

REF.: FE DE ERRATAS DE TABLAS DE MORTALIDAD
DE INVALIDOS IMPARTIDAS POR CIRCULAR
Nº 465

000078

- 8 ENE. 85

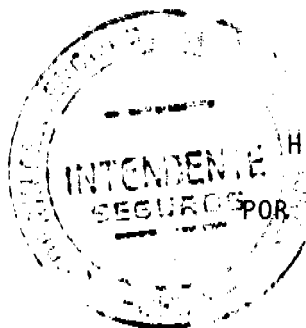
OFICIO CIRCULAR Nº

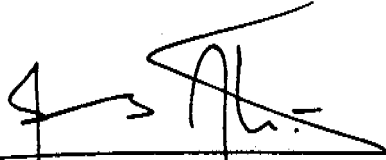
A todas las entidades de seguros del segundo grupo.

Santiago,

Por la presente hago llegar a usted la
fé de erratas de las tablas de mortalidad de inválidos MI-85 M (pa-
ra mujeres) y MI-85H (para hombres) impartidas recientemente por Cir-
cular Nº 465 de esta Superintendencia. Adjunto sírvase encontrar la
versión corregida de dichas tablas.

Saluda atentamente a Ud.,




HERNÁN BURDILES AULENDE
INTENDENTE DE SEGUROS
POR ORDEN DEL SUPERINTENDENTE

000042

SUPERINTENDENCIA DE
VALORES Y SEGUROS
CHILE

FE DE ERRATAS CIRCULAR N° 465

TABLA MI-85 M

| EDAD | COLUMNA | DICE | DEBE DECIR |
|------|---------|---------------|---------------|
| 39 | Dy | 216626,92742 | 216626,91742 |
| 40 | Dy | 208022,24060 | 208011,14060 |
| 46 | Ny | 3008987,07093 | 3008978,07093 |
| 50 | ly | 601106,6894 | 601106,5894 |
| 50 | Ny | 2398211,59951 | 2398311,59951 |
| 56 | ly | 550844,3736 | 550744,3736 |
| 61 | Dy | 83187,48462 | 83187,47462 |
| 63 | ly | 485114,0485 | 485114,0475 |
| 64 | ly | 4749940,198 | 474940,1980 |
| 73 | ly | 3700850,0849 | 370850,0849 |
| 85 | Dy | 13508,43725 | 13508,43715 |
| 98 | ly | 9791,9816 | 9891,9816 |
| 107 | Ny | 2.88091 | 2,88091 |

TABLA MI-85 H

| EDAD | COLUMNA | DICE | DEBE DECIR |
|------|---------|---------------|---------------|
| 20 | lx | 738390,3010 | 738390,3012 |
| 35 | Nx | 2729688,75910 | 3729688,75910 |
| 39 | lx | 538309,8625 | 538209,8625 |
| 66 | Nx | 408626,16097 | 408626,88523 |
| 70 | Dx | 38844,13767 | 28844,13767 |
| 86 | lx | 51121,3950 | 56121,3950 |

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TABLA MI-85 M

La función q_y se obtiene de la ecuación de Makeham

$$q_y = 1 - s \cdot g^{c^y (c-1)}$$

y los valores de las constantes son

$$c = 1,078598208$$

$$g = 0,998686190$$

$$s = 0,990990544$$

$$0 \leq Y \leq 70$$

$$c = 1,101361529$$

$$g = 0,999697423$$

$$s = 0,996745335$$

$$70 \leq Y \leq 110$$

Las funciones D_y y N_y han sido calculadas para el interés técnico obligatorio de 3%.

