Ms 5107/4: Eötvös L. negyes jegyzetei

görbületi sugár $\frac{1}{\rho} = -\frac{1}{g}\frac{\partial^2 U}{\partial s^2}$

görbület különbség $\frac{1}{\rho_1} - \frac{1}{\rho_2} = -\frac{1}{g}\left(\frac{\partial^2 U}{\partial x^2} - \frac{\partial^2 U}{\partial y^2}\right)\frac{1}{\cos 2\alpha}$.

görb. összeg. $\frac{1}{\rho_1} + \frac{1}{\rho_2} = -\frac{1}{g}\left(\frac{\partial^2 U}{\partial x^2} + \frac{\partial^2 U}{\partial y^2}\right)$

főirány szöge $\operatorname{tg} 2\alpha = \frac{2\frac{\partial^2 U}{\partial x \partial y}}{\frac{\partial^2 U}{\partial x^2} - \frac{\partial^2 U}{\partial y^2}}$

Vízszintes erő iránya $\cos \beta = \frac{\frac{\partial^2 U}{\partial x \partial z}}{\sqrt{\left(\frac{\partial^2 U}{\partial x \partial z}\right)^2 + \left(\frac{\partial^2 U}{\partial y \partial z}\right)^2}}$

görbülete $R = \frac{g}{\sqrt{\left(\frac{\partial^2 U}{\partial x \partial z}\right)^2 + \left(\frac{\partial^2 U}{\partial y \partial z}\right)^2}}$

Változás x irányban =

y irányban

eredő nem = $\frac{1}{\rho_1} + \frac{1}{\rho_2} =$

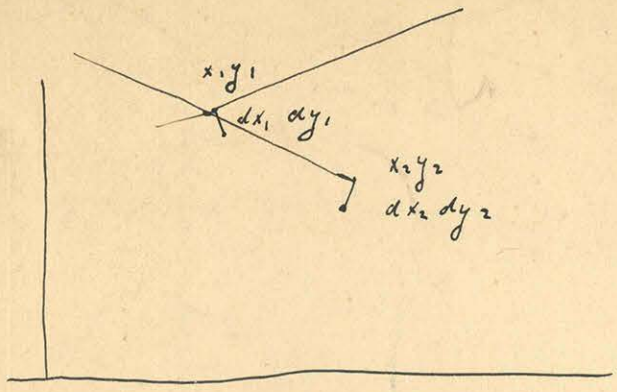
tört irány $\frac{1}{\rho_1} - \frac{1}{\rho_2} = \frac{1}{\rho_1} - \frac{1}{\rho_2}$

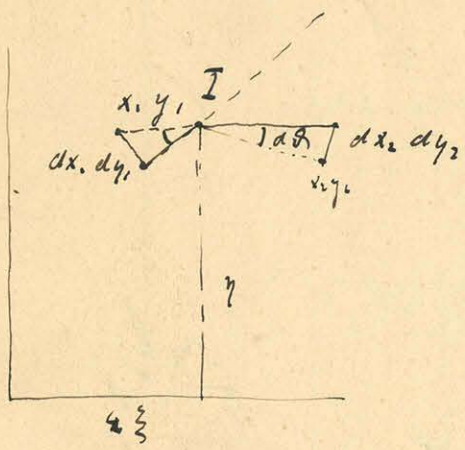
változás lekvő =

2

1

Ms 5107 /4





$$ds \quad \rho_1 d\vartheta = \sqrt{dx_1^2 + dy_1^2}$$
$$\rho_2 d\vartheta = \sqrt{dx_2^2 + dy_1^2}$$

$$y = -\frac{dx_1}{dy_1} x + c$$
$$y = -\frac{dx_2}{dy_2} + c'$$

$$y - y_1 = -\frac{dx_1}{dy_1}(x - x_1)$$
$$y - y_2 = -\frac{dx_2}{dy_2}(x - x_1)$$

$$y_1 - y_2 = \left(\frac{dx_1}{dy_1} - \frac{dx_2}{dy_2}\right)\xi - x_1 \frac{dx_1}{dy_1} + x_2 \frac{dx_2}{dy_2}$$

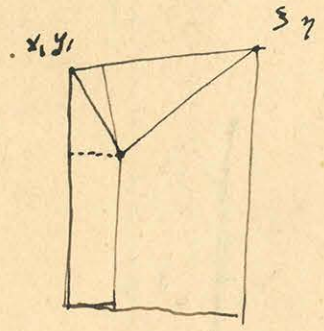
$$y_1 - y_2 = -(x_1 - x_2)\frac{dx_1 - dx_2}{dy_1 - dy_2}$$

