$$A_n = A_{n-2} + A_{n-1}$$

$$\frac{A_n}{A_{n-1}} \text{ converges on } 1.618033989\cdots$$

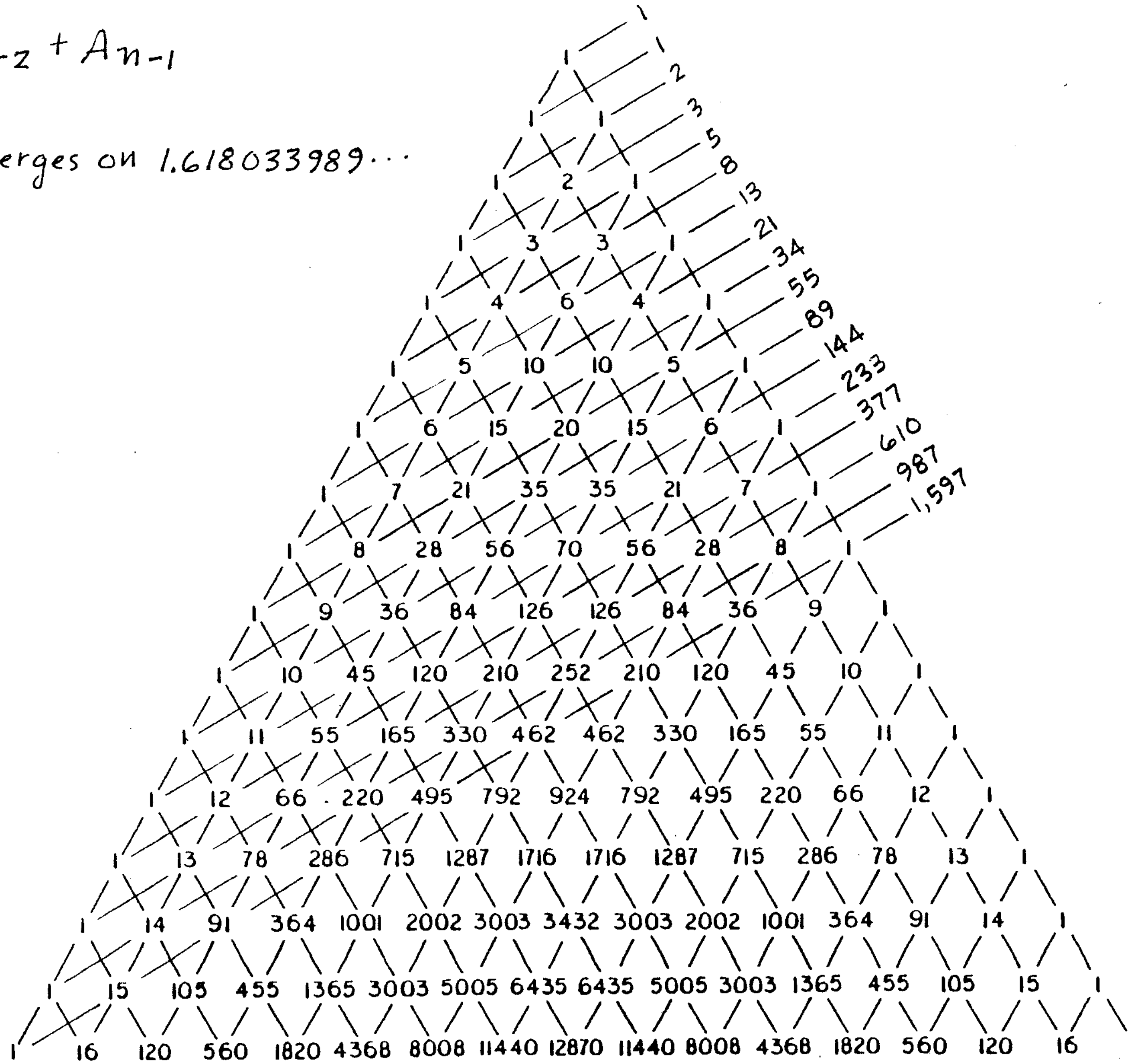

Fig 1

The Scales of Mt. Meru

Ref: "On the use of series in Hindu Mathematics"
A.N. Sing, Osiris Vol I, pp 623-624, 1936
"Recurrent Sequences and Pascal's Triangle"
Thomas M. Green, Mathematic Magazine Vol. 41, 1968

Meru 1 1.618 03398875..

Log₂- .694 241913631..

<u>1/x Pattern</u>

		.694
←	1	.440
→	2	.270
←	3	.696
→	1	.436
←	2	.289
→	3	.448
←	2	.228
→	4	.373
←	2	.676
→	1	.478
←	?, (2	.088)
	? (11	. 357)

0/1

<u>Zig-Zag Pattern</u>

1/1 →
1/2 →
2/3 →
3/4 →
5/7
7/10 .0057
9/13 .0019
→ 16/23 .0014
25/36 .0002
34/49 →
59/85
84/121 .00002
109/157
193/278 .0000027
277/399 →
470/677
663/955
856/1233 .0000002
1049/1511
1905/2744 .00000007
2761/3977 .000000023
→ $\frac{4666}{6721}$ .000000015
$\frac{7427}{10,698}$ .000000001
$\frac{10188}{14675}$ → 11 places ?