SUPERINTENDENCIA DE
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| y | $q_y^* 10^3$ | l_y | D_y | N_y |
|----|--------------|--------------|---------------|----------------|
| 0 | 9,112 | 1000000,0000 | 1000000,00000 | 24815629,57217 |
| 1 | 9,120 | 990888,1492 | 962027,32932 | 23815629,57217 |
| 2 | 9,129 | 981851,3500 | 925489,06589 | 22853602,24285 |
| 3 | 9,138 | 972888,4430 | 890330,74409 | 21928113,17696 |
| 4 | 9,148 | 963998,2462 | 856499,95596 | 21037782,43287 |
| 5 | 9,159 | 955179,5531 | 823946,27317 | 20181282,47690 |
| 6 | 9,171 | 946431,1303 | 792621,17166 | 19357336,20374 |
| 7 | 9,183 | 937751,7157 | 762477,95978 | 18564715,03207 |
| 8 | 9,197 | 929140,0152 | 733471,70797 | 17802237,07229 |
| 9 | 9,212 | 920594,7010 | 705559,18255 | 17068765,36432 |
| 10 | 9,228 | 912114,4085 | 678698,78105 | 16363206,18177 |
| 11 | 9,245 | 903697,7330 | 652850,46993 | 15684507,40071 |
| 12 | 9,263 | 895343,2272 | 627975,72543 | 15031656,93078 |
| 13 | 9,283 | 887049,3974 | 604037,47580 | 14403681,20536 |
| 14 | 9,305 | 878814,7004 | 581000,04645 | 13799643,72956 |
| 15 | 9,328 | 870637,5394 | 558829,10652 | 13218643,68311 |
| 16 | 9,353 | 862516,2603 | 537491,61796 | 12659814,57659 |
| 17 | 9,380 | 854449,1474 | 516955,78632 | 12122322,95863 |
| 18 | 9,409 | 846434,4188 | 497191,01330 | 11605367,17232 |
| 19 | 9,441 | 838470,2220 | 478167,85150 | 11108176,15901 |
| 20 | 9,474 | 830554,6286 | 459857,96038 | 10630008,30751 |
| 21 | 9,511 | 822685,6294 | 442234,06438 | 10170150,34712 |
| 22 | 9,550 | 814861,1283 | 425269,91212 | 9727916,28274 |
| 23 | 9,593 | 807078,9368 | 408940,23761 | 9302646,37062 |
| 24 | 9,639 | 799336,7678 | 393220,72278 | 8893706,13301 |
| 25 | 9,688 | 791632,2284 | 378087,96109 | 8500485,41023 |
| 26 | 9,741 | 783962,8141 | 363519,42341 | 8122397,44914 |
| 27 | 9,799 | 776325,9003 | 349493,42402 | 7758878,02574 |
| 28 | 9,861 | 768718,7357 | 335989,08910 | 7409384,60171 |
| 29 | 9,928 | 761138,4336 | 322986,32551 | 7073395,51261 |
| 30 | 10,000 | 753581,9639 | 310465,79134 | 6750409,18711 |

SUPERINTENDENCIA DE
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| | | | | |
|----|--------|-------------|--------------|---------------|
| 31 | 10,078 | 746046,1441 | 298408,86734 | 6439943,39577 |
| 32 | 10,162 | 738527,6304 | 286797,62962 | 6141534,52843 |
| 33 | 10,252 | 731022,9081 | 275614,82332 | 5854736,89882 |
| 34 | 10,350 | 723528,2817 | 264843,83734 | 5579122,07550 |
| 35 | 10,455 | 716039,8649 | 254468,68015 | 5314278,23816 |
| 36 | 10,569 | 708553,5699 | 244473,95651 | 5059809,55801 |
| 37 | 10,691 | 701065,0971 | 234844,84522 | 4815335,60150 |
| 38 | 10,823 | 693569,9236 | 225567,07766 | 4580490,75628 |
| 39 | 10,966 | 686063,2926 | 216626,91742 | 4354923,67863 |
| 40 | 11,119 | 678540,2018 | 208011,14060 | 4138296,76121 |
| 41 | 11,285 | 670995,3924 | 199707,01715 | 3930285,62061 |
| 42 | 11,463 | 663423,3383 | 191702,29304 | 3730578,60346 |
| 43 | 11,656 | 655818,2347 | 183985,17301 | 3538876,31042 |
| 44 | 11,864 | 648173,9880 | 176544,30447 | 3354891,13740 |
| 45 | 12,088 | 640484,2061 | 169368,76200 | 3178346,83294 |
| 46 | 12,329 | 632742,1890 | 162448,03268 | 3008978,07093 |
| 47 | 12,590 | 624940,9209 | 155772,00213 | 2846530,03826 |
| 48 | 12,871 | 617073,0637 | 149330,94151 | 2690758,03613 |
| 49 | 13,173 | 609130,9518 | 143115,49510 | 2541427,09461 |
| 50 | 13,500 | 601106,5894 | 137116,66875 | 2398311,59951 |
| 51 | 13,852 | 592991,6499 | 131325,81903 | 2261194,93076 |
| 52 | 14,232 | 584777,4786 | 125734,64320 | 2129869,11173 |
| 53 | 14,641 | 576455,0989 | 120335,16994 | 2004134,46853 |
| 54 | 15,082 | 568015,2230 | 115119,75086 | 1883799,29860 |
| 55 | 15,558 | 559448,2673 | 110081,05277 | 1768679,54774 |
| 56 | 16,071 | 550744,3736 | 105212,05071 | 1658598,49497 |
| 57 | 16,624 | 541893,4372 | 100506,02179 | 1553386,44426 |
| 58 | 17,220 | 532885,1430 | 95956,53988 | 1452880,42247 |
| 59 | 17,862 | 523709,0097 | 91557,47094 | 1356923,88259 |
| 60 | 18,555 | 514354,4450 | 87302,96931 | 1265366,41165 |

