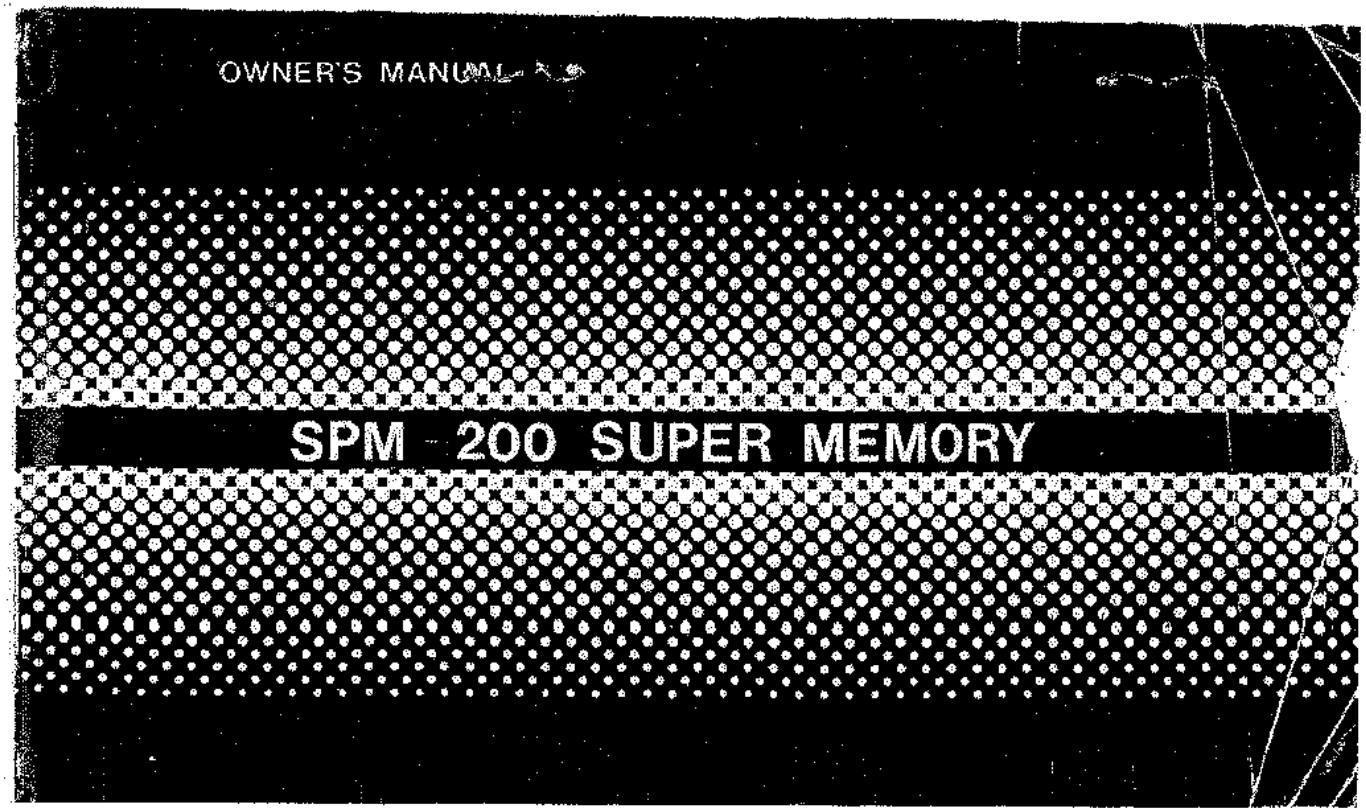

OWNER'S MANUAL
SPM-200 SUPER MEMORY

RETAIN FOR YOUR RECORDS

KINGSPOINT CORPORATION
104 HARBOR DRIVE
JERSEY CITY, N.J. 07305

WARRANTY

Kingspoint Corp. warrants to the purchaser of the new Kingspoint Calculator that if the machine or any part thereof in the judgment of Kingspoint is proven to be defective in material or workmanship within one year from date of original purchase, such defects will be repaired or replaced (at the Company's option) free of charge for parts and labor.

This warranty does not apply to any product which has been damaged by accident or which has been misused, abused, altered, or repaired by anyone other than Kingspoint.

This warranty is in lieu of all other warranties expressed or implied, and no person is authorized to assume for Kingspoint any other liability in connection with the sale of this product.