$$B_n = B_{n-3} + B_{n-1}$$

$\dfrac{B_n}{B_{n-1}}$ converges on $1.465571232\cdots$

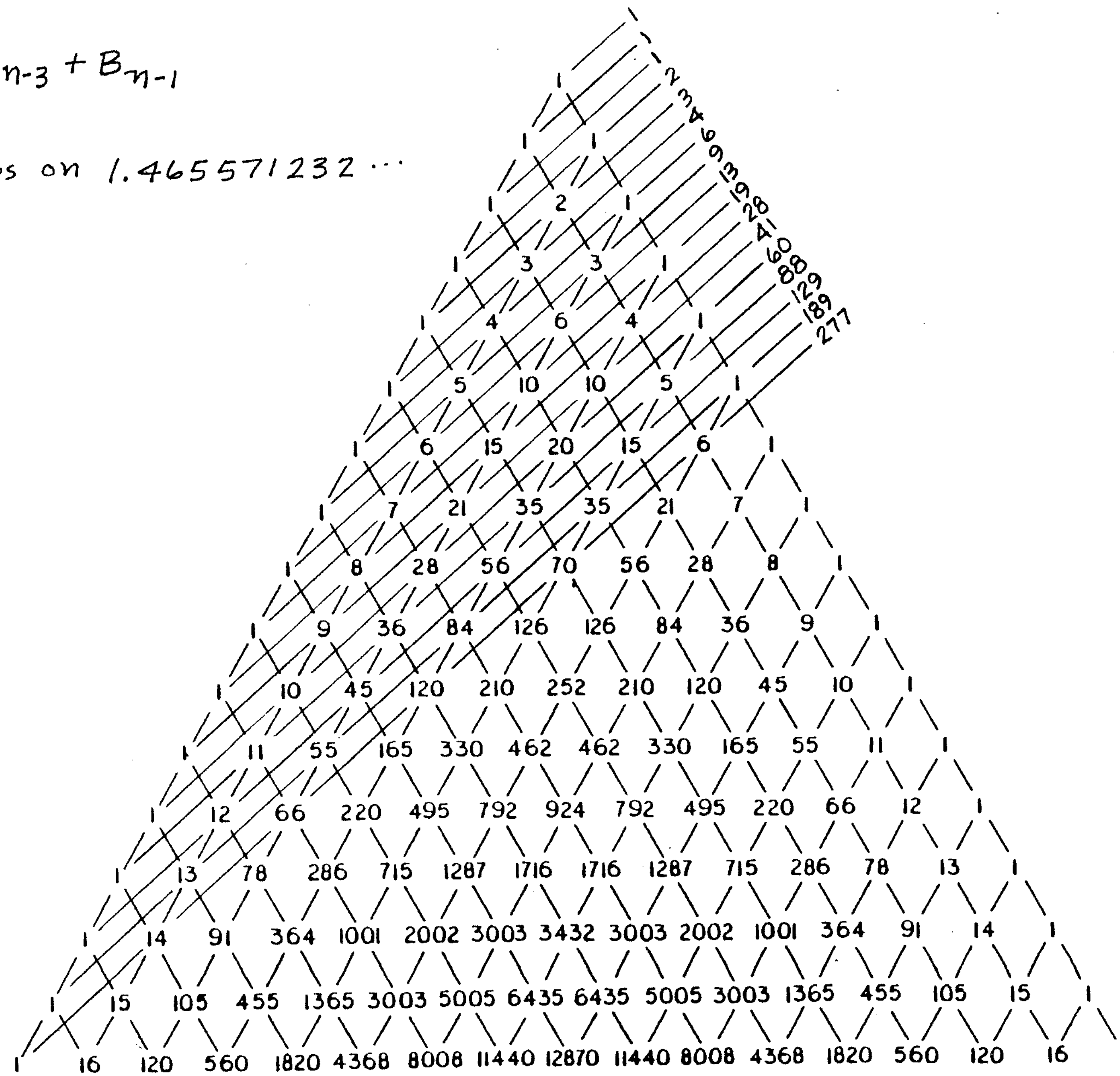

Fig. 2

Meru 2 , 1.4655712318 8...

Log$_2$ .551463089748...

1/N Pattern			Zig-Zag Pattern
		.551	0/1 1/1
←	1	.813	1/2
→	1	.229	2/3
←	4	.357	3/5 4/7
→	2	.794	5/9 .004
←	1	.258	6/11
→	3	.865	11/20
←	1	.155	16/29 .0002
→	6	.423	27/49
←	2	.361	43/78
→	2	.766	59/107
?(	1	.305	75/136 .0000075
?	3	.274)	134/243