SUPERINTENDENCIA DE
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| | | | | |
|----|---------|-------------|-------------|---------------|
| 61 | 19,301 | 504810,8112 | 83187,47462 | 1178063,44234 |
| 62 | 20,105 | 495067,5045 | 79205,70959 | 1094875,96772 |
| 63 | 20,972 | 485114,0475 | 75352,67848 | 1015670,25813 |
| 64 | 21,906 | 474940,1980 | 71623,66626 | 940317,57965 |
| 65 | 22,913 | 464536,0752 | 68014,23858 | 868693,91339 |
| 66 | 23,997 | 453892,3040 | 64520,24213 | 800679,67481 |
| 67 | 25,166 | 443000,1797 | 61137,80567 | 736159,43268 |
| 68 | 26,424 | 431851,8547 | 57863,34143 | 675021,62701 |
| 69 | 27,780 | 420440,5474 | 54693,54687 | 617158,28559 |
| 70 | 29,240 | 408760,7745 | 51625,40646 | 562464,73872 |
| 71 | 31,836 | 396808,6078 | 48656,19356 | 510839,33226 |
| 72 | 34,687 | 384175,8805 | 45735,12986 | 462183,13870 |
| 73 | 37,817 | 370850,0849 | 42862,84357 | 416448,00884 |
| 74 | 41,253 | 356825,7036 | 40040,68537 | 373585,16527 |
| 75 | 45,022 | 342105,7433 | 37270,78263 | 333544,47989 |
| 76 | 49,157 | 326703,3736 | 34556,08563 | 296273,69727 |
| 77 | 53,690 | 310643,6391 | 31900,40251 | 261717,61164 |
| 78 | 58,658 | 293965,1837 | 29308,41754 | 229817,20913 |
| 79 | 64,098 | 276721,9103 | 26785,68735 | 200508,79159 |
| 80 | 70,054 | 258984,4718 | 24338,60873 | 173723,10424 |
| 81 | 76,570 | 240841,4633 | 21974,35094 | 149384,49551 |
| 82 | 83,694 | 222400,1636 | 19700,74622 | 127410,14457 |
| 83 | 91,476 | 203786,6524 | 17526,13226 | 107709,39835 |
| 84 | 99,970 | 185145,1137 | 15459,14175 | 90183,26609 |
| 85 | 109,234 | 166636,1437 | 13508,43715 | 74724,12434 |
| 86 | 119,326 | 148433,8937 | 11682,39148 | 61215,68718 |
| 87 | 130,308 | 130721,9293 | 9988,72139 | 49533,29571 |
| 88 | 142,246 | 113687,7642 | 8434,08457 | 39544,57432 |
| 89 | 155,204 | 97516,1352 | 7023,66003 | 31110,48975 |
| 90 | 169,249 | 82381,2333 | 5760,73723 | 24086,82972 |

