NOMBRES - Curiosités, théorie et usages

NOMBRES PREMIERS de rang donné

Retour Page Principale (Liste de nombres premiers)
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Table des nombres premiers selon leur rang

Sommaire

Nombres premiers du rang 1 au rang 100

Exemple: au 10e rang on trouve le nombre premier 29

[[1, 2], [2, 3], [3, 5], [4, 7], [5, 11], [6, 13], [7, 17], [8, 19], [9, 23], [10, 29], [11, 31], [12, 37], [13, 41], [14, 43], [15, 47], [16, 53], [17, 59], [18, 61], [19, 67], [20, 71], [21, 73], [22, 79], [23, 83], [24, 89], [25, 97], [26, 101], [27, 103], [28, 107], [29, 109], [30, 113], [31, 127], [32, 131], [33, 137], [34, 139], [35, 149], [36, 151], [37, 157], [38, 163], [39, 167], [40, 173], [41, 179], [42, 181], [43, 191], [44, 193], [45, 197], [46, 199], [47, 211], [48, 223], [49, 227], [50, 229], [51, 233], [52, 239], [53, 241], [54, 251], [55, 257], [56, 263], [57, 269], [58, 271], [59, 277], [60, 281], [61, 283], [62, 293], [63, 307], [64, 311], [65, 313], [66, 317], [67, 331], [68, 337], [69, 347], [70, 349], [71, 353], [72, 359], [73, 367], [74, 373], [75, 379], [76, 383], [77, 389], [78, 397], [79, 401], [80, 409], [81, 419], [82, 421], [83, 431], [84, 433], [85, 439], [86, 443], [87, 449], [88, 457], [89, 461], [90, 463], [91, 467], [92, 479], [93, 487], [94, 491], [95, 499], [96, 503], [97, 509], [98, 521], [99, 523], [100, 541]]

Nombres premiers du rang 100 au rang 1000 par 10

[[100, 541], [110, 601], [120, 659], [130, 733], [140, 809], [150, 863], [160, 941], [170, 1013], [180, 1069], [190, 1151], [200, 1223], [210, 1291], [220, 1373], [230, 1451], [240, 1511], [250, 1583], [260, 1657], [270, 1733], [280, 1811], [290, 1889], [300, 1987], [310, 2053], [320, 2129], [330, 2213], [340, 2287], [350, 2357], [360, 2423], [370, 2531], [380, 2617], [390, 2687], [400, 2741], [410, 2819], [420, 2903], [430, 2999], [440, 3079], [450, 3181], [460, 3257], [470, 3331], [480, 3413], [490, 3511], [500, 3571], [510, 3643], [520, 3727], [530, 3821], [540, 3907], [550, 3989], [560, 4057], [570, 4139], [580, 4231], [590, 4297], [600, 4409], [610, 4493], [620,

4583], [630, 4657], [640, 4751], [650, 4831], [660, 4937], [670, 5003], [680, 5087], [690, 5179], [700, 5279], [710, 5387], [720, 5443], [730, 5521], [740, 5639], [750, 5693], [760, 5791], [770, 5857], [780, 5939], [790, 6053], [800, 6133], [810, 6221], [820, 6301], [830, 6367], [840, 6473], [850, 6571], [860, 6673], [870, 6761], [880, 6833], [890, 6917], [900, 6997], [910, 7103], [920, 7207], [930, 7297], [940, 7411], [950, 7499], [960, 7561], [970, 7643], [980, 7723], [990, 7829], [1000, 7919]]

Nombres premiers du rang 1000 au rang 10 000 par 100

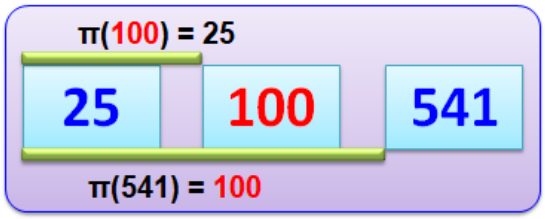
[[1000, 7919], [1100, 8831], [1200, 9733], [1300, 10657], [1400, 11657], [1500, 12553], [1600, 13499], [1700, 14519], [1800, 15401], [1900, 16381], [2000, 17389], [2100, 18313], [2200, 19423], [2300, 20357], [2400, 21383], [2500, 22307], [2600, 23321], [2700, 24281], [2800, 25391], [2900, 26399], [3000, 27449], [3100, 28499], [3200, 29443], [3300, 30559], [3400, 31601], [3500, 32609], [3600, 33613], [3700, 34649], [3800, 35759], [3900, 36781], [4000, 37813], [4100, 38921], [4200, 39971], [4300, 41081], [4400, 42073], [4500, 43051], [4600, 44201], [4700, 45307], [4800, 46447], [4900, 47527], [5000, 48611], [5100, 49663], [5200, 50753], [5300, 51803], [5400, 52919], [5500, 53993], [5600, 55103], [5700, 56179], [5800, 57191], [5900, 58237], [6000, 59359], [6100, 60497], [6200, 61631], [6300, 62773], [6400, 63809], [6500, 65063], [6600, 66103], [6700, 67231], [6800, 68371], [6900, 69493], [7000, 70657], [7100, 71713], [7200, 72823], [7300, 73973], [7400, 75079], [7500, 76207], [7600, 77351], [7700, 78479], [7800, 79621], [7900, 80713], [8000, 81799], [8100, 82891], [8200, 84127], [8300, 85237], [8400, 86371], [8500, 87553], [8600, 88801], [8700, 89849], [8800, 90977], [8900, 92173], [9000, 93179], [9100, 94349], [9200, 95441], [9300, 96581], [9400, 97813], [9500, 98947], [9600, 100109], [9700, 101281], [9800, 102317], [9900, 103591], [10000, 104729]]

Nombres premiers au rang 10^k (Fonction Pi(n))

Ne pas confondre Pi(n) et Phi(n)

Pi(n) = Quantité de nombre premiers inférieurs à n.
Ex: Il y a 25 nombre premiers jusqu'à 100, et 100 jusqu'à 541.

Phi(n) = Quantité de nombres premiers avec n et inférieurs à n.
Ex: Phi(100) = 40



Pi(d)	d = Pi(n)	n
0	1	2
4	10	29
25	100	541
168	1000	7 919
1 229	10^4	104 729
9 592	10^5	1 299 709
78 498	10^6	15 485 863
664 579	10^7	179 424 673
5 761 455	10^8	2 038 074 743
50 847 534	10^9	22 801 763 489
455 052 511	10^{10}	252 097 800 623
4 118 054 813	10^{11}	2 760 727 302 517
37 607 912 018	10^{12}	29 996 224 275 833
346 065 536 839	10^{13}	323 780 508 946 331
3 204 941 750 802	10^{14}	3 475 385 758 524 527
29 844 570 422 669	10^{15}	37 124 508 045 065 437
279 238 341 033 925	10^{16}	394 906 913 903 735 329
2 623 557 157 654 233	10^{17}	4 185 296 581 467 695 669
24 739 954 287 740 860	10^{18}	44 211 790 234 832 169 331

Programme Maple: recherche des premiers de rang 10^k

```
L := [ ] :
for k from 1 to 5 do
  i := 10^k :
  L := [op(L), [i, ithprime(i)]] :
od: L;
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[[10, 29], [100, 541], [1000, 7919], [10000, 104729], [100000, 1299709]]

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