209/379

284/515

359/651

434/787

509/923

.00000047

584/1059

1093/1982   .000000079

1602/2905

2695/4887   .000000024

3788/6869   .000000005

4JAN01·EW

$$C_n = C_{n-3} + C_{n-2}$$

$\dfrac{C_n}{C_{n-1}}$ converges on 1.324717957

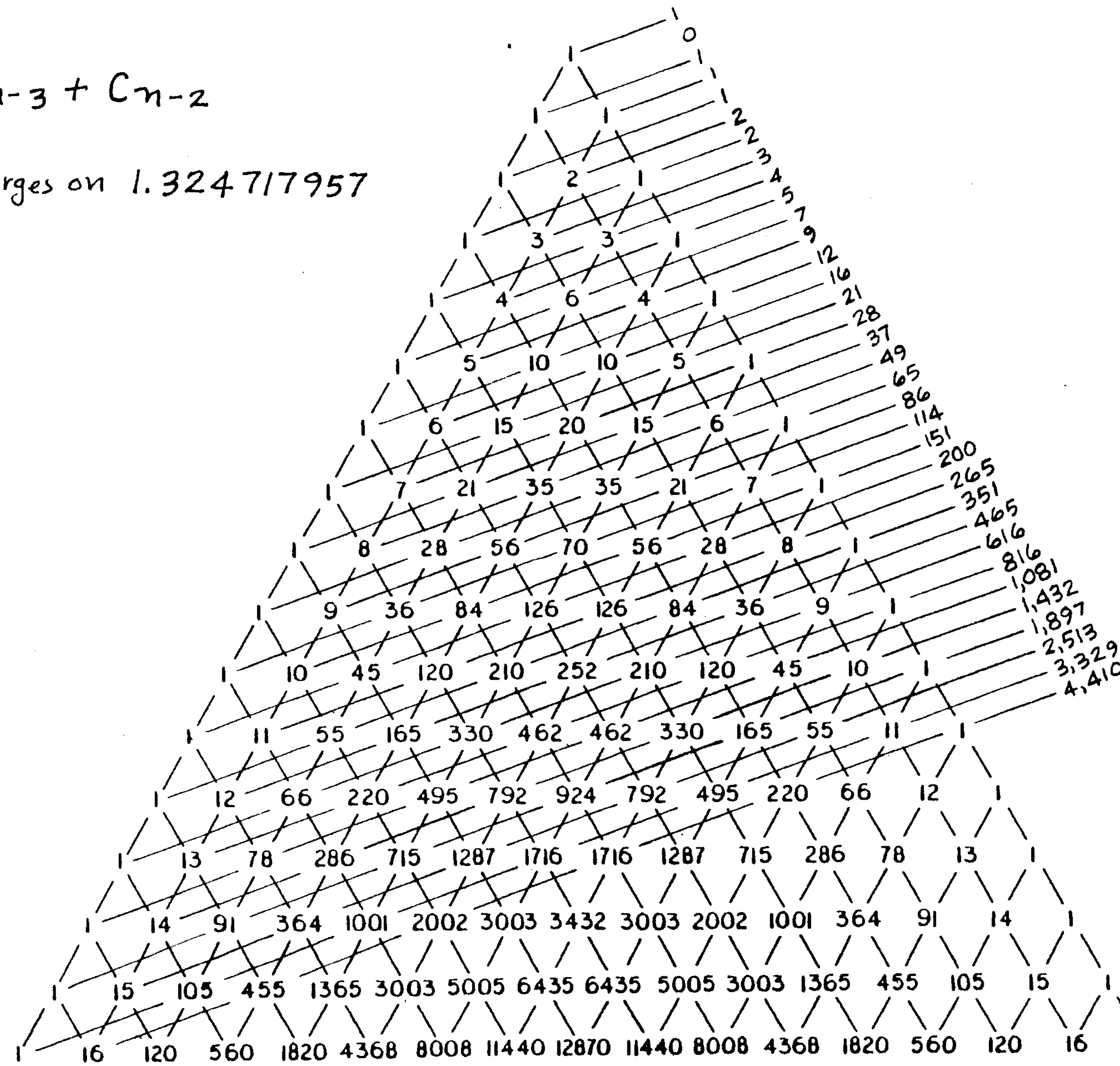

Fig. 3

Meru 3 , 1.32471795725 (also Meru 6)

$\log_2$ .405685231382..

Zig-Zag Pattern

1/x Pattern		
		.405
←	2	.464
→	2	.150
←	6	.635
→	1	.572
←	1	.745
→	1	.341
←	2	.929
→	1	.075
←	13	.275
? (	3	.625
?	1	.598)

0/1

1/1

1/2

1/3

2/5

3/7 −.005

5/12

7/17

9/22

11/27

13/32 .00056

15/37 −.0002

28/69 .0001

(2×53) 43/106 .00002

71/175

114/281

(9×43) 157/387 −.000000477

271/668

(13 places)

