

```

In[ ]:= SeedRandom[412]
list = RandomPrime[{161, 672}, 488]
sum = list[[162]] + list[[366]]
bin = IntegerDigits[sum, 2]
rot = RotateLeft[bin, 12]
FromDigits[rot, 2]

Out[ ]:= RandomGeneratorState[
  Method: ExtendedCA
  State hash: 8965510408165155272
]

```

```

Out[ ]:= {463, 577, 587, 281, 311, 487, 163, 337, 593, 587, 281, 233, 631, 457, 509, 421,
293, 269, 397, 193, 439, 337, 331, 397, 277, 631, 659, 617, 547, 229, 463, 467,
163, 587, 643, 643, 463, 337, 619, 419, 509, 397, 487, 257, 349, 601, 331, 661,
409, 443, 281, 337, 223, 181, 401, 307, 167, 479, 499, 661, 571, 313, 601, 181,
457, 641, 659, 331, 647, 641, 431, 491, 401, 647, 317, 563, 617, 409, 617, 617,
607, 491, 619, 643, 443, 347, 163, 433, 607, 223, 487, 619, 197, 487, 331, 521,
541, 647, 373, 281, 457, 487, 337, 367, 223, 601, 283, 443, 523, 613, 293, 491,
277, 479, 421, 337, 421, 191, 167, 467, 367, 349, 547, 269, 587, 401, 263, 337,
647, 311, 643, 401, 463, 641, 167, 281, 211, 257, 523, 211, 277, 383, 571, 491,
163, 271, 653, 569, 347, 479, 337, 419, 619, 223, 251, 257, 227, 607, 251, 523,
293, 661, 547, 431, 193, 631, 167, 307, 599, 223, 619, 521, 283, 509, 347, 211,
271, 443, 419, 659, 601, 373, 599, 373, 443, 347, 521, 367, 389, 541, 643, 337,
293, 281, 547, 227, 557, 593, 293, 641, 191, 463, 577, 359, 233, 607, 613, 191,
353, 223, 641, 409, 271, 571, 359, 181, 331, 277, 487, 293, 631, 631, 409,
199, 521, 409, 379, 431, 541, 521, 163, 607, 233, 563, 479, 461, 223, 541,
433, 367, 463, 631, 223, 263, 547, 547, 397, 503, 563, 541, 619, 599, 593, 643,
541, 331, 367, 191, 191, 241, 509, 347, 503, 607, 421, 631, 313, 647, 557,
383, 349, 383, 347, 557, 421, 503, 521, 383, 461, 179, 449, 191, 439, 317,
251, 479, 421, 223, 373, 463, 419, 173, 293, 647, 563, 397, 389, 251, 331, 271,
163, 541, 433, 479, 521, 317, 401, 491, 263, 563, 383, 193, 503, 389, 229, 569,
661, 379, 229, 211, 487, 373, 661, 503, 523, 509, 593, 431, 349, 653, 563, 229,
331, 331, 353, 167, 277, 461, 541, 181, 613, 569, 401, 331, 557, 521, 181, 307,
277, 251, 587, 491, 229, 593, 313, 239, 359, 547, 233, 503, 263, 179, 569, 191,
389, 163, 587, 181, 331, 661, 367, 631, 349, 487, 617, 167, 311, 271, 467, 227,
211, 263, 521, 419, 457, 509, 181, 223, 359, 257, 227, 199, 601, 577, 487, 359,
491, 191, 383, 191, 461, 239, 401, 421, 491, 479, 571, 641, 227, 439, 277, 607,
467, 263, 647, 313, 601, 179, 311, 227, 479, 239, 557, 283, 419, 331, 397, 239,
317, 163, 617, 571, 409, 433, 563, 263, 563, 433, 389, 167, 521, 607, 431,
661, 631, 503, 263, 167, 431, 241, 359, 271, 281, 331, 431, 167, 383, 571,
389, 331, 347, 229, 571, 397, 503, 601, 601, 223, 631, 173, 599, 199, 317,
353, 197, 263, 599, 523, 283, 379, 401, 263, 419, 661, 419, 499, 293, 167}