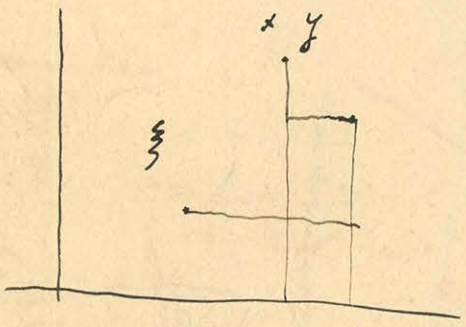
ξ, η

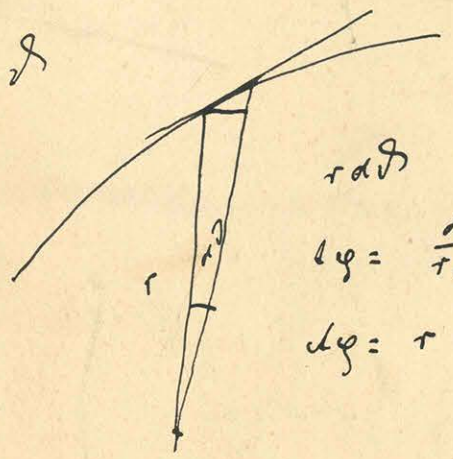
$x_1 \quad y_1$

$x_1 + dx_1 \quad y_1 + dy_1$

$\xi = x_1 +$





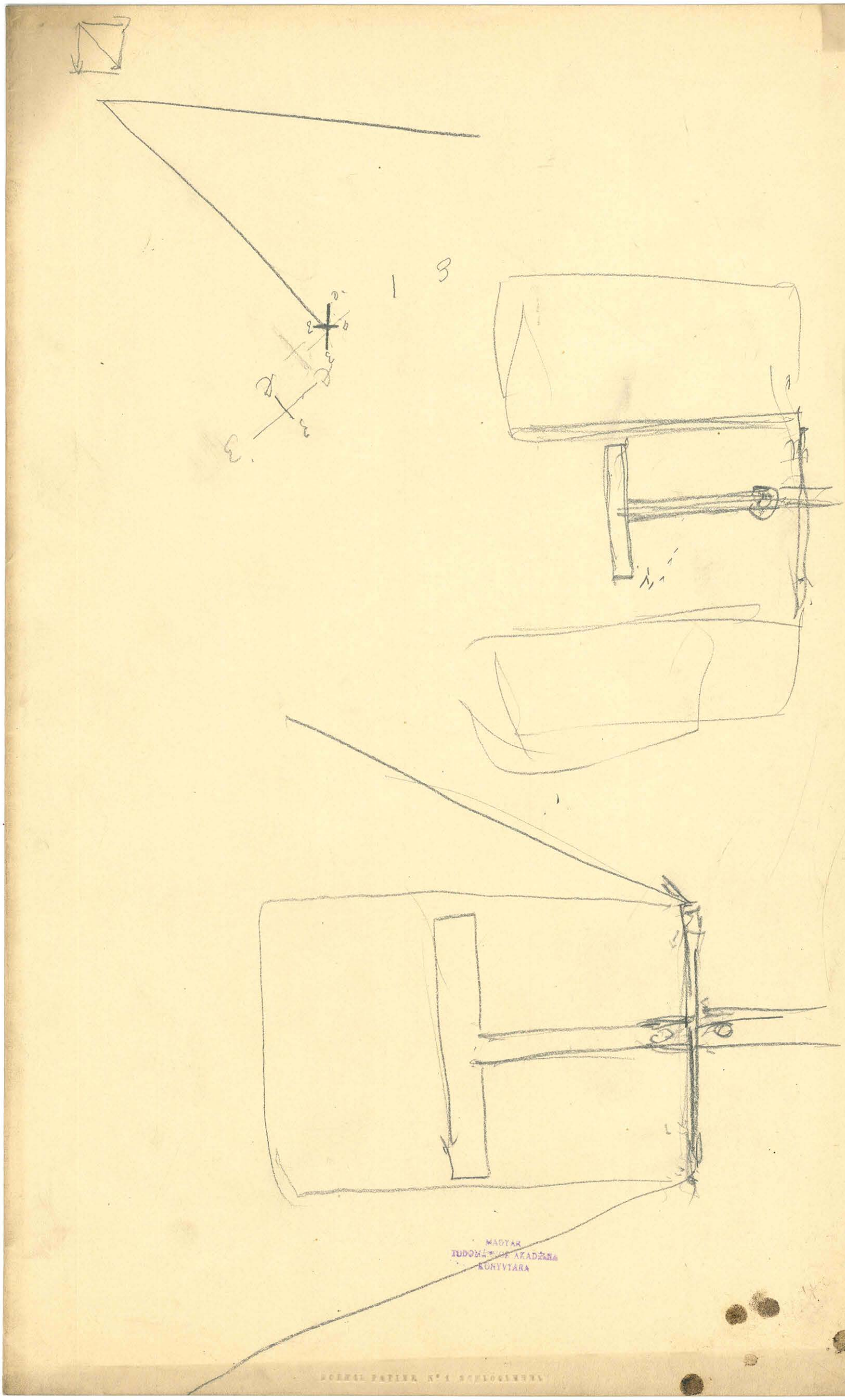


$r\,d\vartheta \quad dr$

$d\varphi = \frac{dr}{r\,d\vartheta}$

$d\varphi = r\frac{d\vartheta}{dr}$

$x_1 + dx_1 - a = x_1 - a - (y_1 - b)\sin\vartheta$



$-30x + 600 - 200 - 2y^2 - 2x^2$

$-15x + 400 - y^2 - x^2$

$x^2 + y^2 + 15x = 400$

$x^2 + y^2 + \alpha^2 + 2\alpha x + 15x = 400$

$x = 0$ vz.

$X = -\frac{r^2}{r^5}$ $\qquad r^2 = y^2 + 100$

$Y = -\frac{60y}{r^5}$

$Z = \frac{600 - 2r^2}{r^5}$

$\frac{0,000000}{100000}$ 300

$\frac{M}{r^2} = 300$

$\frac{4}{50}$

4

40

$-30x + 600 - 2x^2 - 2y^2 - 200 = 0$

$x^2 + y^2 + 15x = 200$

$x = -\frac{15}{2} \pm \sqrt{\frac{225}{4} + 200 - y^2}$

$y^2 + x^2 + \alpha^2 + 2\alpha x + 15x = 200 + \alpha^2 - \alpha^2$

$+15x$

$\alpha = -\frac{15}{2}$

$200 - \frac{225}{4} + \frac{225}{4}$

$x^2 y^2 = 200 - \frac{225}{4}$

$x^2 + px + q = 0$

$x^2 + px + \frac{p^2}{4} = \frac{p^2}{4} - q$

$-30x + 600 - 2x^2 - 200 - 2y^2 = 0$

$y^2 = -x^2 - 15x + 200$

$x = 10 \quad y^2 = 300 - 150 = 150$

$x = 20 \quad y^2 = -$

~~$-2x^2$ $60x$ -100~~ $= y^2$

100 80 120 20

$x = 0$

$y = 200 \quad 141$

15
7,5
7,5
10
112,5

32
16 $-7{,}5$

$-56{,}25$
$-112{,}5$
168,75

212,5
$-56{,}25$
256,25

16

3

16,1

0,7
0,4

$\frac{4100}{2100}$

$\frac{0{,}398}{0{,}75}$

$\frac{0{,}4}{0{,}75}$ $\frac{2150}{4200}$

c = 0,6

$\sqrt{b^2+c^2} = 3,05941$

$\sqrt{a^2+b^2+c^2} = 3,21869$

0,255273
0,507680
0,747593 − 1

29° 12' 55"

0,5061455
34907
2666
0,5099028
~~0,413397~~

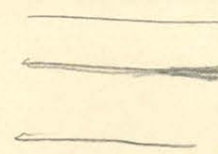
0,500000 0,477121
0,563411 0,581915
1,063411
1,059036 704
0,004375 0,013125

0,133509
0,066720
0,782431 0,778151 − 1
0,849201 0,793699
0,571850
0,277351 0,166410
0,179536

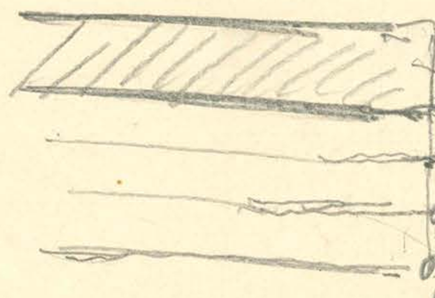
0,923300

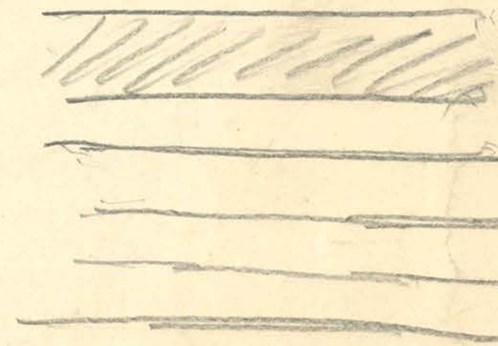
c			
0,1	0,328489		
0,2	0,517877	0,139696	
0,3	0,657573	0,108499	0,031197
0,4	0,766072	0,086684	0,021815
0,5	0,852756	0,070544	0,016140
0,6	0,923300		

Cmtkg



Cmt.

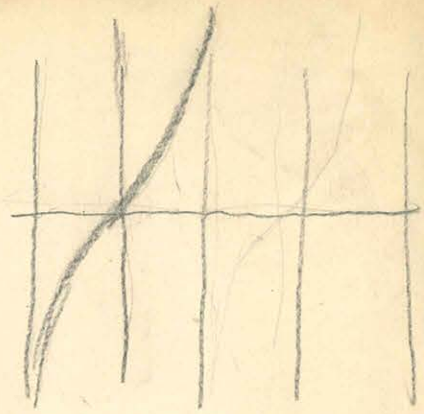




IV

/ 28 / 46 / 1.6
180

12,6
1 6
756
126
2.016



I

144
16
864
144
23,0 13
92
26
117
1.96

III

i ρ sen ϑ = −12,9
i ρ cos ϑ = +4'5

tg ϑ = − 13'9 / 4'5   ϑ = −70°.45
+110°

~~ρ cos(ϑ+ϑ')~~

ρ sen ϑ' = + 3,9
cos ϑ' = 36,5

tg ϑ' = 3,9 / 36,5   + ϑ' 5°
− 175

−72°   +108

II

~~45~~°   34°

− 3,09 = −12,9 / 4'5

+15,5 / 22,6 = + 0,

39 / 56,45

626 / 1550 / 0,686
1256
1940

$$2\int\left[\frac{i_0 h}{h^2+(y-b)^2}+\frac{c(y-b)h}{h^2+(y-b)^2}\right]dy.$$

$2\pi i^0$ 0,2

$\pi i =$

$i = \frac{1}{50}.$

$$2\int\left[+\frac{2y i_0 h}{(h^2+(y-b)^2)^2}-\frac{ch}{h^2+y^2}+\frac{2chy^2}{(h^2+y^2)^2}\right)dy.$$

$$-\frac{ch}{h}\operatorname{arc\,tg}\frac{y}{h}-2ch\left(\frac{y}{2(h^2+y^2)}-\frac{1}{h}\operatorname{arc\,tg}\frac{y}{h}\right)$$

$$c\operatorname{arc\,tg}\frac{y}{h}-2ch\frac{y}{2(h^2+y^2)}$$

$c\pi$

$c\operatorname{arc\,tg}\frac{y}{h}.$

$$-\frac{i_0 h}{2(h^2+y^2)}$$

$2c\operatorname{arc\,tg}\frac{300}{1900}.$

$2c\operatorname{arc\,tg}.2$ 63½

$2c\operatorname{arc\,tg}6.$ 80,½

$\frac{1}{2}c.$

6

Ad Mágnesség

$$\frac{\partial X}{\partial \lambda} = \frac{\partial h}{\partial \lambda}\cos\delta + h\sin\delta\cos\varphi - h\sin\delta\frac{\partial\delta}{\partial\lambda} + \left(\ldots\right)$$

$$+\left(\frac{\partial h}{\partial \lambda}\sin\delta + h\cos\delta\frac{\partial\delta}{\partial\lambda}\right)\sin\varphi\,\delta\lambda - \left\{\frac{\partial h\,tg\,i}{\partial\lambda}\right\}\delta\varphi$$

$$\left(-\frac{\partial h}{\partial\varphi}\cos\delta + h\sin\delta\frac{\partial\delta}{\partial\lambda}\right)\sin\varphi\;\delta\lambda$$

$$-\frac{\partial}{\partial\varphi}(h\cos\delta\sin\varphi) - \frac{\partial}{\partial\varphi}(h\,tg\,i\cos\varphi)$$

