Instructions For Use

Four - Rule Calculator

The four rules in arithmetical operations which occur frequently in practical calculations are Addition, Subtraction, Multiplication and Division. Since we have the Addition and Subtraction well covered by the adding and subtracting machine on one side, we shall now deal with the Multiplication and Division with the Slide Rule on the other, so that this tiny piece of machine serves to solve all your arithmetical problems in a jiffy.

Multiplication. This slide rule is designed similar to those of any ordinary metric rule in shrunk form. Multiplication is usually accomplished with Scales C and D. To make an example such as 2 x 4 = 8, the "1" on Scale C is set over "2" on Scale D, and then the cursor is shifted so that the hairline coincides with "4" on Scale C. The answer, "8", appears under the hairline on Scale D. In some cases, when the "1" on Scale C is used, the answer is off the scale, and the "10" on Scale C must be used instead of the "1". For example, if 35 x 45 is to be computed, the procedure is as follows: Set "10" on Scale C over "35" on Scale D and coincide with "45" on Scale C, and the answer, 1,575, appears on Scale D. The manipulation would be the same in the multiplication of: 3.5 x 4.5 = 15.75; .35 x .45 = .1575; or .035 x .045 = .001575.

Division: Division is the reverse of multiplication. For example, 8 ÷ 4 = 2, coincide the "4" on Scale C with "8" on Scale D, and read the answer "2" on Scale D opposite "1" on Scale C. To make another example 1,575 ÷ 45 = 35. Coincide 45 on Scale C with 1,575 on Scale D and read the answer "35" on Scale D opposite "10" on Scale C. In this case, since the "1" is off the scale, the "10" on Scale C is to take its place.

Reciprocal Scale C1. The Scale C1 is a reversed Scale C, and reciprocals are obtained by projecting the number from Scale C to Scale C1 or vice-versa. For example, 4 on Scale C projects .25 or ¼ in Scale C1.

Scales A and B. These scales are principally used to find the squares and square roots of given numbers. For any number set on Scale D, the square is found under the hairline on Scale A. For example, 2^2 on Scale D is 4 on Scale A. $2.5^2 = 6.25$; $12^2 = 144$.

How To Use This Pocket Calculator

ALWAYS clear the calculator first before each calculation by pulling the clearing bar all the way out and then pushing it back. After the calculator is cleared the figure in all the answer windows should be "0". Should any arrow sign appear in any window insert pen in the column above it and pull toward window to bring out "0".

RULE 1 - When the hole in the figure column is white move pen towards the answer window and when the hole is red move pen away from the window *and around the bend.*

TO SET the first figure in the calculator at the beginning of each calculation after the calculator has been cleared, use the upper half or addition side and insert the pen in the holes opposite the appropriate numbers and move toward the answer windows.

Example: To set 3152

Insert pen in hole opposite "3" in fourth column from right and move toward window to as far as it will go. "3" will appear in the window. Next insert pen in hole opposite "1" in the third column from the right and move toward window. Then insert pen in hole opposite "5" in second column. Finally put pen in "2" in first column and move toward window. The complete figure "3152" will now appear in the answer windows.

(See Overleaf)

TO ADD - Actually you have just done a multiple addition as follows:

3000 + 100 + 50 + 2 = 3152

Example: 4261 + 92 = 4353

First clear calculator. Next set "4261" on calculator. Then still using the addition side, insert pen in hole opposite "9" in second column from right. Since the hole is in the red zone move pen away from the answer window and around the bend. Next insert pen in hole opposite "2" in first column and move toward window. The answer "4353" will appear in the windows.

TO SUBTRACT - First clear calculator and set the first figure using the addition side. Then use the lower half or substraction side for the rest of the calculation.

Example: 3869—1953 = 1916

After clearing calculator and setting first figure "3869", insert pen in hole "1" in fourth column on lower half and move upward toward window. Next insert pen in hole "9" in third column (red) and *move away from window and around the bend.* Then insert pen in hole "5" in the second column and move toward window. Finally insert pen in "3" in first column and move toward window. The answer "1916" now appears in the windows.

RULE 2 - When arrows appear in the windows during a calculation, simply insert the pen in "0" in the corresponding column and move away from the window and around the bend.

Example: 476 + 228 = 704

Clear and set first figure. Insert pen in "2" in third column and move toward window. Insert pen in "2" on second and move toward window. Insert pen in "8" on first and move away from window and around bend. "6▲4" now appears in the windows. Insert pen in "o" on second and move away from window and around. The correct answer "704" now appears in the windows.