To obtain repairs, the Calculator should be delivered, prepaid, to Kingspoint Corp. at address shown above. In-warranty units will be returned postage prepaid.

MODEL NO. SPM-200

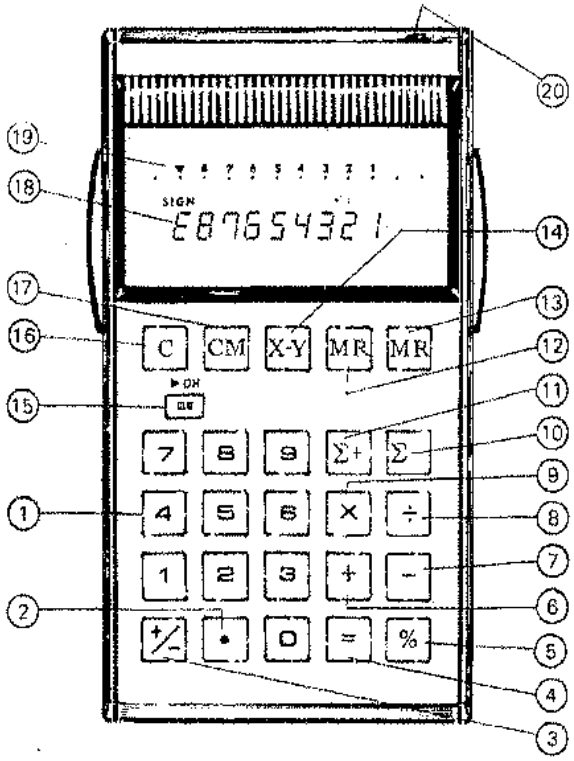
SERIAL NO. 30390

PURCHASE DATE 2-2-76

or use by
tion tool.
instantly
problems
to.), – in
amount
or reverse

FEATURES

- Data entry and display in range of $\pm(10^8-1)$ to $\pm 10^{-7}$
- Answer in eight significant digit accuracy
- Wrap-around decimal point for an answer ranging from $\pm 10^8$ to $\pm (10^{16} - 2)$
- Answer in true credit balance
- True algebraic notation mode entry
- Magnitude-sign format number entry
- Double entry proof
- Full floating decimal point
- Exponentiation — X^n, X^{-n}
- Automatic constant
- Factor reverse calculations
- Accumulative memory with [Σ+] and [Σ-] key
- Grand total and sub total calculations
- Mixed chain calculations
- Full flexible percentage calculations
- Chain mark-up/discount calculations
- Memory-in-use indicator
- Status information display in the ninth digit
- Large-sized fluorescent display
- Large-sized feather touch keyboard
- Compact and light weight
- Convenient jack for AC adaptor



1. Number Key
2. Decimal Entry Key
3. Sign (+,−) Reverse Key
4. Equals Key
5. Percent Key
6. Plus Key
7. Minus Key
8. Division Key
9. Multiplication Key
10. Memory Minus Key
11. Memory Plus Key
12. Memory Recall Clear Key
13. Memory Recall Key
14. Factor Change Key
15. Power ON-OFF Switch
16. Clear Key
17. Clear Memory Key
18. Number Display
19. Sign Display
20. AC Adaptor Jack

Figure 1.

BATTERY INSTALLATION

Your calculator operates on inexpensive penlight batteries of the kind used in transistor radios or penlights. For economical and sure operation, carefully follow these simple instructions:

- Slide the battery compartment cover out in the direction shown by the arrow.
- Place three 1.5 Volt "AA" size batteries in the compartment with positive-negative polarity.

CAUTION: Wrong arrangement of batteries will cause damage to the calculator.

- After calculations are finished, always make sure to turn the calculator off to prevent battery drain and to rest the batteries for any short length of time. For economical operation, it should be noted that the life of a battery that is used continuously is relatively much shorter. However, using to batteries intermittently results in lengthening battery life considerably. For instance, a five to ten minute period of operation, followed by 20 to 30 minutes of rest will give the longest total operating possible from the batteries.
- While the calculator does not require any special type batteries, use of a premium grade or alkaline batteries will certainly give longer operation.
- Remove batteries before storing the calculator for a long period.