$$-\frac{\partial h}{\partial\varphi}\cos\delta\sin\varphi + h\sin\delta\frac{\partial\delta}{\partial\varphi}\sin\varphi + h\cos\delta\cos\varphi - \frac{\partial h}{\partial\varphi}tg\,i\cos\varphi - \frac{h}{\cos^2 i}\frac{\partial\varphi}{\partial i}\cos\varphi$$

$$\frac{\cos\varphi}{\cos^2 i} \quad + h\,tg\,i\sin\varphi.$$

$$\frac{\sin i}{\cos i} \qquad \frac{\cos i}{\cos i} + \frac{\sin^2 i}{\cos^2 i} \qquad 1 + \frac{\sin^2 i}{\cos^2 i}$$

$$-\cos\delta\cos\varphi - \frac{\cos\varphi}{\cos^2 i} + tg\,i\sin\varphi$$

$$\frac{\partial}{\partial\lambda}$$

$$\frac{\partial}{\partial\lambda}(h\sin\delta\sin\varphi)\delta\lambda - \frac{\partial}{\partial\lambda}(h\,tg\,i)\,\delta\varphi = -\frac{\partial}{\partial\varphi}(h\cos\delta\sin\varphi)\delta\lambda - \frac{\partial}{\partial\varphi}(h\,tg\,i\cos\varphi)\,\delta\lambda.$$

$$\left(\frac{\partial h}{\partial\lambda}\sin\delta\sin\varphi + h\cos\delta\frac{\partial\delta}{\partial\lambda}\sin\varphi\right)\delta\lambda - \left(\frac{\partial h}{\partial\lambda}tg\,i + \frac{h}{\cos^2 i}\frac{\partial i}{\partial\lambda}\right)\delta\varphi = -\left(\frac{\partial h}{\partial\varphi}\cos\delta\sin\varphi - h\sin\delta\frac{\partial\delta}{\partial\varphi}\sin\varphi + h\cos\delta\cos\varphi\right)\delta\lambda$$

$$\left(-\frac{\partial h}{\partial\varphi}tg\,i\cos\varphi - \frac{h}{\cos^2 i}\frac{\partial i}{\partial\varphi} + h\,tg\,i\sin\varphi\right)\delta\lambda$$

$$-\frac{\partial h}{\partial\lambda}tg\,i + \frac{h}{\cos^2 i}\frac{\partial i}{\partial\lambda} = 0 \qquad //$$

$$\frac{\partial h}{\partial\lambda}\frac{\sin 2i}{2} + h\frac{\partial i}{\partial\lambda} = 0$$

$$\frac{\partial h}{\partial\lambda}tg\,\delta\,tg\,\varphi + h\frac{\partial\delta}{\partial\lambda}tg\,\varphi = -\frac{\partial h}{\partial\varphi}tg\,\varphi + h\frac{\partial\delta}{\partial\varphi}tg\,\delta\,tg\,\varphi - h - \frac{\partial h}{\partial\varphi}\frac{tg\,i}{\cos\delta} - \frac{h}{\cos^2 i}\frac{\partial i}{\partial\varphi}\frac{1}{\cos\delta\cos\varphi} + \frac{h\,tg\,i\,tg\,\varphi}{\cos\delta}$$

$$-\frac{\partial h}{\partial\varphi}tg\,\varphi \quad -\frac{\partial h}{\partial\varphi}\frac{tg\,i}{\cos\delta} - \frac{h}{\cos^2 i}\frac{\partial i}{\partial\varphi}\frac{1}{\cos\delta\cos\varphi} + h\,tg\,i\,tg\,\varphi$$

$$-h\frac{\partial i}{\partial\varphi}$$

$$C(\vartheta^2-\vartheta^1) = 2F\sin\alpha.$$

$$C\,d\vartheta = 2 \ldots =$$

$$\sin\alpha = \quad 2F\frac{h}{l}$$

$$C\frac{\partial\vartheta}{\partial h}\delta h = 2\frac{h}{l}\frac{\partial F}{\partial l}\frac{\partial l}{\partial h} + \frac{2F}{l} - 2\frac{Fh}{l^2}\frac{\partial l}{\partial h}$$

$$\frac{1}{2}C\frac{\partial\vartheta}{\partial h} = \left(\frac{h}{l}\frac{\partial F}{\partial l} - \frac{h}{l}\frac{F}{l}\right)\frac{\partial l}{\partial h} + \frac{F}{l}$$

$\frac{e}{R}.$ $\qquad \frac{e}{R^2}$

$I = \frac{V}{R}$

$$l^2 = h^2 + b^2$$

$$2\,l\frac{\partial l}{\partial h} = h$$

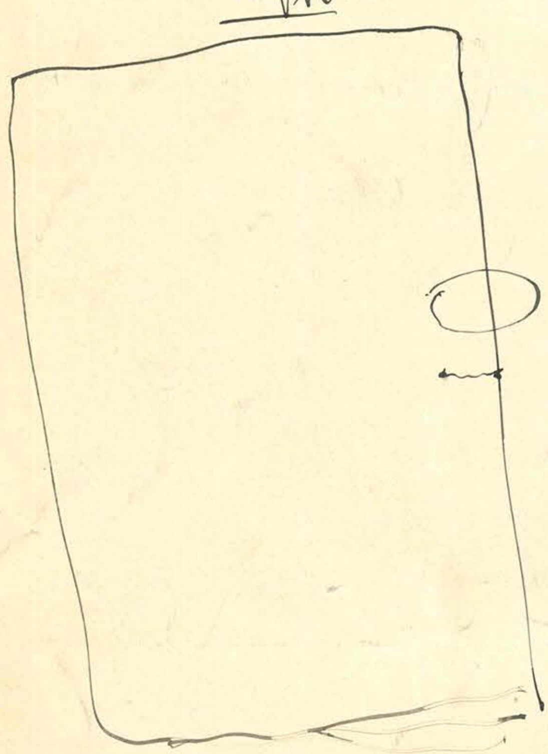
$$\frac{dl}{dh} = \frac{h}{l} = \sin\alpha.$$

$\frac{l}{l_0} - 1$

$$F = \left(\frac{l}{l_0} - 1\right)e$$

$V = 636,000\,000$

600



P

$$-P\lambda + P'\lambda + f\lambda = 0$$

$$P' - P = f\lambda.$$

$l = \frac{1}{2}$,

$b + lk = 1,3535534$ | Andere 1,8321068

$b - lk = 0,6464466$ | 0,4178932

$c = 2,635046$ | 6,943467

$2(b+lk)^2 + c^2 = 10,607680$ | $= 3,256943$

$2(b-lk)^2 + c^2 = 7,779253$ | $= 2,789131$

$(b+lk)^2 - (b-lk)^2 + c^2 = 9,193467$ | $= 3,032073$

$\log (b + lk) = 0,131475$

$\log (b - lk) = 0,810533 - 1$

$\log c = 0,420788$

$\log \sqrt{2(b+lk)^2 + c^2} = 0,5128102$

$\log \sqrt{2(b-lk)^2 + c^2} = 0,4454689$

$\log \sqrt{(b+lk)^2 - (b-lk)^2 + c^2} = 0,4817397$

1,4142136

0,420788
0,810533 −1
0,231321
131475
0,099846
481740
0,618106 −1
22° 32′ 28″2
0,3839724
93084
1367
0,3934175

0,420788
512810
0,907978 −1
38° 58′ 29″1
6632251
168715
1411
0,6802377
13934175
1,0736552

0,420788
445469
0,975319 −1
42° 22′ 22″2
7504916
63995
1077
0,7569988
1,0682957
1,8252945
1,0736552
0,7516393

0,420788
131475
0,552263
810533 −1
0,741730
481740
0,259990
61° 12′ 31,8″
1,0646508
34907
1542
1,0682957

2,25
0,8357864

0,352183
0,922095 −1
0,430088 −1
0,215044
5,424177
2,789131
2,635046
3,032073
5,667119

0,734334
0,753363
0,980971 −1
215044
0,196015

0,292289
362216
0,654505 −1
0,451341

3,6642106

0,563980
0,352183
0,211797
0,105899
5,667119
3,032073
2,635046
3,256943
5,891989

0,753363
0,770262
0,983101
105899
0,089000

0,949390 −2
362216
0,311606 −1

0,204930

8,7755738
1,8321068
6,943467
0,4178932
7,3613602

0,943276
0,866958
0,076318
0,038159
3,435578
2,789131
0,646447
3,032073
3,678520

0,536000
0,565673
0,970327 −1
38159
0,008486

0,928703 −3
362216
0,290919 −2
0,019540
37861
0,057401

0,038159

4,385626
3,032073
1,353553
3,256943
4,610496

0,642032
0,663748
0,978284 −1
038159
0,016443

0,215981 −2
362216
0,578197 −2

0,037861

1,0629785
− ~~1,2043968~~
8956623
~~0,3087975~~
0,1869516
0,4947478
0,2139059
0,8956023
0,1673762 ...