(83×64) 2155/5312 .000000010

$$D_n = D_{n-4} + D_{n-1}$$

$\dfrac{D_n}{D_{n-1}}$ converges on 1.380277569

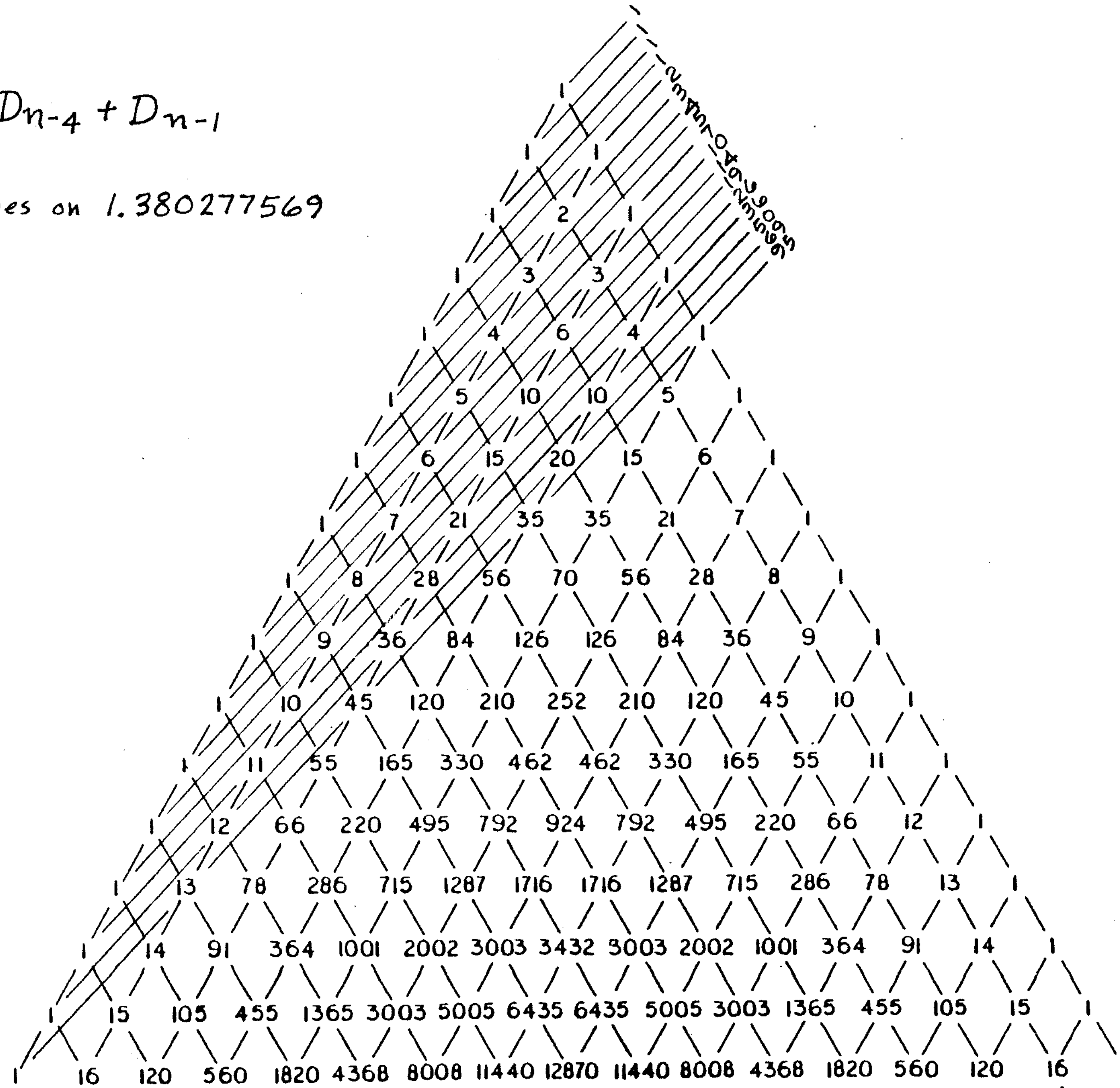

Fig. 4

(Meru 4.) 1.380277569

Log$_2$ .464958417209...

	$1/x$	
		.464
←	2	.150
→	6	.634
←	1	.576
→	1	.735
←	1	.360
→	2	.774
←	1	.290
→	3	.441
	2	.267
	3	.737
	1	.356
	2	.806