AC OPERATION

Your calculator can be operated on AC household current by using an optional AC adaptor. Plug the AC adaptor into any convenient AC outlet and plug the other end of the adaptor cord into the calculator. When switching to battery operation, the plug of the AC adaptor must be removed from the calculator. **CAUTION:** Use the specified AC adaptor only—or the one supplied with the calculator. **The use of the wrong AC adaptor may not only cause serious damage to the calculator, but it may also be hazardous.**

OPERATING INSTRUCTIONS

Power ON–OFF Switch

Sliding the ON-OFF switch to the Right ("ON" position) turns the calculator ON. Sliding the switch to the Left turns it OFF. After calculations are finished, make sure to turn off the switch to prevent battery drain.

ENTRY FORMAT OF YOUR CALCULATOR

As a feature of this calculator, the **true algebraic notation entry method** is employed. All numbers may be entered in magnitude/sign format in full floating decimal point. Any of two variable functions may be entered exactly in the same sequence as the problem is stated.

For example, if a problem is $(-3) + (-2) = -5$, the key sequence would be [3] [+/−] [+] [2] [+/−] [=]

AUTOMATIC CLEARING FEATURE OF YOUR CALCULATOR

For starting a new problem, any number entry or a complete problem entry automatically clears the calculator (except for the memory) without using the [C] key if the previous calculation result was terminated by the [=] key or the [%] key.

ERROR CORRECTION FEATURE OF YOUR CALCULATOR

Any number entry may be erased by pressing the [C] key once, following the number to be revised, without affecting the function instruction and the preceding data stored in the calculator. This key also conditions the calculator to accept a revised number entry.

[C] **CLEAR KEY**—Pressing this key once clears the previously entered number only. Pressing this key twice clears all data and a function instruction in the calculator (except the data stored in the memory), and resets the calculator to zero for the start of a new problem.

[0] to [9] **NUMBER ENTRY KEYS**—These enter numbers 0 through 9 to a limit of eight digits.

[•] **DECIMAL POINT KEY**—This enters a decimal point in its proper place, when entering a number.

[+/—] **SIGN CHANGE KEY**—This changes the sign of the displayed number which may be entered from positive to negative or vice versa.

Note: This key automatically clears the calculator if pressed after the [=] key.

[=] **EQUAL KEY**—This instructs the calculator to execute any of the two-variable functions previously instructed.

[+] **ADD KEY**—This instructs the calculator to add the following entered number to the previously entered number.

[—] **SUBTRACT KEY**—This instructs the calculator to subtract the following entered number from the previously entered number.

[X] **MULTIPLY KEY**—This instructs the calculator to multiply the previously entered number by the following entered number.

[÷] **DIVIDE KEY**—This instructs the calculator to divide the previously entered number by the following entered number.

Note: Any two-variable function key, during chain calculations, completes any previous function instruction, the same as an "equal" function, and then instructs the calculator what the next function will be.

CONSTANT MULTIPLICATION – In any previous calculation, the number entered prior to the [X] key is always stored in the calculator as the constant multiplier. If the previous calculation made is chain calculation, the last function instructed must be multiplication in order to set the constant multiplier, and the intermediate result completed by the last [X] key is stored as the constant multiplier.

CONSTANT DIVISION – In any previous calculation, the number entered following the [÷] key is always stored in the calculator as the constant divisor. If the previous calculation made is chain calculation, the last function instructed must be division in order to set the constant divisor. And the last number entered following the last [÷] key is always stored as the constant divisor.

Note: Any complete calculation consisting of a one-variable or a two-variable function, clears the previous constant stored in the calculator without using the [C] key, and if the function is multiplication or division, the new constant multiplier or divisor will be stored.

[%] **PERCENTAGE KEY**–This converts the previously entered number in percent to the fractional number. In other words, any number followed by this key is interpreted by the calculator as a percent unit. In essence, it divides the previously entered number by 100 and puts "equal" after it.

RATIO IN PERCENT–In division calculation, pressing this key, instead of the [=] key, instructs the calculator to complete the division function and immediately provides the result in percent.

MULTIPLICATION BY PERCENTAGE–In multiplication calculation, pressing this key instead of the equal key instructs the calculator to interpret the last entered factor as in percent and immediately complete the multiplication function.

Note: Repeating this key causes the result division by 100 each time.

DISCOUNT CALCULATION—Use the [%] key in the following key sequence:

1. original price
2. the [−] key
3. discount in percent
4. the [%] key
5. the [=] key

MARK-UP CALCULATION—Use the [%] key in the following sequence:

1. actual selling price
2. the [+] key
3. tax in percent
4. the [%] key
5. the [=] key

[Σ+] **MEMORY ADD KEY**—This instructs the calculator to add the displayed number to the memory.