$\frac{15,05}{2360}$ ~~0,00152~~
~~0,006377 = I~~ ?

$r^3 =$

$\frac{15,05}{1040}$

0,014471 = I
0,036635 = II
0,087259 = III

$r = 236,0$ $r^3 = 13,144256$
$r' = 186,0$ $r'^3 = 6,434856$
$r'' = 146$ $r''^3 = 3,112136$

$\frac{438,960}{977,9^2}$

190210,
235851
―――――
45641

B = 44633247
―――――

235851
271562
―――――
35711

969767928

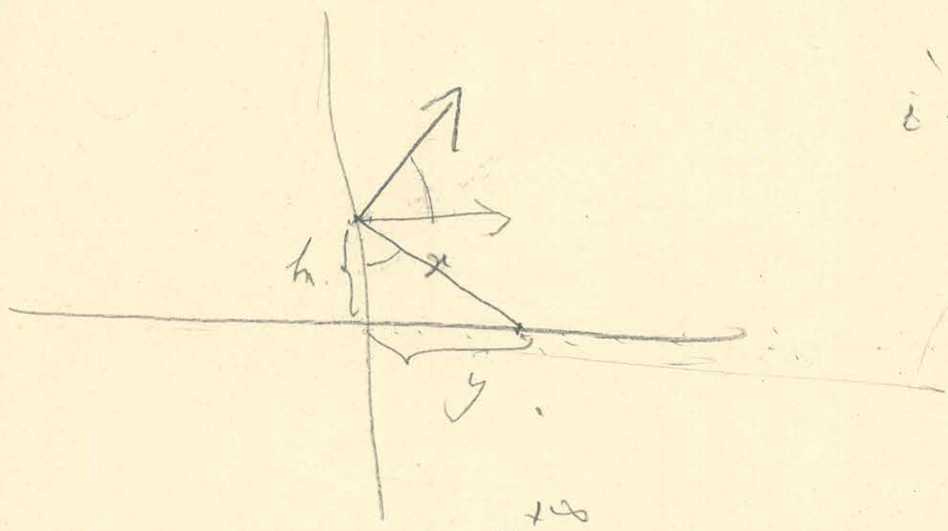
0,034958
35127
0,070085
0,0350425
0356355
35466
35805
71271
0,6780
3390

0,0353390

124297.

3803078
237692
0,00237692.

$$\frac{\partial^2 V}{\partial x^2} - \frac{\partial^2 V}{\partial y^2} = 0{,}00004.$$



$i = i_0 + cr$.

$C = \frac{\partial i}{\partial y}.$

$$2ir.\ \int_{-\infty}^{+\infty}\left(\frac{2 i_0}{r} + \frac{2cy}{r}\right)\frac{h}{r}\,dy$$

$i_0 + cy.$

$r^2 = h^2 + y^2$

$r^2 = h^2 + (y-b)^2$

$$C \quad 2\int\left(\frac{i_0}{r} + \frac{c(y-b)}{r}\right)\frac{h}{r}\,dy$$

$$2\int\left[+\frac{yh}{r^3} - \frac{ch}{r^2} + \frac{cy^2h}{r^3}\right.$$

Quadrat? zu R = 10 log.

a − l = 0,5 | 0,25 | $(a+l)^2+b^2+c^2 = 10,193467$ | 3,192721
a + l = 1,5 | 2,25 | $(a-l)^2+b^2+c^2 = 8,193467$ | 2,862423
c = 2,635046 | 6,943467 | $\log\sqrt{(a+l)^2+b^2+c^2} = 0,504161$

$\log c = 0,420788$ | $\log\sqrt{(a-l)^2+b^2+c^2} = 0,456734$

0,119758
456734
0,663024 −1
24° 42′ 56″7
0,4188790
122173
2749
0,4313712

0,596879
504161
0,092718
51° 4′ 12″6
0,8901179
11636
611
0,8913426
4313712
1,3227138

0,244697
504161
0,740536 −1
28° 49′ 13″6
0,4886922
142535
659
0,5030116
1,0732311
1,5762427
1,3227138
0,2535289

0,721818
456734
0,265084
61° 29′ 29″8
1,0646508
84258
1445
1,0732311

0,207487
5,497469
2,862423
2,635046
3,192721
5,827767
0,740163
0,765503
0,974660 −1
207487
0,182147
0,260422 −1
362216
0,622638 −1
0,419409

9,193467
7,193467
0,963479
0,856938
0,106541
0,053271
0,586859
0,622496
0,964363
53271
0,017634
0,246351 −2
362216
0,608567 −2
0,0406038

0,4313712
0,8913426
1,0732311
2,3959449

1,5090348
0,8388180
0,2139858
2,5618386
2,3959449
0,1658937

0,3318
0829
4147

Quadratizare c = 10 ...

a − b = 0,5 | 0,25
a + b = 1,5 | 2,25
c = 2,635046 | 22,992025

$(a+b)^2 + b^2 + c^2 = 26,242025$ | 5,122697
$(a-b)^2 + b^2 + c^2 = 24,242025$ | 4,923619

$\log\sqrt{(a+b)^2+b^2+c^2} = 0,7094987$
$\log\sqrt{(a-b)^2+b^2+c^2} = 0,6922844$

log c = 0,420788

0,420788	0,420788	0,420788	0,420788
0,698970 − 1	0,176091	0,176091	698970 − 1
0,119758	0,596879	0,244697	0,721818
692284	709499	709499	692284
0,427474 − 1	0,887380 − 1	0,535198 − 1	0,029534
14° 58′ 51″3	37° 39′ 10″7	18° 55′ 41″0	46° 56′ 48″1
0,2443461	0,6457718	0,3141593	0,8028515
168715	113446	159989	162897
2488	519	1988	2332
0,2614664	0,6571683	0,3303570	0,8193744

0,511883
0,096910
0,414973
0,207487
7,558665
4,923619
2,635046
5,122697
7,757743

0,878445
0,889726
0,988709 − 1
207487
0,196196
0,292690
362216
0,654906
0,451758

11−11

25,242025
23,242025
1,402124
0,366273
0,035851
0,017926

0,00832192 | 0,9134678
0,50416096 | 0,4567339
3,192721 | 2,862424

Q=10 l 1/2 [illegible]

0,420788
0,698970 −1
0,119758
680785
0,438973 −1
739899
0,699074 −2
2° 51′ 47,1″

0,0349066
148353
2284
0,0499703

0,420788
0,176091
0,596879
680785
0,916094 −1
753830
0,162264 −1
8° 16′ 1,9″

0,1396263
46542
92
0,1442897
0499703

0,420788
0,680785
1,101573
176091
0,925482
753830
0,171652
56° 2′ 20,7″

0,9772844
5818
1004
0,9780666

0,420788
0,680785
1,101573
698970 −1
1,402603
739899
0,662704
77° ~~48~~′ 1,5″
44′ 1,5″
1,3439035
127991
72
1,3567098
9780666
2,3356490
0,1942600
2,1413890

2,25
22,992025
0,25
23,242025

1,402124
1,366273
0,035851
0,017926
8,129179
5,494133
2,635046
5,673226
8,308272

0,910047
919511
0,990536 −1
17926
0,008462

II–II
0,927473 −3
362216
0,289689 −2
0,0194845

2,25
6,943467
9,193467

0,963479
856938
0,106541
0,053271

10,289133
5,494133
4,795
5,673226
10,468226

1,012878
1,019873
0,992505 −1
53271
0,045776

362216
660638 −2
0,022854 −1

III–III
0,105403

2,9341998
0,1868564
0,5554835
3,6765397
~~1,5518424~~
2,1246973

3,6765397
1,5509698
2,125570

0,0499703
0,1442897
1,3567098
~~1,5518424~~
1,5509698
d_t

2,3347764
1942600
2,1405164

$Q = 10$ re. $\left[l = \frac{1}{2} \right]$

$a = 4{,}795$ $b = 1$ $c = 2{,}635046$ $l = 0{,}5 = 1/2$

Quadrat.