$\frac{0}{1}$ $\qquad\qquad\qquad$ $\frac{1}{1}$

$\frac{1}{2}$ ← $\frac{1}{1}$

$1/3$ → $2/5$ $3/7$ $4/9$ $5/11$ $6/13$ $7/15$

$13/28$ ← $7/15$

$13/28$ → $20/43$

$33/71$ ← $20/43$

$33/71$ → $53/114$ → $73/157$

$126/271$ ← $73/157$

$126/271$ → $\frac{199}{428}$ → $272/585$ $345/742$

$$E_n = E_{n-4} + E_{n-3}$$

$\dfrac{E_n}{E_{n-1}}$ converges on 1.220744085

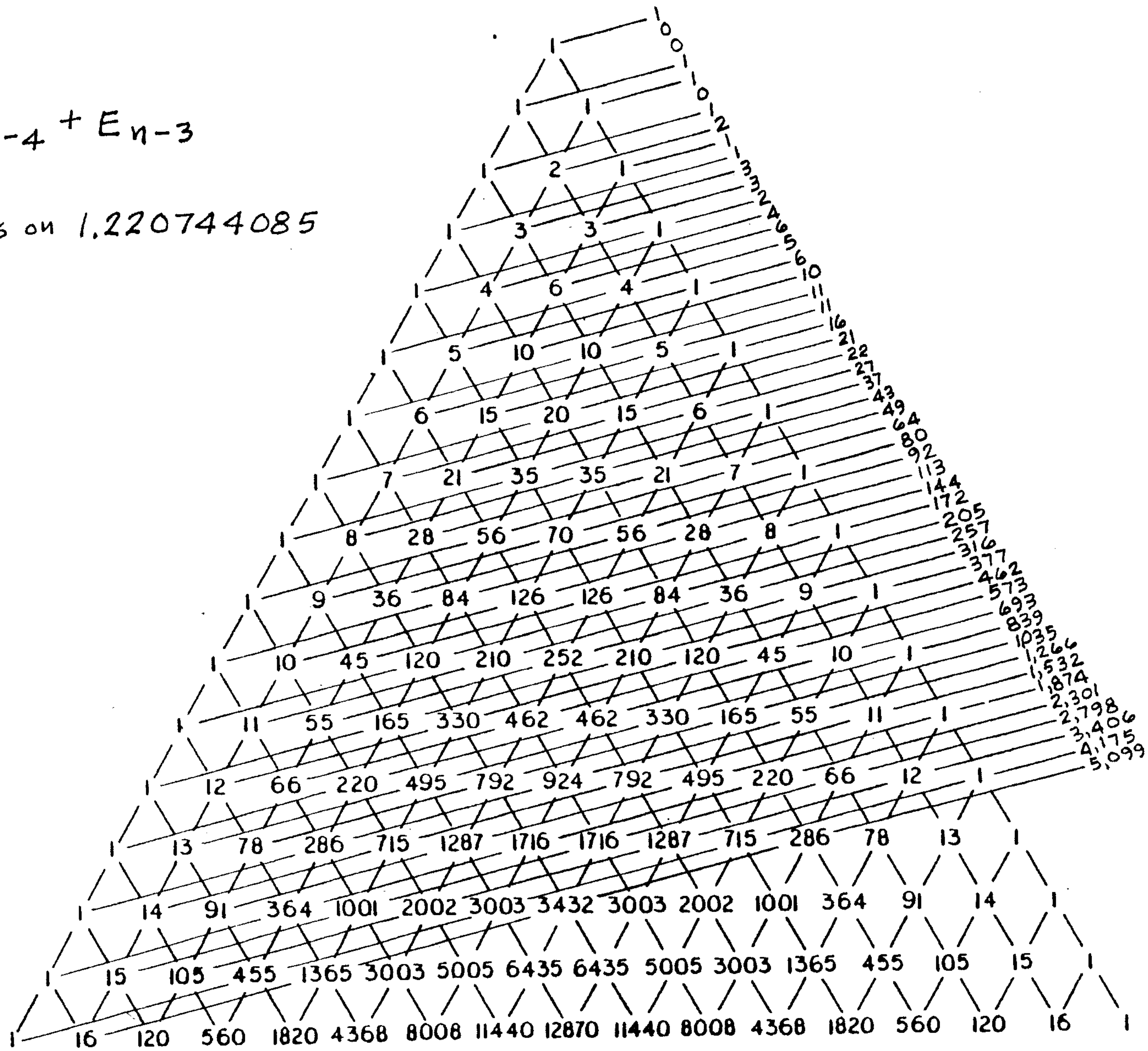

Fig. 5

Meru 5, 1.22074408461…

$\log_2 = .287760787088\ldots$

1/n Pattern

	.287
← 3	.475
→ 2	.104
← 9	.543
→ 1	.839
← 1	.191
5	.227
4	.396
2	.525
1	.904
1	.105
(9	.449)

0/1 1/1

1/2

1/3

1/4

2/7 .002 !