[Σ−] **MEMORY SUBTRACT KEY**—This instructs the calculator to subtract the displayed number from the memory.

[MR] (S.TTL) **SUB-TOTAL KEY**—Pressing this key enters data stored in the memory into the display at any time, while the memory continues to retain the data.

[MR] (G.TTL) **GRAND-TOTAL KEY**—Pressing this key enters data stored in the memory into the display at any time, at the same time clears the memory after transferring the data to the display.

[CM] **CLEAR MEMORY**—This clears the memory without affecting the calculation in progress.

[X–Y] **FACTOR CHANGE KEY**—This interchanges the two factors entered and stored in the calculator, for any of two variable functions, if pressed prior to the [=] key or the following function key.

[×] [=] (X^2) **SQUARE COMBINATION**—Pressing these keys in sequence instructs the calculator for immediate computation of the square function of the previous entered number.

(X^n) N-th **POSITIVE POWER**—Further repeating the [=] key exponentiates to the positive power.

[÷] [=] [=] (1/X) **RECIPROCAL COMBINATION**—Pressing these keys in sequence instructs the calculator for immediate computation of the reciprocal function of the previously entered number.

[$X^{\square}$] N-th NEGATIVE POWER—Further repeating of the [=] key exponentiates to the negative power.

INFORMATION SYMBOLS AND SIGNS

Information symbols and signs are indicated in the ninth digit on the left of the display (except for underflow) to show every status of the calculator.

—	Negative sign
⊏ and RESULT	Positive result overflow
⋿ and RESULT	Negative result overflow
⊏ and 0.	Error symbol
.	Memory indicator
0.0000000	Underflow indication

ENTRY OVERFLOW—If data entry of more than eight integers or seven fractional digits is attempted, only the first eight integers or seven fractional digits will be accepted and displayed. Further attempt of entry will be ignored. In this status, all the function keys are operative, and the calculator may proceed to a function key for a desired calculation.

RESULT OVERFLOW—Any calculation resulting in an answer greater than $10^8 - 1$ in magnitude (more than eight significant digits to the left of the decimal point) causes result overflow status to the calculator. In this status, the eight most significant digits of the answer will be displayed with the **wrap-around decimal point** in a position so that if moved eight places to the right, the answer displayed will be correct in its most significant eight digits. Multiply the answer displayed with the wrap-around decimal point by 10^8. All the keys except the [C] key, are locked and no further calculation is possible in this status.

MEMORY INDICATOR—This indicates that the data other than zero is stored in the memory, and the memory is in use.

UNDERFLOW—Any calculation results with fractional values less than 10^{-7} will be stored and displayed as.

SPECIAL CONDITIONS

DIVISION BY ZERO—This is a prohibited operation. An attempt causes an immediate error status with the symbol and zero only displayed.

OPERATING EXAMPLES

1. PROGRAMING SEQUENCE OF PROBLEMS

Programing sequence of problems, prior to calculation operation, often simplifies the number of key operations considerably, and eliminates complicated key operations with the aid of the memory.

Original Problems	Programing	Operations	Displayed Results
8 + (2 X 3) =	(2 X 3) + 8 =	[2] [X] [3] [+] [8] [=]	14.
8 X (2 + 3) =	(2 + 3) X 8 =	[2] [+] [3] [X] [8] [=]	40.
8 − (2 X 3) =	−[(2 X 3) − 8] =	[2] [X] [3] [−] [8] [=] [+/−]	2.
8 ÷ (2+ 3) =	[(2 + 3) ÷ 8]$^{-1}$ =	[2] [+] [3] [÷] [8] [X−Y] [=]	1.6

2. ERROR CORRECTION

Problems	Operations	Displayed Results
2 X 3 =	[2] [X] [6] [C] [3] [=]	6.
2 X 3 − 4 =	[2] [X] [3] [−] [5] [C] [4] [=]	2.

In the above first problem, 6 was entered by mistake instead of the correct second entry 3, and in the second problem, 5 was entered by mistake instead of the correct third entry 4.

3. ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION

Problems	Operations	Displayed Results
2 + 3 =	[2] [+] [3] [=]	5.
2 − 3 =	[2] [−] [3] [=]	−1.
2 × 3 =	[2] [×] [3] [=]	6.
2 ÷ 3 =	[2] [÷] [3] [=]	0.6666666

4. CALCULATIONS WITH NEGATIVE NUMBERS

Problems	Operations	Displayed Results
(−2) + (−3) =	[2] [+/−] [+] [3] [+/−] [=]	−5.
2 − (−3) =	[2] [−] [3] [+/−] [=]	5.
2 × (−3) =	[2] [×] [3] [+/−] [=]	−6.
(−2) ÷ (−3) =	[2] [+/−] [÷] [3] [+/−] [=]	0.6666666

5. MIXED CHAIN CALCULATION.

Problem: $\dfrac{[2-(-3)] \times (-4) - (-5)}{-3} = 5$

Operation: [2] [−] [3] [+/−] [×] [4] [+/−] [−] [5] [+/−] [÷] [3] [+/−] [=] ——— 5.

Note: In the above calculation, the numbers are entered each time followed by signs and the functions are entered in the same sequence as the problem is stated since your calculator uses **magnitude/sign format entry, and true algebraic notation entry method.**

6. CALCULATIONS WITH THE SQUARE COMBINATION [X^2] – [X] [=]

Problems	Operations	Displayed Results
2^2 =	[2] [×] [=]	4.
$(2+3)^2$ =	[2] [+] [3] [=] [×] [=]	25.
$(5-2)^2$ =	[5] [−] [2] [=] [×] [=]	9.
$(2 \times 3)^2$ =	[2] [×] [3] [=] [×] [=]	36.
$(2 \div 3)^2$ =	[2] [÷] [3] [=] [×] [=]	0.4444443

7. CALCULATIONS WITH THE RECIPROCAL COMBINATION [1/X] – [÷] [=] [=]

Problems	Operations	Displayed Results
2^{-1}	[2] [÷] [=] [=]	0.5
$(2+3)^{-1}$	[2] [+] [3] [=] [÷] [=] [=]	0.2
$(5-2)^{-1}$	[5] [−] [3] [=] [÷] [=] [=]	0.3333333
$(2 \times 3)^{-1}$	[2] [×] [3] [=] [÷] [=] [=]	0.1666666
$(2 \div 3)^{-1}$	[2] [÷] [3] [=] [÷] [=] [=]	1.5000001

8. CALCULATIONS WITH THE SQUARE MEMORY COMBINATION [M + X^2] — [X] [=] [Σ+]

Problems	Operations	Displayed Results
$2^2 + 3^2 + 4^2 =$	2 × = Σ+ 3 × = Σ+ 4 × = Σ+ MR	29.
$(1 + 2)^2 + (2 + 3)^2 =$	1 + 2 = × = Σ+ 2 + 3 = × = Σ+ MR	34.
$(5 - 2)^2 + (6 - 4)^2 =$	5 − 2 = × = Σ+ 6 − 4 = × = Σ+ MR	13.
$(2 \times 3)^2 + (3 \times 4)^2 =$	2 × 3 = × = Σ+ 3 × 4 = × = Σ+ MR	180.
$(2 \div 3)^2 + (3 \div 4)^2 =$	2 ÷ 3 = × = Σ+ 3 ÷ 4 = × = Σ+ MR	1.0069443

9. CALCULATIONS WITH THE RECIPROCAL MEMORY COMBINATION [M+1/X] — [÷] [=] [=] [Σ+]

Problems	Operations	Displayed Results
$2^{-1} + 3^{-1} + 4^{-1} =$	2 ÷ = = Σ+ 3 ÷ = = Σ+ 4 ÷ = = Σ+ MR	1.0833333
$(1 + 2)^{-1} + (2 + 3)^{-1} =$	1 − 2 = ÷ = = Σ+ 2 + 3 = ÷ = = Σ+ MR	0.5333333
$(5 - 2)^{-1} + (6 - 4)^{-1} =$	5 − 2 = ÷ = = Σ+ 6 − 4 = ÷ = = Σ+ MR	0.8333333
$(2 \times 3)^{-1} + (3 \times 4)^{-1} =$	2 × 3 = ÷ = = Σ+ 3 × 4 = ÷ = = Σ+ MR	0.2499999
$(2 \div 3)^{-1} + (3 \div 4)^{-1} =$	2 ÷ 3 = ÷ = = Σ+ 3 ÷ 4 = ÷ = = Σ+ MR	2.8333334