$a - l = 4{,}295$	18,447025	$(a+l)^2 + b^2 + c^2 = 35{,}980492$	5,998374
$a + l = 5{,}295$	28,037025	$(a-l)^2 + b^2 + c^2 = 26{,}390492$	5,137168
$b - l = 0{,}5$	0,25	$(b+l)^2 + a^2 + c^2 = 32{,}185492$	5,673226
$b + l = 1{,}5$	2,25	$(b-l)^2 + a^2 + c^2 = 30{,}185492$	5,494133
$c = 2{,}635046$	6,943467		
$a = 4{,}795$	22,992025		

$\log (a-l) = 0{,}632963$

$\log (a+l) = 0{,}723866$

$\log c = 0{,}420788$

$\log a = 0{,}680785$

$\log \sqrt{(a+l)^2 + b^2 + c^2} = 0{,}7780336$

$\log \sqrt{(a-l)^2 + b^2 + c^2} = 0{,}7107238$

$\log \sqrt{(b+l)^2 + a^2 + c^2} = 0{,}7538301$

$\log \sqrt{(b-l)^2 + a^2 + c^2} = 0{,}7398992$

logaritmus

$\frac{b}{a-l}$ / c	$\frac{b}{a+l}$ / c	$\frac{a+l}{c}$	$\frac{a-l}{c}$
0,420788	0,420788	0,420788	0,420788
632963	723866	723866	632963
1,053751	1,144654	0,696922 −1	0,787825 −1
0,710724	0,778034	0,778034	0,710724
0,343027	0,366620	0,918888 −2	0,077101 −1
65° 25′ 9″8	66° 44′ 11″6	4° 44′ 33″4	6° 48′ 37″3
1,1344640	1,1519173	0,0698132	0,1047198
101811	127991	127991	139626
475	562	1619	1809
1,1446926	1,1647726	0,0827742	0,1188633

1,462952
1,288854
0,174098
0,087049
7,772214
5,137168
2,635046
5,998374
8,633420
0,890545
0,936183
0,954362 −1
087049
0,041411
362216
617118 −2
0,979330 −2
~~0,0952640~~
0,0953520

34,980492
28,037025
6,943467
18,447025
25,390492
1,543826
1,404671
0,139155
0,069578
0,787968
0,844997
0,942971 −1
69578
0,012549
362216
098609 −2
0,460825 −2
0,0288951

1,1446926
1,1647726
0,5105179
0,5105179
3,3305010
1,2195626
~~2,1109174~~
2,1109394

0,8765788
0,1907040
0,1522798

6,943467
22,992025
1,000000
30,935492

1,4904570
0,7452285
5,561968

10590

longit $\frac{F}{4f_0} = -2,110914\varphi + 1,3923638\varphi^2$ (39 written over 14)

tram $\frac{F}{4f_0} = +2,12\overline{46971}\varphi - 1,4316377\varphi^2$ (5570 written above)

0,117822   14631

$0,013758 = 8\alpha_4 + 16\alpha_8$

$0,039274 = \frac{64}{3}\alpha_4 + \frac{512}{3}\alpha_8$

1829

$0,0017229 = \alpha_4 + 2\alpha_8$

0,0018400 $8\alpha_8$

0,0001181

00002.

$-4,235611 = 4\alpha_2 + 12\alpha_6$

$-2,824001 = \frac{8}{3}\alpha_2 + 72\alpha_6.$

1,058903
1,059000
0,000097
0,000004

$2,110914 = 2\alpha_2 + 4\alpha_4$

$2,124697 = 2\alpha_2 - 4\alpha_4$

8472003

$1,055457 = \alpha_2 + 2\alpha_4$

$1,062348 = \alpha_2 - 2\alpha_4$

α_2 $0,006891 = 4\alpha_4$

0,001723.

71900

0,006891
0,007190
0,117805
403
1,058903
1,059113

1,0625468
1,0576355
0,0059113

1,0576355
0014778
1,0591133

1,0576356
61305
1,0637661
2193
1,0635468

1,0576356
15351
1,0591707
0000143
1,0591564

1,0576356
15326
1,0591682
0000137
1,0591545

73575
1675
71900

0,0018394
0000105
0,0018289

(upside down:)
2,110914
2,124697
[illegible]

35,980492
28037025
7,943467
18,447025
26,390492

32,185
225
29,935492
25
3018

1,5560671
lg 5 0,7780336
5,998274

1,4214475
0,7107238
~~5,127108~~
5,137168

1,5076601
0,7538301
5,673226

1,4797983
0,7398992.
5,494103

0,210806

2,110914
2,124697
4,235611

Végeskiesés. $Q = 10$. $\lambda = \frac{1}{2}$ re.

longitudinális.

$$s_1 = 1{,}317523\left[\frac{1}{5{,}137168 \cdot 19{,}447025} - \frac{1}{5{,}998374 \cdot 29{,}037025}\right] = 0{,}005623705$$

99,902635   174,17494

0,0100097 4.6
 005741354
0,004268392

$$s_2 = \frac{1}{24}\,\frac{4{,}295 \cdot 2{,}635046}{\left[26{,}390492 + 18{,}447025c^2\right]5{,}737168}\left[-3 + 2\,\frac{750{,}23905}{[N]} + \frac{1}{26{,}390492}\right] = 0{,}004011742$$

128,08631
 26,39049
154,47680 = N

4,8566455
6,7132910
 0378927
6,7511837

793,57327

1904,5758

11,317522

0,00059422796

$$s_3 = \frac{1}{24}\,\frac{5{,}295 \cdot 2{,}635046}{\left[35{,}980492 + 28{,}037025c^2\right]5{,}998374}\left[-3 + 2\,\frac{1367{,}5568}{[N]} + \frac{1}{35{,}980492}\right] = 0{,}0037337535$$

194,67416
 35,98049
230,65465 = N

5,9290234
8,8580468
 0277928
8,8858396

1383,5529

33205,270

13,952569

0,00042019141

0,3518227
+ ~~0,3518191~~
1,0539139
+ 1,4057330
 0133692
~~1,3923638~~ φ^3
41
1,3920679 φ^3 javítva

2,3094652
0,2016375
2,1078277

0,0056237
 40117
 37338
0,0133692

$Q = 10 \quad l = 1/2$ Transversalis.

$$s_1 = 1,317523\left[\frac{1}{\quad}\right.$$

$$s_1 = 1,317523 \cdot 4,795\left[\frac{1}{5,494133 \cdot 23,242025} - \frac{1}{5,673226 \cdot 25,242025}\right] = 0,0053579821$$

6,3175228

127,69478
0,0078311737
0,0069830593
0,0008481144

143,20371

22,992025
30,185492
53,177517

$$s_2 = \frac{1}{24}\,\frac{6,3175228}{\left[22,992025 \cdot 30,185492 + \frac{c^2}{4}\right]5,494133}\left[-3 + 2\,\frac{282,78483}{[N]} + \frac{22,992025}{30,185492}\right] = 0,000405626$$

694,02559
1,73587
695,76146 = N
3822,6060
91742,544
0,0000688614 31

4,0643934
5,1287868
7616912
5,8904780

22,992025
32,185492
55,177517

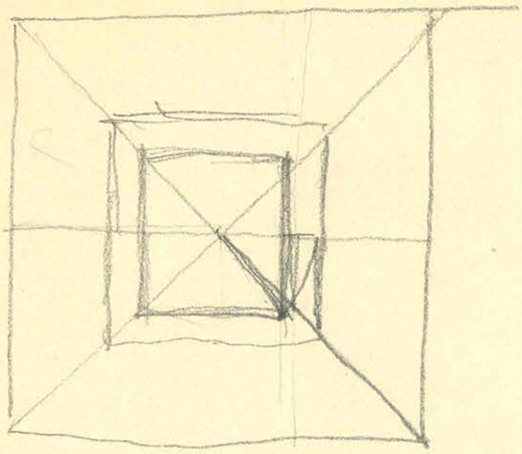
$$s_3 = \frac{1}{8}\,\frac{6,3175228}{\left[22,992025 \cdot 32,185492 + 15,622801\right]5,673226}\left[-3 + 2\,\frac{3044,5584}{N} + \frac{22,992025}{32,185492}\right] = 0,0010633898$$

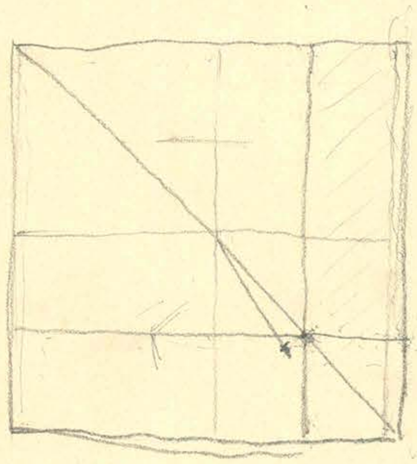
740,00964
15,62280
755,63244 = N
4286,8736
34294,989
0,00018421125