3/10

5/17

7/24

9/31

11/38

13/45

15/52

17/59

19/66 .0001

21/73 .00009

40/139 .000009

61/212

5 places etc

1 JAN 01 · EW

$$F_n = F_{n-5} + F_{n-1}$$

$\frac{F_n}{F_{n-1}}$ converges on 1.324717957

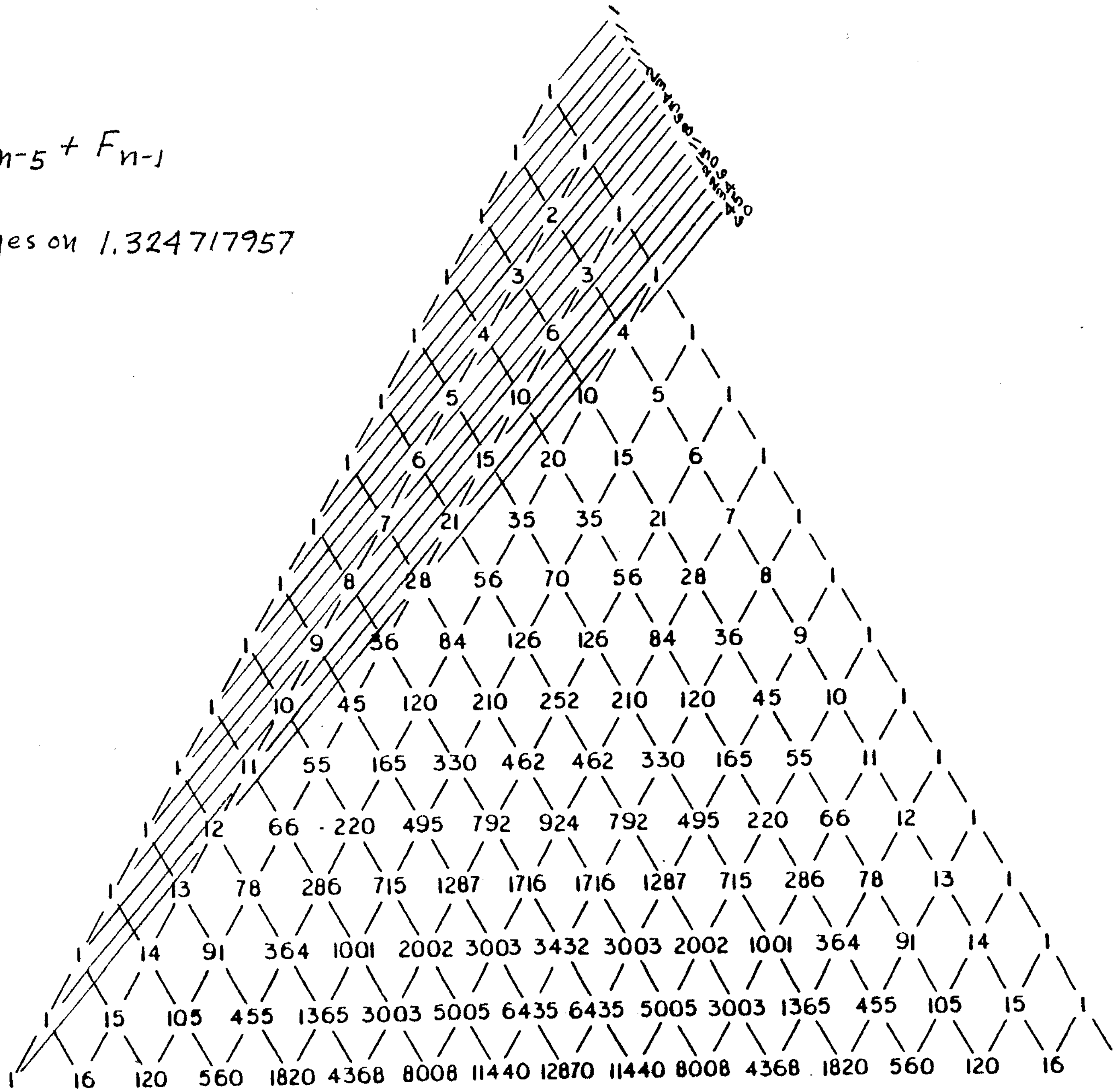

Fig. 6

Meru 3, 1.32471795725 (also Meru 6)

Log 2 · .405685231382..

1/x Pattern

		.405
←	2	.464
→	2	.150
←	6	.635
→	1	.572
←	1	.745
→	1	.341
←	2	.929
→	1	.075
←	13	.275
? (	3	.625
?	1	.598)

Zig-Zag Pattern

0/1

1/1

1/2

1/3

2/5

3/7 −.005

5/12

7/17

9/22

11/27

13/32 .00056

15/37 −.0002

28/69 .0001

(2×53) 43/106 .00002

71/175

114/281

(9×43) 157/387 −.000000477

271/668

(13 places)

(83×64) 2155/5312 .000000010

$$G_n = G_{n-5} + G_{n-2}$$

$\frac{G_n}{G_{n-1}}$ converges on 1,236505703

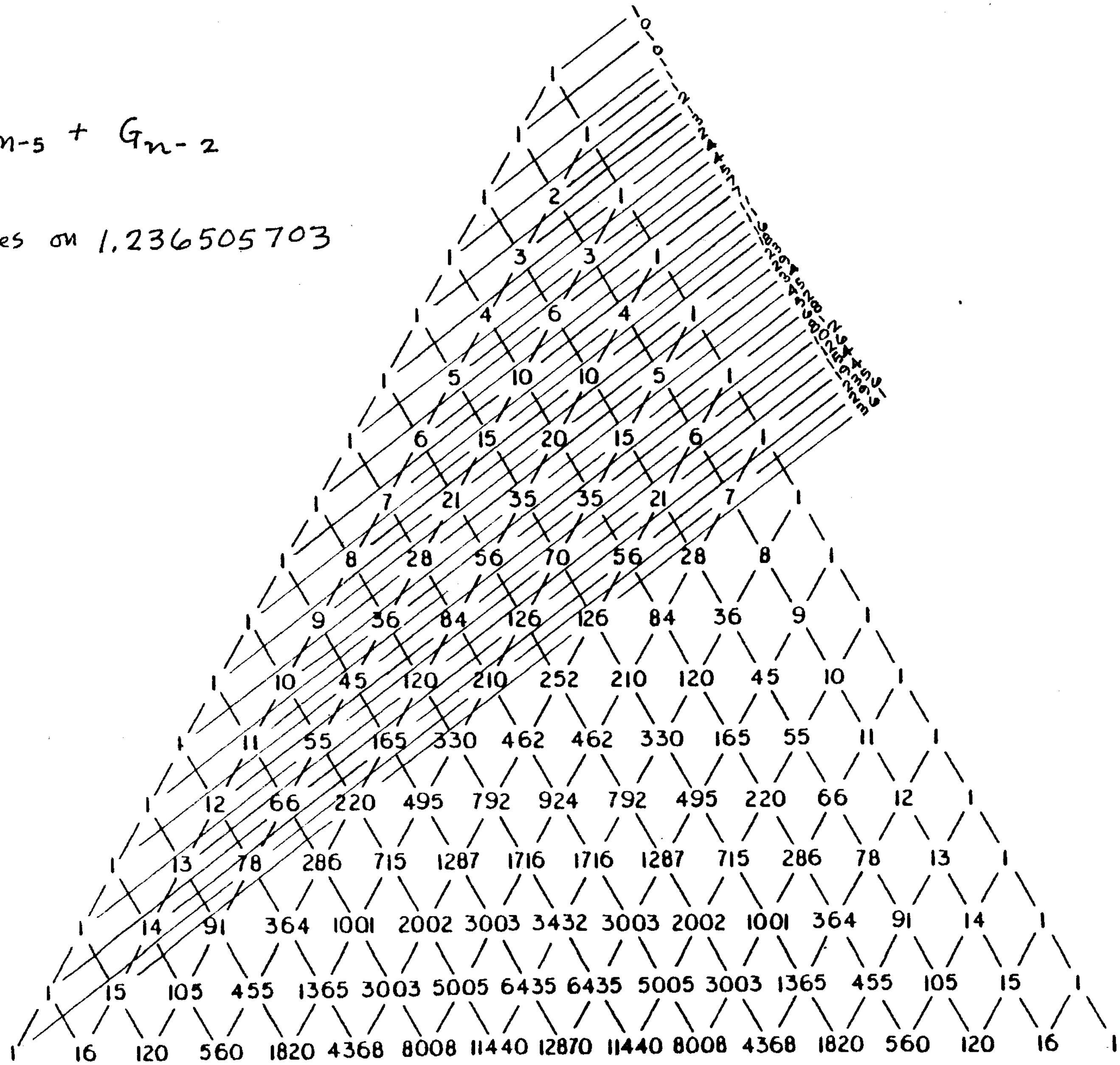

Fig. 7

Meru 7 1.23650570339...