10. CALCULATIONS WITH CONSTANT

Problems	Operations	Displayed Results
1.07 × 2 =	1 • 0 7 × 2 =	2.14
1.07 × 3 =	3 =	3.21
1.07 × 4 =	4 =	4.28
1.07 × 5 =	5 =	5.35
3.14 × 2 =	3 • 1 4 × 2 =	6.28
3.14 × 3 =	3 =	9.42

3.14 X 4 =	4 =	12.56
3.14 X 5 =	5 =	15.7
2 ÷ 1.25	2 ÷ 1 • 2 5 =	1.6
3 ÷ 1.25	3 =	2.4
4 ÷ 1.25	4 =	3.2
5 ÷ 1.25	5 =	.4

11. CALCULATIONS WITH MEMORY

Problems	Operations	Displayed Results
(2 X 3)	2 X 3 = Σ_+	6.
+ (4 X 5)	4 X 5 = Σ_+	20.
+ (6 X 7)	6 X 7 = Σ_+	42.
+ (8 X 9)	9 X 9 = Σ_+	72.
− 4	MR (G.TTL.)	−4.

Problems	Operations	Individual Sums	Operations		Running Products
(1 + 2)	1 + 2 =	3.	Σ_+		
X (2 + 3)	2 + 3 X	5.	MR	= Σ_+	15.
X (3 + 4)	3 + 4 X	7.	MR	= Σ_+	105.
X (4 + 5)	4 + 5 X	9.	MR	= Σ_+	945.
945					

12. CALCULATIONS WITH MEMORY AND CONSTANT

Problems	Operations	Displayed Results
(1.07 X 2)	1 • 0 7 X 2 = Σ_+	2.14
+ (1.07 X 3)	3 = Σ_+	3.21

+ (1.07 × 4)	4 − Σ+	4.28
− (1.07 × 5)	5 = Σ+	5.35
	MR (S.TTL)	Sub Total = 14.98
+ (3.14 × 2)	3 • 1 4 × 2 = Σ+	6.28
+ (3.14 × 3)	3 = Σ+	9.42
+ (3.14 × 4)	4 = Σ+	12.56
−(3.14 × 5)	5 = Σ+	−15.7
27.54	MR (G.TTL)	27.54

Problems	Operations	Displayed Results
(2 ÷ 1.25)	2 ÷ 1 • 2 5 = Σ+	1.6
+ (3 ÷ 1.25)	3 = Σ+	2.4
+ (4 ÷ 1.25)	4 = Σ+	3.2
+ (5 ÷ 1.25)	5 = Σ+	4.
	MR (S.TTL)	Sub Total = 11.2
+ (2 ÷ 1.15)	2 ÷ 1 • 1 5 = Σ+	1.7391304
+ (3 ÷ 1.15)	3 = Σ+	2.6086956
+ (4 ÷ 1.15)	4 = Σ+	3.4782608
− (5 ÷ 1.15)	5 = Σ−	−4.3478260
14.678259	MR (G.TTL)	14.678259

13. PERCENTAGE CALCULATIONS

Problems	Operations	Displayed Results
50% + 30% − 20% =	5 0 % Σ+ 3 0 % Σ+ 2 0 % Σ− MR	1.00
0.15 ÷ 25% =	• 1 5 Σ+ 2 5 % Σ+ MR (G.TTL)	0.40

$\frac{1}{8}$ + 22.5% =	1 ÷ 8 − Σ− 2 2 • 5 % Σ+ MR	0.350
2 ÷ 5 in % =	2 ÷ 5 %	40.
7 X 30% =	7 × 3 0 %	2.1

14. DISCOUNT/MARK-UP CALCULATION

Problem: Find the discounted price by 5%, and then the amount with 6% tax added, where the listed price is 99.95.

Operation: 9 9 • 9 5 − 5 % =
+ 6 % =

94.9525
100.64965

15. CALCULATIONS WITH THE X−Y KEY

Problems	Operations	Displayed Results
$\frac{2}{3+7}$ =	3 + 7 ÷ 2 X-Y =	0.2
$\frac{5}{8 \div 2}$ =	8 ÷ 3 ÷ 5 X-Y =	1.25

16. CONVERSION CALCULATIONS WITH CONSTANT

Use the "CONVERSION TABLE" and Appendix.