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| | | | | |
|-----|----------|------------|------------|-------------|
| 91 | 184,448 | 68438,2752 | 4646,34665 | 18326,09249 |
| 92 | 200,866 | 55814,9785 | 3678,96867 | 13679,74584 |
| 93 | 218,565 | 44603,6690 | 2854,35961 | 10000,77717 |
| 94 | 237,606 | 34854,8574 | 2165,52992 | 7146,41757 |
| 95 | 258,040 | 26573,1467 | 1602,90077 | 4980,88765 |
| 96 | 279,912 | 19716,2228 | 1154,64943 | 3377,98688 |
| 97 | 303,255 | 14197,4239 | 807,23271 | 2223,33745 |
| 98 | 328,090 | 9891,9816 | 546,05361 | 1416,10474 |
| 99 | 354,419 | 6646,5193 | 356,21239 | 870,05113 |
| 100 | 382,225 | 4290,8637 | 223,26582 | 513,83874 |
| 101 | 411,465 | 2650,7878 | 133,91070 | 290,57292 |
| 102 | 442,071 | 1560,0803 | 76,51561 | 156,66222 |
| 103 | 473,940 | 870,4146 | 41,44690 | 80,14661 |
| 104 | 506,936 | 457,8907 | 21,16852 | 38,69971 |
| 105 | 540,888 | 225,7692 | 10,13342 | 17,53120 |
| 106 | 575,582 | 103,6533 | 4,51687 | 7,39777 |
| 107 | 610,767 | 43,9923 | 1,86120 | 2,88091 |
| 108 | 646,152 | 17,1233 | 0,70334 | 1,01970 |
| 109 | 681,414 | 6,0590 | 0,24163 | 0,31636 |
| 110 | 1000,000 | 1,9303 | 0,07474 | 0,07474 |

TABLA MI-85 H

La función q_x se obtiene de la ecuación
de Makeham

$$q_x = 1 - s \cdot g^{c^x (c-1)}$$

y los valores de las constantes son :

$$c = 1,072963417$$

$$g = 0,996723467$$

$$s = 0,985449773$$

$$0 \leq x \leq 70$$

$$c = 1,086562220$$

$$g = 0,998624505$$

$$s = 0,992050395$$

$$70 \leq x \leq 110$$

Las funciones D_x y N_x han sido calculadas para el interés técnico obligatorio de 3%.

SUPERINTENDENCIA DE
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| x | $q_x \cdot 10^3$ | l_x | D_x | N_x |
|----|------------------|--------------|---------------|----------------|
| 0 | 14,786 | 1000000,0000 | 1000000,00000 | 21805521,09758 |
| 1 | 14,803 | 985213,8259 | 956518,27757 | 20805521,09758 |
| 2 | 14,822 | 970629,3239 | 914911,22999 | 19849002,82001 |
| 3 | 14,842 | 956242,7956 | 875097,61871 | 18934091,59001 |
| 4 | 14,863 | 942050,5533 | 836999,71509 | 18058993,97130 |
| 5 | 14,886 | 928048,9182 | 800543,14918 | 17221994,25621 |
| 6 | 14,910 | 914234,2176 | 765656,76416 | 16421451,10704 |
| 7 | 14,936 | 900602,7822 | 732272,47730 | 15655794,34287 |
| 8 | 14,965 | 887150,9435 | 700325,14703 | 14923521,86558 |
| 9 | 14,995 | 873875,0310 | 669752,44574 | 14223196,71855 |
| 10 | 15,027 | 860771,3693 | 640494,73801 | 13553444,27281 |
| 11 | 15,062 | 847836,2753 | 612494,96435 | 12912949,53480 |
| 12 | 15,099 | 835066,0549 | 585698,52954 | 12300454,57045 |
| 13 | 15,140 | 822457,0000 | 560053,19624 | 11714756,04091 |
| 14 | 15,183 | 810005,3853 | 535508,98303 | 11154702,84467 |
| 15 | 15,229 | 797707,4650 | 512018,06694 | 10619193,86164 |
| 16 | 15,278 | 785559,4693 | 489534,69006 | 10107175,79470 |
| 17 | 15,331 | 773557,6010 | 468015,07041 | 9617641,10464 |
| 18 | 15,388 | 761698,0318 | 447417,31651 | 9149626,03423 |
| 19 | 15,449 | 749976,8990 | 427701,34593 | 8702208,71772 |
| 20 | 15,515 | 738390,3012 | 408828,80690 | 8274507,37179 |
| 21 | 15,585 | 726934,2951 | 390763,00396 | 7865678,56489 |
| 22 | 15,661 | 715604,8914 | 373468,82642 | 7474915,56092 |
| 23 | 15,742 | 704398,0508 | 356912,67995 | 7101446,73451 |
| 24 | 15,828 | 693309,6805 | 341062,42157 | 6744534,05456 |
| 25 | 15,922 | 682335,6299 | 325887,29695 | 6403471,63299 |
| 26 | 16,022 | 671471,6869 | 311357,88084 | 6077584,33604 |
| 27 | 16,129 | 660713,5742 | 297446,02010 | 5766226,45520 |
| 28 | 16,244 | 650056,9452 | 284124,77898 | 5468780,43510 |
| 29 | 16,368 | 639497,3807 | 271368,38720 | 5184655,65612 |
| 30 | 16,500 | 629030,3852 | 259152,19004 | 4913287,26892 |

