

THE WORMAN DENTON
EXECUTIVE SLIDE RULE
(IMPROVED) V.P.3 MODEL

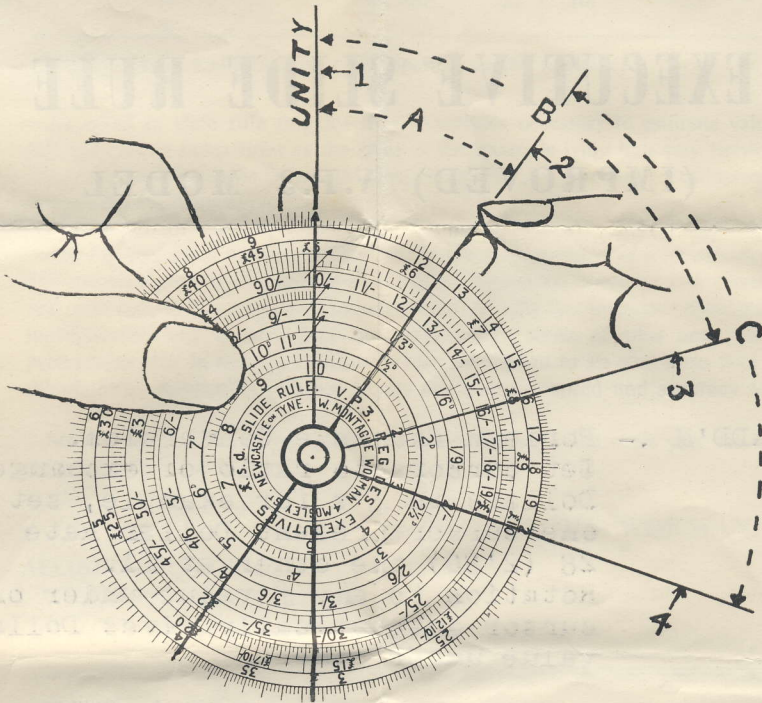
ADD'M :- Foreign Exchange Conversion.
Set cursors to ratio of exchange.
Dollars to £'s for example, set
one cursor present Dollar Rate
28 (2'80) the other at £1.
Rotation to any £ value under one
cursor automatically gives Dollar
value under other.

Interest:- Set as for % & X by
period.

INSTRUCTIONS

The V.P.3 is based on the properties of logarithms by which multiplication and division may be performed by addition and subtraction respectively.

The following diagram illustrates the new V.P.3 action in performing this addition mechanically, the problem being $12/6 \times 16$.



Reference to Diagram :- The unity line is the Radial line (terminating in an arrow head) shown vertically. One cursor edge being set to this line (No. 1) the other cursor edge (line) being set to 12/6 value (No. 2). No. 1 being retained on unity by finger and thumb pressure. The next action is to rotate both cursors together by finger tip action until No. 1 cursor lies over value 16 (No. 3), when the product £10 (No. 4) will be found on No. 2 cursor. This action moves No. 2 over the distance C which is equal in distance to B, and as A is already set A is added to B. Thus the angle between radial line No. 4 and unity is $A + B$.

To Divide. $£10 \div 16$. Settings would be on No. 4 and No. 3 radial lines value £10 and 16 respectively and the distance B is deducted by reverse rotation. No. 1 cursor thus being moved back to unity, leaving No. 2 cursor on radial line No. 2 which is the quotient 12/6.

EXAMPLES.

	Problem	Set No. 1 Cursor	Set No. 2 Cursor	Rotate both Moving	Read Answer
Multiplication	12/6 x 16 0.52 x 35 325 x 228	Unity 52 325	12/6 Unity Unity	No. 1 to 16 No. 2 to 35 No. 2 to 228	£10 1.82 74100
Division	£33/5/0 ÷ 140	£33/5/0	140	No. 2 to unity	4/9d.
Percentages	4½% of 18/4d. 12½% on 22/- 15% off 6/8d.	Unity do. 6/8d.	18/4d. 22/- Unity	No. 1 to 45 No. 1 to 111.5 No. 2 to 85	10d. 24/9d. 5/8d.
Proportion	If a gross costs £12/12/0 what is the cost of 100.	144	£12/12/0	No. 1 to Unity	£8/15/0
Circumference of Circles	What is the circumference of circles 5" dia	π 3.1416	Unity	No. 2 to 5"	15.7 + (15.708)

Notes :- The (outer) metric scale also represents shillings (and multiples of shillings), thus £12/12/- may be set at 252. The unity line is also 1. 10. 100. 1,000 etc. A given value is 100% thus 12½ on 22/- ; regard 22/- as 100% and add 12½% which is 112.5 (see above) also 100% minus 15% = 85% or less 15% (see above). For diameter of circles set as for circumference read opposite cursor.

The Scale—these should be examined fully. (*Get to know them.*)

£.s.d. Scale base = 1/-.

Position	Type	Graduations have following values	
No. 1 Outer	Metric	Main divisions	1—2, 2—4, 4—10
		Sub do.	10 5 2
No. 2 S. Ring	£5—£50	Main do.	All
		Sub. do.	10/-
No. 3 do.	10/-—£5	Main do.	10/-£1 : £1-£2 £2-£4 £4-£5
		Sub. do.	2d. 3d. 6d. 1/-
No. 4 do.	1/-—10/-	Main do.	All
		Sub. do.	1d.
No. 5 do.	(1.2d.) 1½d.—1/-	Main do.	All
		Sub. do.	½d.
No. 6 Log equally Divided		Main do.	All
		Sub. do.	10.

Note: Above £50 add cypher "O" read £6 as £60 : £600, etc.

As usual in slide rule practice it is sometimes necessary to estimate values falling between index lines as the value 5 for example lying half way between 123 and 124 indicates the value 1235. Practice will enable you to effect estimations with surprising accuracy.

The foregoing is a necessarily brief illustration of operation of the instrument. The examples are of simple character permitting mental check as you proceed and serve only to acquaint you with manipulation in the first instance. Continued multiplication and division may be performed or series of plus and minus percentages etc. In fact the instrument may be applied to an enormous field of calculations. Remember practice begets manipulative speed and accuracy too.

Make a habit of using your V.P.3 on every occasion, the more you use it—the greater its value becomes.

W. MONTAGUE WORMAN.

ALLIANCE BUILDINGS,
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The "Denton Major" is a high grade desk instrument capable of performing involution—evolution in addition to solutions in sterling, etc. Details upon request.

The V.P.2 is a similar instrument to V.P.3 but with a double circle per scale arrangement.