CONVERSIONS TO METRIC UNITS.

Problems		Key Operations	Displayed Results
inch → cm	2.5 inch =	2 • 5 4 × 2 • 5 =	6.35
	6.2 inch =	6 • 3 =	16.002
	18.5 inch =	1 8 • 5 =	46.99

CONVERSIONS FROM METRIC UNITS.

m → ft	1 ft =	1 ÷ • 3 0 4 8 =	3.2808398
	3.5 ft =	3 • 5 =	11.482939
	12 ft =	1 2 =	39.370078

APPENDIX:

1 inch = 2.54 cm	1 oz. = 28.35 gr (Approx.)
1 ft. = 0.3048 m	1 lb. = 0.4536 kg (Approx.)
1 yd. = 0.9144 m	
1 mile = 1.609344 km	1 qt. (U.S.) = 0.94635 ℓ (Approx.)
	(Eng.) = 1.141 ℓ (Approx.)
°F = °C × 1.8 + 32	1 gal. (U.S.) = 3.7854 ℓ (Approx.)
°C = (°F − 32) ÷ 1.8	(Eng.) = 4.564 ℓ (Approx.)

17. KINETIC ENERGY OF PROJECTILE IN JOUL, where m = 0.05Kg, and

V = 340 Meters/sec.

$$Ek = \frac{1}{2} m V^2 = \frac{1}{2} \times 0.05 \times 340^2$$

3 4 0 x x • 0 5 ÷ 2 = ⟶ 2890 JOULS

18. PARALLEL RESISTANCE, where R_1 = 33 ohms, and R_2 = 47 ohms

$$R_p = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2}} = \frac{1}{\frac{1}{33} + \frac{1}{47}}$$

17 [C] 3 ÷ = [1/x] Σ+ 4 7 ÷ = [1/x] Σ+ MR (C-TTL) ÷ [1/x] = 19.387547 ohms

To find value of a resistor [= R_1] to be connected in parallel with the resistor of 47 ohms (= R_2) to cut it down to 40 ohms.

$$R_1 = \frac{1}{\frac{1}{Rp} - \frac{1}{R_2}} = \frac{1}{\frac{1}{40} - \frac{1}{47}}$$

[4] [0] [÷] [=] [=] [Σ+] [4] [7] [−] [=] [=] [Σ−] [MR] (G.TTL) [÷] [=] [=] → 268.68452 ohms

Note: The same above methods can be applied to **Series Composition of Capacitors.**

19. SPECIAL CONDITIONS OF YOUR CALCULATOR

RESULT OVERFLOW

[9] [9] [9] [9] [9] [9] [9] [9] [×] [=]
[9] [9] [9] [9] [9] [9] [9] [9] [×] [2] [0] [+/−] [=]
[9] [9] [9] [9] [9] [9] [9] [9] [Σ+] [Σ+]

Displayed Result	Remarks
99999998.	Correct if multiplied by 10^8
19.999999	Correct if multiplied by 10^8
1.9999999	Memory Overflow.

UNDERFLOW

[9] [9] [9] [9] [9] [9] [9] [÷] [=] [=]
[9] [9] [9] [9] [9] [9] [9] [9] [÷] [=] [=]
[0] [•] [0] [0] [0] [0] [0] [1] [2] [%]

Displayed Result	Remarks
0.0000001	Smallest available result
0.0000000	Underflowed
1.2	Correct if multiplied by 10^{-8}

ERROR DUE TO ILLEGAL CALCULATION

[1] [÷] [0] [=]
[C] [÷] [=]
[C] [÷] [%]

Displayed Result	Remarks
0.	Error
0.	Error
0.	Error

CARE OF YOUR CALCULATOR

- Your calculator is supplied with a convenient protective carrying case. When your calculator is not in use, it should be enclosed in this carrying case to protect it from dust and other foreign material.
- When the calculator case needs to be cleaned, a damp (not wet), soft, lint-free cloth should be used. Dust and foreign material should be removed carefully to protect the keyboard.
- Your calculator should not be exposed to excessive heat or moisture.

IN CASE OF DIFFICULTY

- Replace the batteries with new ones.
- Check to be sure that the AC adaptor is correctly plugged into a proper outlet that has power.
- Turn the calculator off, and then turn it on, and press the clear key to reset every segment of logic devices and data registers in the calculator to zero.
- Review operating instructions again to be certain calculations are performed correctly.

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