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**SUPERINTENDENCIA DE
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| | | | | |
|----|--------|-------------|--------------|---------------|
| 31 | 16,642 | 618651,3837 | 247452,60082 | 4654135,07888 |
| 32 | 16,795 | 608355,7185 | 236247,05542 | 4406682,47806 |
| 33 | 16,958 | 598138,6467 | 225513,96899 | 4170435,42264 |
| 34 | 17,134 | 587995,3380 | 215232,69455 | 3944921,45365 |
| 35 | 17,322 | 577920,8723 | 205383,48326 | 3729688,75910 |
| 36 | 17,524 | 567910,2392 | 195947,44705 | 3524305,27584 |
| 37 | 17,740 | 557958,3367 | 186906,52232 | 3328357,82879 |
| 38 | 17,973 | 548059,9720 | 178243,43597 | 3141451,30647 |
| 39 | 18,222 | 538209,8625 | 169941,67257 | 2963207,87051 |
| 40 | 18,489 | 528402,6379 | 161985,44333 | 2793266,19793 |
| 41 | 18,776 | 518632,8440 | 154359,65648 | 2631280,75460 |
| 42 | 19,084 | 508894,9475 | 147049,88914 | 2476921,09812 |
| 43 | 19,414 | 499183,3428 | 140042,36057 | 2329871,20897 |
| 44 | 19,768 | 489492,3605 | 133323,90674 | 2189828,84841 |
| 45 | 20,147 | 479816,2782 | 126881,95627 | 2056504,94167 |
| 46 | 20,554 | 470149,3337 | 120704,50754 | 1929622,98540 |
| 47 | 20,991 | 460485,7407 | 114780,10702 | 1808918,47786 |
| 48 | 21,459 | 450819,7080 | 109097,82878 | 1694138,37084 |
| 49 | 21,961 | 441145,4620 | 103647,25519 | 1585040,54206 |
| 50 | 22,500 | 431457,2726 | 98418,45851 | 1481393,28687 |
| 51 | 23,078 | 421749,4839 | 93401,98367 | 1382974,82836 |
| 52 | 23,697 | 412016,5492 | 88588,83199 | 1289572,84470 |
| 53 | 24,361 | 402253,0710 | 83970,44583 | 1200984,01270 |
| 54 | 25,073 | 392453,8466 | 79538,69406 | 1117013,56687 |
| 55 | 25,836 | 382613,9199 | 75285,85853 | 1037474,87281 |
| 56 | 26,655 | 372728,6388 | 71204,62110 | 962189,01428 |
| 57 | 27,532 | 362793,7204 | 67288,05161 | 890984,39318 |
| 58 | 28,472 | 352805,3225 | 63529,59628 | 823696,34157 |
| 59 | 29,480 | 342760,1229 | 59923,06684 | 760166,74529 |
| 60 | 30,561 | 332655,4065 | 56462,63006 | 700243,67846 |