$\log_2$ .306268894183...

	$1/x$	
		.306
←	3	.265
→	3	.772
←	1	.295
→	3	.387
←	2	.578
→	1	.727
←	1	.373
→	2	.676
←	1	.479
→	2	.086
	(11	.509)?

0/1

1/1

1/2

1/3

1/4 → 2/7

3/10

4/13 .0014

7/23 → 11/36

15/49 .0001

19/62

34/111 .00003

49/166 .00001

→ 83/271

132/431 → 215/702 .000001

298/973

.000000376

513/1675 → 811/2648 .000000012

1324/4323

11 pl

?

$$H_n = H_{n-5} + H_{n-3}$$

$\dfrac{H_n}{H_{n-1}}$ converges on 1.193859111

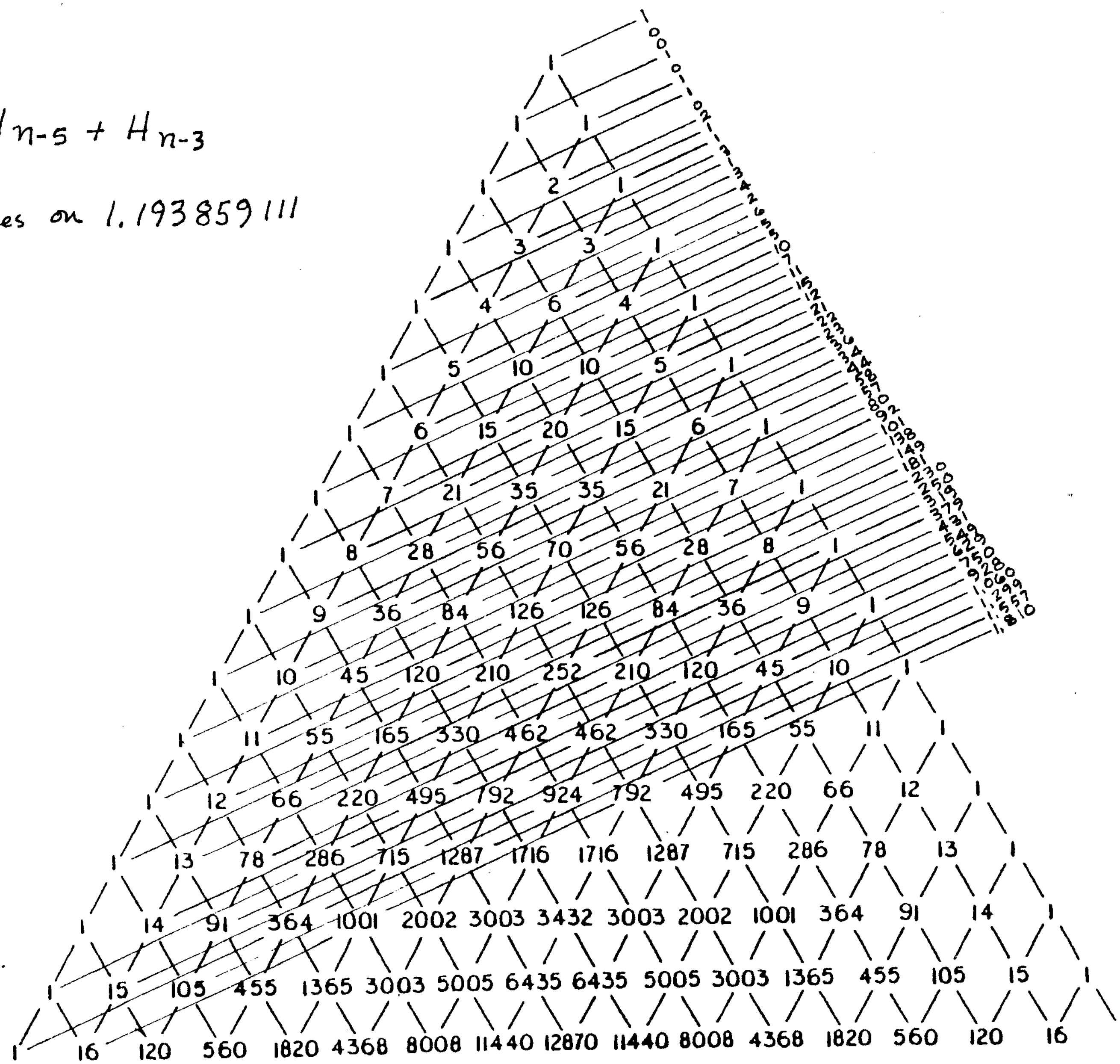

Fig. 8

Meru 8, 1.19385911132..

Log_2 .255632592555..