4,0291525
5,0583050
7143599
5,7726649

– 0,3541162
1,0706945
0053580
0004056
0010634
1,4316377 φ^3

0,3542617
1,0702582
53580
4056
10634
1,4313469 φ^3 javított





$$\frac{4}{\sqrt{2}}\sigma\Big[(b+lk)\Big|_{\substack{b-lk\\ c}}^{b+lk}$$

$$+\,b(l+k)\Big|^{b+lk}$$

$$F=\frac{4\sigma}{\sqrt{2}}\Big[(b+lk)\Big|_{\substack{b-lk\\ c}}^{b+lk}+(b+lk)\Big\|_{\substack{b-lk\\ c}}^{b+lk}+c\,\Big|\Big|\Big|_{\substack{b-lk\\ c}}^{b+lk}$$

$$+(b+lk)\Big|_{\substack{b+lk\\ c}}^{b+lk}+(b+lk)\Big\|_{\substack{b+lk\\ c}}^{b+lk}+c\,\Big|\Big|\Big|_{\substack{b+lk\\ c}}^{b+lk}$$

$$-(b-lk)\Big|_{\substack{b-lk\\ c}}^{b-lk}+(b-lk)\Big\|_{\substack{b-lk\\ c}}^{b-lk}-c\,\Big|\Big|\Big|_{\substack{b-lk\\ c}}^{b-lk}$$

$$-(b-lk)\Big|_{\substack{b+lk\\ c}}^{b-lk}-(b+lk)\Big\|_{\substack{b+lk\\ c}}^{b-lk}-c\,\Big|\Big|\Big|_{\substack{b+lk\\ c}}^{b-lk}\Big]\,l\omega$$

$$-2\sigma\Big[\Big\|\quad+\quad+\quad+\quad\ldots\Big]\,l^2\omega.$$

$$-2\sigma\Big(\Big\|_{\substack{b-lk\\ c}}^{b+lk}-\Big\|_{c}^{b-lk}{}_{b-lk}\Big)\,l^2\omega-2\sigma\Big\{\Big\|_{\substack{b+lk\\ c}}^{b+lk}-\Big\|_{\substack{b+lk\\ c}}^{b-lk}\Big\}\,l^2\omega.$$

3,6642106
6,943467
10,607680

0,8357864
6,943467
7,779253

2,2500000
6,943467
9,193467

1,0256204
45 0,5128102
3,256943.

0,8909279
0,4454689
2,789131

~~477~~ 0,9634793
0,4817397
3,032073

2,619522

$\alpha_4 \sin 4\varphi + \alpha_8 \sin 8\varphi.$

$4\alpha_4 \cos 4\varphi_{14} + 8\alpha_8 \cos 8\varphi \cdot \Delta\varphi,$

0,1666188
7248
~~0,1658940~~
0,1674336

93

64 | 5 3 4 7 5 ...

$4\alpha_8 = -0,0003847$

$\alpha_8 = -0,0000962$

$\alpha_{12} = 0,0000014$

$\alpha_4 = 0,0416617$

0,0416659

$\alpha_4 + 2\alpha_8 + 2\alpha_{12} = 0,0414735$

$\alpha_4 - 2\alpha_8 + 3\alpha_{12} = 0,0418582$

$\alpha_4 + 8\alpha_8 + 27\alpha_{12} = 0,0409300$

$2\alpha_4 + 6\alpha_{12} = 0,0833317$

$\alpha_4 + 3\alpha_{12} = 0,0416658$

$\alpha_4 + 27\alpha_{12} = 0,0416998$

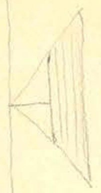
$24\alpha_{12} = 0,0000339$

8,9401

894309
346

8943389
3467

8943473
67



Veges kicsiny λ ra

$\varsigma = 2,9905630$ $\varsigma^2 = 8,943467$

6,943467

15,886934

$$-\sigma_1 = \frac{1\ 2,635046}{12 \cdot 15,886934 \cdot 2,990563}\left[3 - 2\frac{98,872536}{15,886934} - \frac{1}{8,943467}\right] = 0,043717140$$

47,510877

570,13052

0,0046218294

6,2235127
~~1118135~~
9,4470254
1118135
9,4588389

$$\sigma_2 = \frac{2,635046}{23,9245040}\ \frac{9,943467}{8,943467} = \frac{26,201493}{213,96801} = 0,12245519$$

4371714

0,16617233

Quadratikus osztóp. $l = 1/2$

2,862423
71

$$s_1 = 1{,}317523 \left[\frac{1}{2{,}862423 \cdot 1{,}25} - \frac{1}{3{,}192721 \cdot 3{,}25} \right] = 0{,}24125222$$

2,635046

~~3,7587803~~
3,5780287

10,376343

0,27948351
0,09637807
0,18311044

$$s_2 = \frac{1}{24} \frac{1{,}317523}{\left[8{,}193467 + 0{,}25c^2\right] 2{,}862423} \left[-3 + 2\frac{84{,}519835}{[N]} + \frac{1}{8{,}193467} \right] = 0{,}0273235 09$$

8,193467
1,735867
9,929334 = N

8,5121353
14,0242706
1220485
14,1463191

28,421954

682,12690

0,0019314925

$$s_3 = \frac{1}{24} \frac{3{,}952569}{\left[10{,}193467 + 2{,}25c^2\right] 3{,}192721} \left[-3 + 2\frac{125{,}29370}{[N]} + \frac{1}{10{,}193467} \right] = 0{,}013597506$$

6307

15,622800
10,193467
25,816267 = N

4,8532848
6,7065696
981020
6,8046716

82,424138

1978,1793

0,0019980843

-0,1267644
0,0276489
2412522
273235
135963
0,4365853

2,619522

1812

$\alpha_7 + 2\alpha_8 = 0{,}0414735$

$\alpha_7 + 8\alpha_8 = 0{,}0409300$

$6\alpha_8 = -0{,}0005435$

$\alpha_8 = -0{,}0000906$

$\alpha_7 = 0{,}0416547$

7248

0 0 41929 9

$$bc\left(a-\frac{\pi}{4}b\right)=\frac{V}{8}$$

$$bc(a-b)=\frac{V}{8}$$

$$\frac{c}{b}\left(x^2-\frac{\pi}{4}\right)=\frac{V}{8b^3}$$

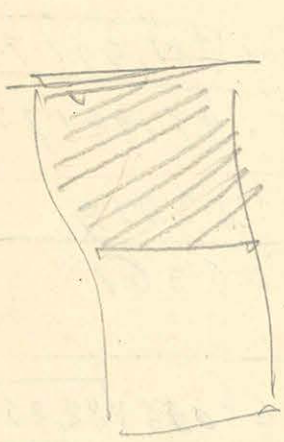
$$bq=$$

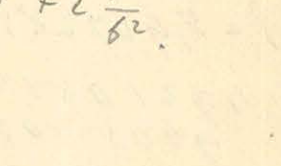
$$c\left(a-\frac{\pi}{4}b\right)=q$$

$$\frac{c}{b}\sqrt{x^2+1+\frac{c^2}{b^2}}\left(x-\frac{1}{x}\right)$$

$$x^2+1+2\frac{c^2}{b^2}$$

$$\frac{c}{a}\sqrt{1+\frac{1}{x^2}}+\dots$$





$x = 3,18$ 3,1800000 $\frac{\pi}{4} = 0,7853982$

$x^2 = 10,1124$ 7853982

2,3946018

$(x-\frac{\pi}{4})^2 = 5,7241178$ 63

1,9015662 8928595.

9507831

36,4496 $\sqrt{79,719811}$

3,18 · 95,719811

32544072

30478900.

$x = 3,22$

3,2200000

7853982

2,4346018

$x^2 = 10,3684$

$(x-\frac{\pi}{4})^2 = 5,9272859$

1,9210814

9605407

9,131470

37,4736 $\sqrt{83,380757}$

3,22 · 99,380757.

34218905

32001570

$x = 3,21$

3,21000000

7853982

2,4246018

$x^2 = 10,3041$

$(x-\frac{\pi}{4})^2 = 5,8786939$

1,9162083

0,9581042

9,080383

37,2164 $\sqrt{82,453344}$

3,21 · 98,453344.

33793917.

31603523

$x = 3,205$

3205 0000

7853982

2,4196018

$x^2 = 10,272025$

$(x-\frac{\pi}{4})^2 = 5,8544729$

1,9137703

9568852.

9,054931

37,088100 $\sqrt{81,991765}$

3,205 · 97,991765

33583019

31406361

$x = 3,208$

3208

7853982

2,4226018

$x^2 = 10,291264$

$(x-\frac{\pi}{4})^2 = 5,8689995$

1,9152331

0,9576166

9,070194

37,165056 $\sqrt{82,268423}$

3,208 · 98,268423

33709427

31524510

$x = 3,209$

2,4236018

$x^2 = 10,297681$

$(x-\frac{\pi}{4})^2 = 5,8738457$

1,9157260

0,9578630

9,0752870

37,190724 $\sqrt{82,360835}$

3,209 · 98,360835

337516494

315639919.

0 fokos végtelen hiány 6 élű 1 egybeállítás

végesen hiány 1 1 egybeállítás.