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| | | | | |
|----|---------|-------------|-------------|--------------|
| 61 | 31,719 | 322489,1598 | 53142,79766 | 643781,04840 |
| 62 | 32,960 | 312260,1734 | 49958,41655 | 590638,25074 |
| 63 | 34,289 | 301968,1520 | 46904,65919 | 540679,83419 |
| 64 | 35,714 | 291613,8316 | 43977,01403 | 493775,17500 |
| 65 | 37,240 | 281199,1024 | 41171,27573 | 449798,16097 |
| 66 | 38,875 | 270727,1378 | 38483,53526 | 408626,88523 |
| 67 | 40,627 | 260202,5268 | 35910,16945 | 370143,34998 |
| 68 | 42,502 | 249631,4078 | 33447,82991 | 334233,18053 |
| 69 | 44,510 | 239021,6024 | 31093,43115 | 300785,35063 |
| 70 | 46,660 | 228382,7453 | 28844,13767 | 269691,91948 |
| 71 | 49,939 | 217726,4066 | 26697,34974 | 240847,78181 |
| 72 | 53,489 | 206853,3731 | 24625,35094 | 214150,43207 |
| 73 | 57,331 | 195788,9953 | 22629,28720 | 189525,08113 |
| 74 | 61,488 | 184564,1646 | 20710,60344 | 166895,79393 |
| 75 | 65,985 | 173215,5987 | 18871,01007 | 146185,19048 |
| 76 | 70,846 | 161786,0147 | 17112,43847 | 127314,18041 |
| 77 | 76,099 | 150324,1570 | 15436,98474 | 110201,74195 |
| 78 | 81,773 | 138884,6452 | 13846,84104 | 94764,75721 |
| 79 | 87,899 | 127527,6044 | 12344,21422 | 80917,91617 |
| 80 | 94,509 | 116318,0422 | 10931,23189 | 68573,70195 |
| 81 | 101,637 | 105324,9440 | 9609,83732 | 57642,47005 |
| 82 | 109,318 | 94620,0633 | 8381,67483 | 48032,63273 |
| 83 | 117,589 | 84276,4009 | 7247,96904 | 39650,95790 |
| 84 | 126,490 | 74366,3839 | 6209,40217 | 32402,98886 |
| 85 | 136,059 | 64959,7775 | 5265,99483 | 26193,58669 |
| 86 | 146,338 | 56121,3950 | 4416,99729 | 20927,59185 |
| 87 | 157,368 | 47908,6950 | 3660,79822 | 16510,59456 |
| 88 | 169,191 | 40369,3937 | 2994,85950 | 12849,79634 |
| 89 | 181,850 | 33539,2394 | 2415,68449 | 9854,93684 |
| 90 | 195,386 | 27440,1238 | 1918,82710 | 7439,25235 |

**SUPERINTENDENCIA DE
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| | | | | |
|-----|----------|------------|------------|------------|
| 91 | 209,840 | 22078,7047 | 1498,94654 | 5520,42525 |
| 92 | 225,251 | 17445,7084 | 1149,91023 | 4021,47872 |
| 93 | 241,655 | 13516,0459 | 864,94354 | 2871,56849 |
| 94 | 259,086 | 10249,8212 | 636,82069 | 2006,62495 |
| 95 | 277,572 | 7594,2337 | 458,08662 | 1369,80426 |
| 96 | 297,136 | 5486,2864 | 321,29569 | 911,71763 |
| 97 | 317,793 | 3856,1150 | 219,24979 | 590,42194 |
| 98 | 339,550 | 2630,6701 | 145,21730 | 371,17215 |
| 99 | 362,405 | 1737,4259 | 93,11530 | 225,95485 |
| 100 | 386,343 | 1107,7740 | 57,64063 | 132,83955 |
| 101 | 411,335 | 679,7936 | 34,34135 | 75,19892 |
| 102 | 437,338 | 400,1708 | 19,62675 | 40,85757 |
| 103 | 464,291 | 225,1610 | 10,72159 | 21,23082 |
| 104 | 492,116 | 120,6207 | 5,57636 | 10,50923 |
| 105 | 520,714 | 61,2612 | 2,74965 | 4,93287 |
| 106 | 549,965 | 29,3616 | 1,27948 | 2,18323 |
| 107 | 579,728 | 13,2138 | 0,55904 | 0,90375 |
| 108 | 609,840 | 5,5534 | 0,22811 | 0,34470 |
| 109 | 640,119 | 2,1667 | 0,08641 | 0,11660 |
| 110 | 1000,000 | 0,7798 | 0,03019 | 0,03019 |