBLEMS**

In the home, on the job or in class . . . whatever your math needs, the Corvus 400 can help solve a host of daily math problems: Weekly shopping trips, balancing the checking account, averages, gratuities, mileage, homework, cooking, painting (area) . . . the list goes on. And you can enter your problems just as you would write them on paper. Simple enough for the entire family.

**COMPARING PRICES**

While grocery shopping you want to economize and get the most for your money. A 16 oz. brand can of shortening costs 64 cents and a comparable brand costs 70 cents in a 20 oz. can. Which costs less per ounce?

	ENTER	PRESS	DISPLAY
Brand A: 64¢ ÷ 16 =		C	0
Brand B: 70¢ ÷ 20 =	.64	÷	0.64
Brand A per ounce	16	=	0.04
		C	0
	.70	÷	0.70
Brand B per ounce	20	=	0.035

Brand "B" is a better buy by 1/2¢ per ounce.

**MILEAGE**

You want to figure the gas mileage on a trip you're planning, and then compare it with mileage in the city.

Here's how: At the start of your trip fill the gasoline tank full and record the mileage. Each subsequent time you fill up record the quantity purchased, including the quantity needed to fill your tank immediately upon reaching your destination. Deduct final mileage from mileage recorded at start of trip and divide by total gallons used.



	ENTER	PRESS	DISPLAY
Mileage:			
Start 4567		C	0
Finish 5377	5377	-	5377
Gasoline bought = 38 gal.	4567	÷	810.
Gas mileage = miles/gallon	38	=	21.315789

Follow the same procedure for figuring city gas mileage.

### AVERAGES

The end of school term is approaching. You want to find the lowest score you must make on the final exam to get a "B" in the course. Test scores during the term were 82, 75, 63, 77, 88, 83. Final test counts 25% of final grade.

$$\text{Semester grade } 80 \text{ ("B")} = .75 (\text{Avg.}) + .25 (X)$$

or $X = \frac{80 - [(.75)(78)]}{.25}$		C	0
	82	+	82
	75	+	157.
	63	+	220.
	77	+	297.
	88	+	385.
	83	÷ N =	78.
		×	78.
	.75	=	58.5
		C	0
	80	-	80.
	58.5	÷	21.5
	25	% =	86.

Any grade, 86 or above, on the final exam will insure a "B" in the course.

## CALCULATOR MAINTENANCE

### CLEANING

Case may be cleaned with alcohol or damp cloth. Display lenses may be cleaned with soft cloth and glass cleaner.

### STORAGE

Unit should not be exposed to temperatures below -40°F or above 150°F for prolonged periods (these temperatures might be encountered in a closed automobile, for example)

### TROUBLE SHOOTING

If a problem occurs, verify the power switch is "ON". If blank or weak display is present, check or replace batteries; observe correct polarity. If the display is lighted but result is incorrect, review your operation instructions.

Should the above suggestions fail to correct the problem, refer to your service certificate for instructions.

### POWER

The four N-cell batteries that operate your calculator will have a longer life if power is turned off when not in use and the calculator is cleared with the **C** key after obtaining calculation results.

### BATTERY REPLACEMENT

N-cell batteries are readily available at any camera store or department. To replace, remove cover from bottom of calculator, remove old batteries and place new ones according to the outline in the battery compartment. This will insure correct polarity.

Failure to properly install the batteries will result in the failure of the calculator to operate.

Batteries which may be used in your calculator include but are not necessarily limited to the following:

Company	Carbon Zinc	Alkaline
Eveready	E340E, 904	E90
Mallory		MN9100
Ray-O-Vac	910F, RN	910A
Burgess	310	AL-N

**Note:** Batteries are not guaranteed by the calculator manufacturer. They should not be included with unit if returned for servicing.

**CAUTION:** Some batteries have the tendency to leak when power is exhausted. To prevent possible damage replace weak batteries without delay. Corvus cannot be responsible for damage to calculator due to leakage.

#### NOTES:

### SERVICE CERTIFICATE

*Your electronic calculator is a precision electronic instrument which will serve you for many years with normal care.*

CORVUS CORPORATION guarantees this calculator against defects in materials or workmanship for a period of one year from date of purchase. This guarantee applies only to the original owner registered on the card attached. This card must be completed and mailed, postage paid, within ten (10) days from date of purchase. Any merchandise that has been repaired by an unauthorized party, tampered with, or abused is not covered by this guarantee.

After one year from date of purchase CORVUS CORPORATION will repair any unit for the minimum service charge of Nine Dollars (\$9.00). Any unit requiring repair after this one year period should be returned, postage prepaid, and fully insured, with a check or money order for Nine Dollars (\$9.00) to the nearest service center.

Ship in the original packaging container or in a similarly-constructed container, via U.P.S. where possible. Enclose a letter explaining the problem, with place and date of purchase.

Service Center:  
Corvus Corporation | 13030 Branch View Lane | Dallas, Texas 75234

MODEL NO. \_\_\_\_\_

DATE OF PURCHASE \_\_\_\_\_

DEALER'S NAME \_\_\_\_\_

SERIAL NO. \_\_\_\_\_