45 fokos végtelen hiány 8 élű : 1 egybeállítás

~~Pontosan 0 fokos~~ 22½-os fogás mentén · 16 lap · egybeállítás

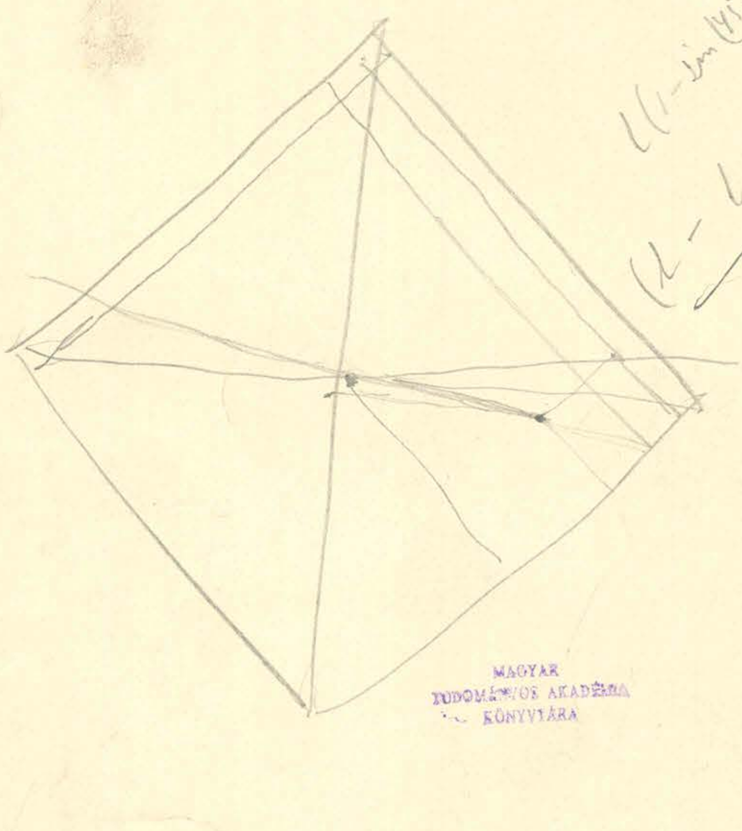
~~Pontosan 45 fokos~~

végtelen hiány

$l((1-\sin(45+\varepsilon))$

$(l-l\cos(45+\varepsilon))-l((1-\sin(45+\varepsilon))$

$-l\cos(45+\varepsilon)+l\sin(45+\varepsilon)$



0,0003692
1,1950903
5,1954595
0,7156240
0,3578120
2,279355

lg √2

0,0003692
0,8049097
4,8052789
0,6817186
0,2408590

0,0003692
1,4282408
5,4286180
0,7346886
0,3673447
2,229938

0,0003692
6478796
4,6482488
0,6672895
0,3336447
2,155980

1265685 42
1065685 42

2065685 42

18254496

8042429
4444298
1134133
19682
1831,4696 ~~1968~~ 7499601
1685304
1357548
8314696
1,5555702

1,414214

83686

√2 = 1,41421356
5,65685424
1,755207.

124114

112214
111816
000398

17,715681
2723939
20,439620

4,879681
2723939
7,603620

13,021620

12,836

~~16,0099911~~
~~9,240185~~
~~25,250176~~

~~76,754677~~
~~460,52806~~
~~3,999998~~
~~0,008685681~~

25,240185

76,724307
460,345842

104,86139

4,1545413
5,3090826
1082229
5,4173055

56,848899
9,240185
66,089084 = N

311,95303
1871,71818
7,5398208

0,0040282842

56,848899
22,280185
79,129084 = N

373,50431
1,2566368

541,96701

6,849151
10,698302
44883
10,740185

41√
1,1321171
0,6656086
4,630294

0,9346812
0,4677406
2,533193

1,1230008
0,6155004
4,125727

1,1146650
0,5573325
3,608549

~~P' - P = 0319~~

$P' - P = 0{,}153621 = 8\alpha_4 + 16\alpha_8$

$Q' - Q = 0{,}412518 = \frac{64}{7}\alpha_4 + \frac{512}{7}\alpha_8$

$-(P' + P) = 2{,}418799 = 4\alpha_2 + 12\alpha_6$

$-(Q' + Q) = 2{,}232164 = \frac{8}{7}\alpha_2 + 72\alpha_6$

~~1240354~~

$\alpha_2 = -0{,}8569046$

$\alpha_4 = 0{,}0191422$

$\alpha_6 = +0{,}00073493$

$\alpha_8 = 0{,}00003018$

00664

$0{,}0192026 = \alpha_4 + 2\alpha_8$

$0{,}0192807 = \alpha_4 + 8\alpha_8$

$0{,}0001811 = 6\alpha_8$

$\alpha_8 -$

0,696492

22048

$-0{,}8546998 = \alpha_2 + 3\alpha_6$

$-0{,}8370615 = \alpha_2 + 27\alpha_6$

$-0{,}0176383 = 24\alpha_6$

40699
-0,8569046
416354
0,8152092
1,6304184
8162947
1,6325894

0,0282844
0022078
41207
0406999

$$\frac{c}{b} = \frac{v}{b^3\left(x-\frac{\pi}{4}\right)}$$

$$v = \frac{V}{b}$$

$$\frac{\frac{V}{b^3\left(x-\frac{\pi}{4}\right)}\sqrt{x^2+1+\frac{V^2}{b^2\left(x-\frac{\pi}{4}\right)^2}b^6}\left(x-\frac{1}{x}\right)}{x^2+1+2\frac{V^2}{b^2\left(x-\frac{\pi}{4}\right)^2}b^6}$$

$$\frac{V\sqrt{(x^2+1)\left(x-\frac{\pi}{4}\right)^2b^6+V^2}\,(x^2-1)}{x\left\{(x^2+1)\left(x-\frac{\pi}{4}\right)^2b^6+2V^2\right\}}$$

$4 \cdot 8\sqrt{49{,}044611+16}$

$3 \cdot 81{,}044611$

65,044611

1,8732113

0,9066056

8,065024

$\pi/4 = 0{,}7853982$

2580807

2431338 33

1,06476

46° 42′ 30″

3,2000000
7853982
2,4146018

0,802851
122
0,815

|eltérés| < 0,0001

$x = 3{,}2$

$x^2 = 10{,}24$

$(x-\frac{\pi}{4})^2 = 5{,}8303019$

1,8791091
0,9395546
8,100707

59,702291

65,522593
16
1,9113312
0,9556656
9029540

$9{,}24\sqrt{75{,}702291}$

0,8 · 91,702291

80394533
7336 18328

$9{,}24\sqrt{87{,}522593}$

0,8 97,522593

10,83422950

78026 0744

$x = 3{,}4$

$x^2 = 11{,}56$

$(x-\frac{\pi}{4})^2 = 6{,}8361426$

2,00801299
1,00400699
1,0092668

3,4000000
7853982
2,6146018
6,8361426
85,861951

9224

$4.\ 10{,}56\sqrt{101{,}861951}$

3,4. 117,861951

42631430
40073063

$x = 3{,}24$

$x^2 = 10{,}4976$

$(x-\frac{\pi}{4})^2 = 6{,}0250700$

2,9308758
0,9654079

3,2400000
0,7853982
2,4546018
69273845

19 4976

$97{,}9904\sqrt{85{,}273845}$

3,24 · 101,273845

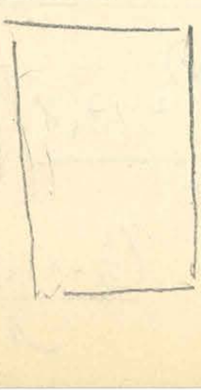
35087790
3 3312872727

9234383

1,14
190
3,8
3,5

1 8 4 1 0
1 5 7 8
2 6 3 0
5 6
5,26
263

5,26
3,8



184C. ...

