

THE "BLUNDELL" SLIDE RULE

TYPE G.I.

The "Blundell" Type G.I Slide Rule is simple in design, and therefore especially suited for learners. Even experienced slide rule users sometimes prefer this type of rule because of its easy readability.

The Slide Rule consists of the body, in which moves a strip called the slide, and the cursor. The cursor carries a piece of transparent material with one fine black line marked across it.

The scales are, reading from the top of the rule :—

- Cube scale.
- A scale.
- B scale.
- Reciprocal scale.
- C scale.
- D scale.
- Mantissae scale.

The first line on the left-hand end of the scale is called the Left-Hand Index. Similarly, the last line on the right-hand end of the scale is called the Right-Hand Index.

MULTIPLICATION

Example 1. 2.5×3.1 Answer=7.75

Use scales C and D. [Set left-hand index of scale C over 2.5 on scale D, move the cursor line over 3.1 on scale C, and read result 7.75 underneath on scale D.

Example 2. 33.4×595 Answer=19873

If the left-hand index on scale C is placed over 33.4 on scale D, it will be seen that when you slide the cursor to cover 595 on scale C, thus repeating the action in Example 1, the cursor will fall off the rule.

In this case use the right-hand index instead of the left-hand index, and set it opposite 33.4 on scale D. Find 595 with cursor on scale C, and read result underneath on scale D. The nearest answer obtainable on a 10" rule lies between 19850 and 19900.

DIVISION

Example 3.
$$\begin{array}{r} 43 \\ \hline 2.8 \end{array} \quad \text{Answer} = 15.38$$

Set cursor line over 43 on scale D, and slide scale C along until 2.8 coincides with the line on the cursor. Underneath left-hand index on scale C read on scale D result, which is between 15.3 and 15.4.

Example 4.
$$\begin{array}{r} 125 \\ \hline 19.6 \end{array} \quad \text{Answer} = 6.377$$

Set cursor line over 125 on scale D, and slide scale C along until 19.6 coincides with the lines on the cursor. Underneath right-hand index on scale C read on scale D result, which is between 6.3 and 6.4.

Example 5.
$$\begin{array}{r} 13.132 \times 15.9 \\ \hline 18.42 \end{array} \quad \text{Answer} = 11.33$$

In this sum, first we multiply 13.132 by 15.9, and then divide the product by 18.42.

Place the left-hand index of scale C over 13.132 on scale D, and slide the cursor over 15.9 on scale C. The product lies where the cursor line cuts scale D at 208.8.

To divide by 18.42, hold 208.8 on the cursor and slide 18.42 on scale C on to the cursor line. Read result, 11.35 (nearest) on scale D under left-hand index of scale C.

Operations in examples 1 to 5 can be equally well performed

on scales A and B, with more convenience, but with less accuracy.

RECIPROCAL SCALE

The reciprocal scale in the centre of the slide, apart from its use in calculating the reciprocal of numbers, can be used in multiplication to save unnecessary movement of the slide, but beginners are advised first to master the use of the ordinary scales to avoid confusion.

Example 6. Multiplication. 82×3 Answer=246

Set cursor line over 82 on scale D, and slide 3 on Reciprocal scale along to cover it. Read result, 246, on scale D, under left-hand index of scale C.

Example 7. Division $\frac{25}{4}$ Answer 6.25

Set left-hand index on scale C over 25 on scale D, move cursor to 4 on Reciprocal scale, and read result, 6.25, where cursor line cuts scale C.

Position of the decimal point

The quickest way to determine the position of the decimal point is to make a quick mental calculation. This has proved to be more effective than any set rules.

Example. 33×600

Answer is in the region of 20,000, and not 2,000 or 2,000,000.

SQUARE, SQUARE ROOT, CUBE, AND CUBE ROOT

Example 8. 2.2^2 Answer=4.84

Put cursor on 2.2 on scale D, and read result on scale A. The answer lies between 4.8 and 4.85.

Example 9. $\sqrt{15}$ Answer=3.87

Put cursor line on 15 on scale A, and read result on scale D. The answer lies between 3.86 and 3.88.

Example 10. 3.1^3 Answer=29.79

Put cursor line on 3.1 on scale D, and read result

on Cube scale. The answer lies between 29.5 and 30.

Example 11. $3\sqrt{79}$ Answer=4.28

Put cursor line on 79 on Cube scale, and read result on scale D. The answer lies between 4.25 and 4.3.

MANTISSAE SCALE

Example 12. Find logarithm of 2.

Put cursor on 2 on scale D and read on Mantissae scale .3 to .302 as result.

NOTE.—On scale A and B the position 78.4 represents $\frac{\pi}{4}$