```

```

Out[ ]:= 824

```

```

Out[ ]:= {1, 1, 0, 0, 1, 1, 1, 0, 0, 0}

```

```

Out[ ]:= {0, 0, 1, 1, 1, 0, 0, 0, 1, 1}

```

```

Out[ ]:= 227

```

```
In[ ]:= PrimePi[6475]
```

```
Out[ ]:= 840
```

```
In[ ]:= IntegerLength[7451168, 16]
```

```
Out[ ]:= 6
```

```
In[ ]:= res = Mod[NextPrime[4052, 1] * NextPrime[4052, 2], 185]
```

```
Out[ ]:= 146
```

```
In[ ]:= lost = {}
```

```
AppendTo[lost, NextPrime[74, 1]]
```

```
AppendTo[lost, NextPrime[74, 2]]
```

```
AppendTo[lost, NextPrime[74, 3]]
```

```
AppendTo[lost, NextPrime[74, 4]]
```

```
AppendTo[lost, NextPrime[74, 5]]
```

```
AppendTo[lost, NextPrime[74, 6]]
```

```
AppendTo[lost, NextPrime[74, 7]]
```

```
AppendTo[lost, NextPrime[74, 8]]
```

```
AppendTo[lost, NextPrime[74, 9]]
```

```
Intersection[Range[44, 99], lost]
```

```
Out[ ]:= {}
```

```
Out[ ]:= {79}
```

```
Out[ ]:= {79, 83}
```

```
Out[ ]:= {79, 83, 89}
```

```
Out[ ]:= {79, 83, 89, 97}
```

```
Out[ ]:= {79, 83, 89, 97, 101}
```

```
Out[ ]:= {79, 83, 89, 97, 101, 103}
```

```
Out[ ]:= {79, 83, 89, 97, 101, 103, 107}
```

```
Out[ ]:= {79, 83, 89, 97, 101, 103, 107, 109}
```

```
Out[ ]:= {79, 83, 89, 97, 101, 103, 107, 109, 113}
```

```
Out[ ]:= {79, 83, 89, 97}
```

```
In[*]:= range = CharacterRange["а", "я"]
join = StringJoin[range]
code = ToCharacterCode[join]
Mean[code]
```

```
Out[*]:= {а, б, в, г, д, е, ж, з, и, й, к, л, м, н,
          о, п, р, с, т, у, ф, х, ц, ч, ш, щ, ъ, ы, ь, э, ю, я}
```

```
Out[*]:= абвгдежзийклмнопрстуфхцчшщъыьэюя
```

```
Out[*]:= {1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081,
          1082, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092,
          1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103}
```

```
Out[*]:= 
$$\frac{2175}{2}$$

```

```
In[*]:= sp1 = Range[1, 7]
sp2 = Range[469, 1096]
sp = Join[sp1, sp2]
sortsp = Sort[sp]
SeedRandom[660579282]
rnd = RandomSample[sortsp, 635]
a1 = Position[rnd, 1]
a2 = Position[rnd, 1096]
summa = a1 + a2
```

```
Out[*]:= {1, 2, 3, 4, 5, 6, 7}
```

```

Out[n]= {469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484,
485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500,
501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516,
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565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580,
581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596,
597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612,
613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628,
629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644,
645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660,
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738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752,
753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768,
769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784,
785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800,
801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816,
817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832,
833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848,
849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864,
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1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096}

```

```

Out[*]= {1, 2, 3, 4, 5, 6, 7, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481,
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594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609,
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797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812,
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1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096}

```

```

Out[*]= {1, 2, 3, 4, 5, 6, 7, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481,
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  894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909,
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  990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000, 1001, 1002, 1003, 1004,
  1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018,
  1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031,
  1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044,
  1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057,
  1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070,
  1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083,
  1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096}

```

```

Out[*]= RandomGeneratorState [
  Method: ExtendedCA
  State hash: -176 904 662 243 211 160
]

```

```

Out[*]= {1019, 740, 486, 473, 971, 579, 958, 903, 796, 800, 834, 967, 892, 1027, 1026, 654,
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        795, 845, 853, 679, 596, 989, 607, 887, 653, 889, 973, 524, 783, 756, 1010,
        857, 861, 535, 741, 694, 772, 645, 975, 848, 471, 863, 666, 663, 821, 1062,
        531, 1001, 970, 507, 1086, 519, 1056, 501, 560, 957, 729, 1066, 909, 493, 1016,
        943, 1043, 503, 745, 660, 480, 898, 677, 556, 871, 500, 815, 1042, 611, 991,
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