Segment – $l=1$

$$0{,}0538628 \quad 108647 \quad 0{,}0429984 \qquad 0{,}0538628 \quad 110644 \quad 0{,}427984$$

~~0,0761033~~

$$s_1 = c\left(\frac{1}{3{,}039768 \cdot 6{,}1076} - \frac{1}{4{,}720190 \cdot 19{,}1476}\right) = 0{,}0757494$$

$$s_2 = \frac{1}{6}\,\frac{2{,}26 \times 1{,}769911}{(9{,}240185 + 5{,}1076 \cdot c^2)\,3{,}039768}\left[-3 + 2\frac{(10{,}240185)^2}{(N)} + \frac{1}{9{,}240185}\right] = ~~0{,}0109723~~ \; ~~0{,}0451909~~ = 0{,}047071615$$

$0{,}0086891195$

~~4,2627642~~ ~~5,2008597~~ 5,4173055

$$s_3 = \frac{1}{6}\,\frac{4{,}26 \times 1{,}769911}{(22{,}280185 + 18{,}1476 \times c^2)\,4{,}720190}\left[-3 + 2\frac{(23{,}280185)^2}{(N)} + \frac{1}{22{,}280185}\right] = 0{,}036134818$$

~~2,24…0224~~ 0,0033644506 10,740184

$s_1 + s_2 + s_3 =$ 0,0757494
0451909
0361348
0,157075[1]

$\Phi = +1{,}632257$
$\frac{1}{6}\Phi = +0{,}272043$
920964
1,014546
1,935510

0,0877950
0,2521516
0,3399466
1,935510
1,595563
0,797782
0,272043
+ 1,069825
0,157075
+ 0,912750 φ^3

$s_2 = 0$!

$$s_1 = 3{,}26 \times 1{,}769911\left(\frac{1}{3{,}709473 \times 10{,}6276} - \frac{1}{4{,}214283 \times 14{,}6276}\right) = 0{,}052760512$$

5,7699100 39,422795 61,644846

0,025366035
0,016221956
0,009144079

$$s_3 = \frac{1}{38}\,\frac{2 \cdot 3{,}26 \times 1{,}769911}{(10{,}6276 \times 17{,}760185 + 4c^2)\,4{,}214283}\left[-3 + 2\frac{(28{,}387785)^2}{(N)} + \frac{10{,}6276}{17{,}760185}\right] = 0{,}012920439$$

0,0023048049 5,6058711

$s_1 =$ 0,0527605
$s_3 =$ 0,0129204
$\frac{1}{6}\Phi =$ 0,2977017
0,9594584
1,3228410 φ^3

2) 0,3399466
1) 1,9324188
1,5924722
0,7962361
272043
+ 1,068279
157075
0,911204 φ^3

0,0757494
0470716
0361348
1589558

1,068279
158956
0,909323 φ^3

quadratumos üreg

$V=$

$V = abc$ $\quad c = \frac{V}{x}$ $\quad c^2 = \frac{V^2}{x^2}$

[illegible]

[illegible]

$$\frac{c\sqrt{x^2+1+c^2}\left(x-\frac{1}{x}\right)}{x^2+1+2c^2}$$

3,5724420 1,7862210

3,265178 1,632589

2,6456822 1,3228411

1,8186646 0,909323

$$\frac{(x^2-1)\,V\sqrt{x^2+1+\frac{V^2}{x^2}}}{x^2+1+2\frac{V^2}{x^2}}$$

$$\frac{V(x^2-1)\sqrt{(x^2+1)x^2+V^2}}{x\left((x^2+1)x^2+2V^2\right)}$$ $\quad (x^2-1)$

$V=1$ $\quad x^2=V^2$

$x^2(x^2-1)\ldots+1)$

$V(V^2-1)\sqrt{(V^2+1)}$

$$\frac{V(V-1)\sqrt{2V^2+V}}{3V^2+V}$$

0,0291021

46° 55′ 6″

0,8028515
1599,88
291
0,8188794

$V=1$ $\quad \frac{3\sqrt{3.6}}{52}$ $\quad \frac{18}{52}$

Végs kics longitudinális $q=4$, hengeres üreg

$$s_1 = 1,650436\left[\frac{1}{2,933193 \cdot 5,879681} - \frac{1}{4,630294 \cdot 18,715681}\right] = 0,076653160$$

17,246239   86,659105

0,057983656   0,011539468

0,011539468

0,046444188

$$s_2 = \frac{1}{6}\,\frac{2,209 \cdot 1,650436}{[8,603620 + 4,879681 \cdot c^2]\,2,933193}\left[-3 + 2\,\frac{(9,603620)^2}{[N]} + \frac{1}{8,603620}\right] = 0,052421858$$

13,291953
8,603620
21,895573 = N

64,223941

385,34365

3,6458131

0,0094611994

92,2295171

4,2122450

5,4244900

0,1162301

5,5407201

$$s_3 = \frac{1}{6}\,\frac{4,209 \cdot 1,650436}{[21,439620 + 17,715681\,c^2]\,4,630294}\left[-3 + 2\,\frac{(22,439620)^2}{[N]} + \frac{1}{21,439620}\right] = 0,041180645$$

48,256434
21,439620
69,696054 = N

322,771322

1939,2793

6,9466851

0,0035820962

503,53654

7,2247496

11,4494992

0466426

11,4961418

+ 0,2639379
0,7711443
1,0350822
1702557
0,8648265 φ^3

− 0,0766532
0524219
411806
− 0,1702557

0,8932958
982896 7
1,8761925
0844867
1,7917058
2494173
1,5422885

$x \quad R \quad r \quad \varphi$

$$R^2 = \varepsilon^2 + (r+x)^2 + 2\varepsilon(r+x)\cos\varphi$$

$$R-\varepsilon$$

$$R^2 = \varepsilon^2 + R^2 + \varepsilon^2 - 2R\varepsilon + x^2 + 2(R-\varepsilon)x + 2\varepsilon(R-\varepsilon+x)\cos\varphi$$

$$0 = -2R\varepsilon + x^2 + 2Rx - 2\varepsilon x + 2R\varepsilon\cos\varphi + 2\varepsilon x\cos\varphi$$

$$x = \frac{1}{2}\sin^2\frac{\varphi}{2}$$

Transversalis

$$s_1 = 3{,}209 \times 1{,}650436 \left[\frac{1}{3{,}608549 \cdot 10{,}297681} - \frac{1}{4{,}125727 \cdot 17{,}297681}\right] = 0{,}052742051$$

~~0,047445801~~

5,2962491

0,026910884
16952506
0,009958378

27,319301
17,021620
10,297681

$s_2 = 0$

$$s_3 = \frac{1}{6} \cdot \frac{2 \cdot 3{,}209 \cdot 1{,}650436}{[10{,}297681 \cdot 17{,}021620 + 4c^2]\, 4{,}125727} \left[-3 + 2\frac{746{,}34421}{[N]} + \frac{10{,}297681}{17{,}021620}\right] = 0{,}012922397$$

175,28321
10 89576
186,17897 = N

768,12360
2304,37080

0,0022983493

4,0087460
5,0174920
0,6049766
5,6224686

− 0,2912453	− 0,2912453
0,9485441	9485441
0474458	527421
0129224	129224
~~1,3001576~~ φ^3	1,3054539 φ^3
0474458	
1,2527118	
0527421	
1,3054539 φ^3	

logarithm 2,26|4   1,769911

$a^2 = 10,6276$

~~1,68~~

$b=1$ $a = 2,26$ $c = 1,769911$ $l=1$

andmark

$a-1 = 2,26$ | 5,1076
$a+1 = 4,26$ | 18,1476
$b-1 = 0$ | 0
$b+1 = 2$ | 4
$c = 1,769911$ | $c^2 = 3,132585$

$\sqrt{(a+1)^2+(b+1)^2+c^2} = 5,027941$
$\sqrt{(a+1)^2+(b-1)^2+c^2} = 4,612044$
$\sqrt{(a-1)^2+(b+1)^2+c^2} = 3,498598$
$\sqrt{(a-1)^2+(b-1)^2+c^2} = 2,870572$

$\log\sqrt{(a+1)^2+(b+1)^2+c^2} = 0,701390$
$\log\sqrt{(a+1)^2+(b-1)^2+c^2} = 0,663988$
$\log\sqrt{(a-1)^2+(b+1)^2+c^2} = 0,542894$
$\log\sqrt{(a-1)^2+(b-1)^2+c^2} = 0,457969$

log a−1 = 0,354108
log a+1 = 0,629410
log b−1 =
log b+1 = 0,301030
log c = 0,247952

0,247952
354108
0,602060
0,482840
0,119220
52° 46′ 2½″
0,9075712
133809
121
l^b_{a-l} c 0,9209642

0,247952
629410
0,877362
0,673959
0,203403
57° 57′ 7½″
0,9948377
165806
363
l^b_{a+l} 4,0114546
21,280185

0,247952
629410
0,618542 −1
0,672959
0,944583 −2
5° 1′ 49″
0,0872665
2909
2876
l^{a+l}_b c 0,0877950

0,247952
0,354108
0,893844 −1
482840
0,411004 −1
14° 26′ 50″
0,2443461
75621
2424
l^{a-l}_b c 0,2521516

1,282114
785871
0,496243
0,248122
4,809679
3,039768
1,769911
4,720190
6,490101
0,682116 II–II
812251
0,869865 −1
248122
0,617987
0,071834 −1
262216
0,434050 −1
0,271675

18,1476
3,132585
5,1076
8,240185
1,327976
915937
0,412039
0,206020
0,606357
0,757410
0,848947
206020
0,054967
0,740102 −2
262216
0,102318 −1
0,126766 (7 corrected to 5) III–III

0,9209642
1,0114546
0,5698626
2,5022814
~~8700249~~
~~1,6322565~~

~~0,3739854~~
~~0,2716750~~
~~0,2243645~~
0,8700249
0,3740067
2716750
2240106
0,8696923
2,5022814
1,6325891