1/n	Pattern
← 3	.911
→ 1	.096
← 10	.346
→ 2	.889
← 1	.124
→ 8	.013
← 73	.265
3	.765

Zig-zag

$\frac{0}{1}$ $\frac{1}{1}$ $\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$ $\frac{2}{7}$ $\frac{3}{11}$ $\frac{4}{15}$ $\frac{5}{19}$ $\frac{6}{23}$ $\frac{7}{27}$ $\frac{8}{31}$ $\frac{9}{35}$ $\frac{10}{39}$ $\frac{11}{43}$ $\frac{12}{47}$

.00018

$\frac{23}{90}$

−.000077

$\frac{34}{133}$ (7×19) .0000065

$\frac{57}{223}$

(8 places)

$\frac{295}{1154}$ $\frac{329}{1287}$ −.000000010

73 places

$\frac{21569}{84375}$ 3.7000000E-11

$\frac{21864}{85529}$

$$I_n = I_{n-5} + I_{n-4}$$

$\frac{I_n}{I_{n-1}}$ converges on 1.167303978

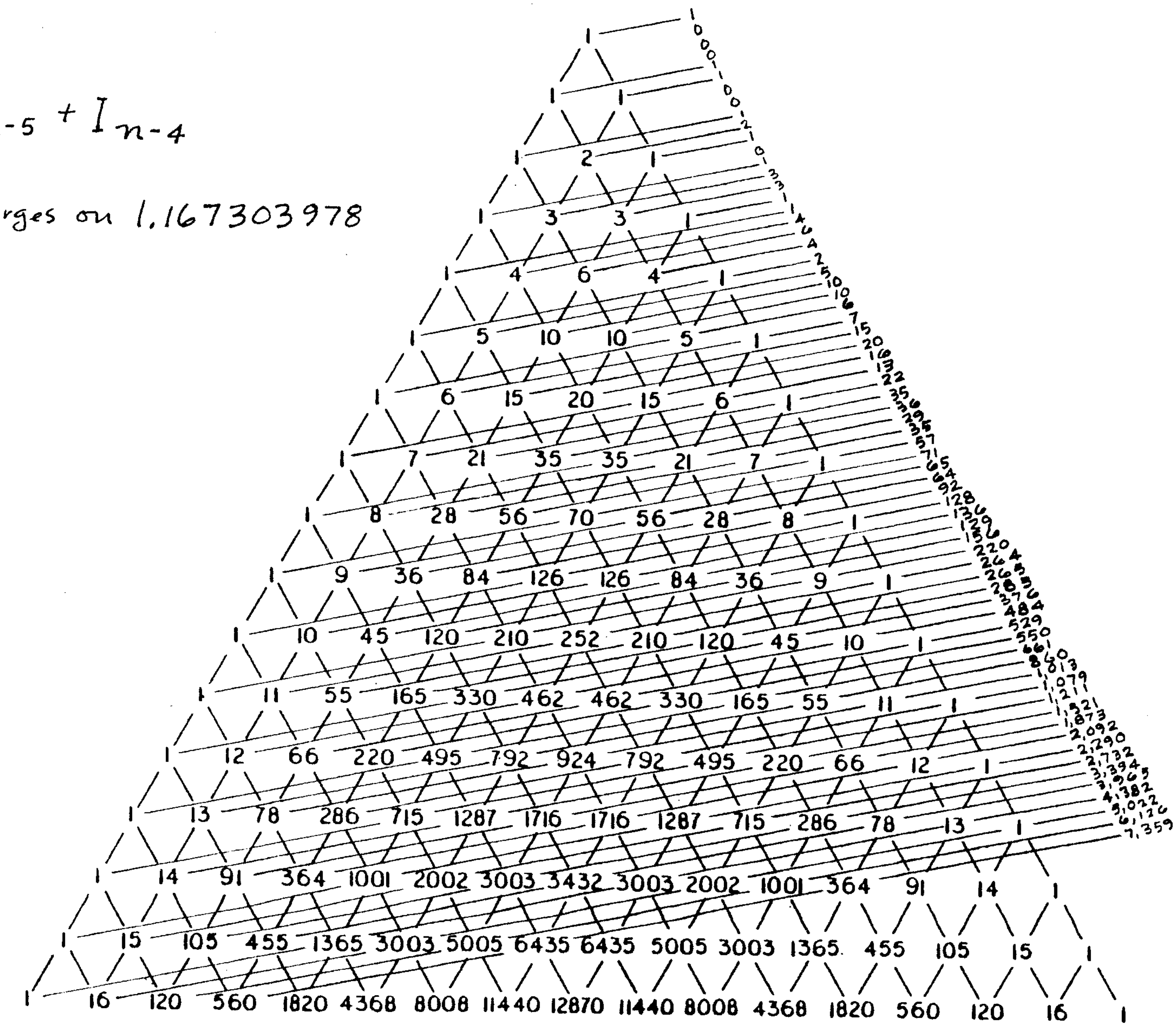

Fig. 9

Meru 9 = 1.16730397826..

$\log_2$ > .223180302967..

1/x Pattern

		.223
←	4	.480
→	2	.080
←	12	.441
→	2	.265
	3	.766
	1	.305
	3	.276
	3	.613
	1	.631

Zig-Zag Pattern

0/1

1/1 → 1/2 → 1/3 → 1/4 → 1/5 → 2/9 → 3/13 → 5/22

.000958

7/31

9/40 ! Surupan Melog per Kunst

11/49

13/58

15/67

17/76

19/85

21/94

23/103

25/112

27/121 → 52/233 → 77/345