

Week 6 Programming Practice

Problem 1

Write a Python function **KminGreaterThan(arr, k, num)**, that accepts an unsorted list `arr`, two numbers `k` and `num`, returns `True` if the k^{th} smallest element in the list `arr` is greater than or equal to `num`, otherwise returns `False`. Try to write a solution that runs in $O(n \log k)$ time.

```
1 def kminGreaterThan(arr, k, num):  
2     #Complete this function
```

Sample Input:

```
1 66 55 43 34 12 7 2 20 5  
2 5  
3 18
```

Sample Output

```
1 True
```

Sample Input:

```
1 66 55 43 34 12 7 2 20 5  
2 6  
3 40
```

Sample Output

```
1 False
```

Solution:

```
1 class max_heap:  
2     def __init__(self):  
3         self.size=0  
4         self.arr = []  
5  
6     def isempty(self):  
7         return True if (self.size == 0) else False  
8  
9     def max(self):  
10        return self.arr[0] if self.size>0 else None  
11  
12        # Heapify element at index i  
13        def heapify_down(self, i):  
14            n = self.size  
15            a = self.arr  
16            while (i<n):  
17                gg = 1 = 2 * i + 1
```

```

18     r = 2 * i + 2
19     # gg is greater of left and right child
20     if (l < n and r < n and a[l] < a[r]):
21         gg = r
22     if (gg < n and a[gg] > a[i]):
23         a[i], a[gg] = a[gg], a[i]
24         i = gg
25     else:
26         break
27
28 def delete_max(self):
29     max = self.arry[0]
30     last = self.arry.pop()
31     #size of heap after pop operation will reduce by 1
32     self.size -= 1
33     if (self.size > 0):
34         self.arry[0] = last
35         self.heapify_down(0)
36     return max
37
38 # Replace max element with x
39 def replace_max(self, x):
40     max = self.arry[0]
41     self.arry[0] = x
42     self.heapify_down(0)
43     return max
44
45 # Heapify last element in the heap
46 def heapify_up(self):
47     i = self.size - 1
48     while (i > 0):
49         parent = (i-1)//2
50         if (self.arry[i] > self.arry[parent]):
51             self.arry[i], self.arry[parent] = self.arry[parent], self.arry[i]
52             i = parent
53         else:
54             break
55
56 # Insert to min heap
57 def insert_max_heap(self, x):
58     self.arry.append(x)
59     self.size += 1
60     self.heapify_up()
61
62 # This function first finds the kth smallest element and than compares it
with x
63 def kminGreaterThan(arr, k, num):
64     # Build max heap of size k
65     h = max_heap()
66     for i in range(k):
67         h.insert_max_heap(L[i])
68
69     # Insert the next element in the list if it is smaller than the max in
heap.
70     # This will ensure that the heap contains k minimum elements from the
parsed elements.
71     for i in range(k, len(arr)):
72         if (h.max() > arr[i]):

```

```
73     h.replace_max(arr[i])
74     return True if (h.max() >= num) else False
```

Suffix

```
1 L = [int(item) for item in input().split(" ")]
2 k = int(input())
3 num = int(input())
4 print(KminGreaterThan(L, k, num))
```

Public Test Case 1

input

```
1 | 1 10 11 12 15 23 31 34 61 64 65 72 84 92 96
2 | 4
3 | 30
```

output

```
1 | False
```

Public Test case 2

input

```
1 | 77 97 109 147 155 160 188 191 205 206 217 242 252 286 289 294 308 312 335 375
   | 393 402 405 455 456
2 | 10
3 | 78
```

output

```
1 | True
```

Private Test case 1

input

```
1 | 80 98 110 117 125 126 127 132 150 159 171 183 187 200 208 209 221 223 236 242
   | 247 255 274 283 315 340 346 356 361 365
2 | 11
3 | 150
```

output

```
1 | True
```

Private Test case 2

input

```
1 | 63 71 93 118 125 129 136 147 149 159 166 172 173 183 184 185 220 226 236 238
   | 251 279 290 298 302 327 340 343 360 366 396 406 407 413 439 454 460 474 487
   | 488 494 498 543 549 550 560 563 582 587 600
2 | 23
3 | 256
```

output

```
1 | True
```

Private Test case 3

input

```
1 | 77 97 109 147 155 160 188 191 205 206 217 242 252 286 289 294 308 312 335 375
   | 393 402 405 455 456
2 | 10
3 | 78
```

output

```
1 | True
```

Private Test case 4

input

| | | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 60074 | 60077 | 60078 | 60084 | 60114 | 60121 | 60122 | 60124 | 60129 | 60152 | 60153 | 60156 | 60183 |
| | 60197 | 60201 | 60203 | 60220 | 60227 | 60228 | 60234 | 60244 | 60265 | 60266 | 60272 | 60280 | 60292 |
| | 60298 | 60301 | 60304 | 60308 | 60313 | 60317 | 60323 | 60329 | 60334 | 60335 | 60356 | 60359 | 60361 |
| | 60372 | 60377 | 60379 | 60391 | 60403 | 60406 | 60407 | 60408 | 60409 | 60416 | 60420 | 60423 | 60459 |
| | 60466 | 60469 | 60474 | 60478 | 60483 | 60486 | 60491 | 60518 | 60526 | 60539 | 60542 | 60549 | 60557 |
| | 60577 | 60592 | 60598 | 60599 | 60605 | 60610 | 60623 | 60625 | 60628 | 60639 | 60645 | 60651 | 60698 |
| | 60746 | 60748 | 60749 | 60759 | 60760 | 60766 | 60770 | 60772 | 60777 | 60788 | 60789 | 60808 | 60819 |
| | 60829 | 60830 | 60844 | 60852 | 60863 | 60882 | 60884 | 60900 | 60906 | 60908 | 60910 | 60916 | 60924 |
| | 60927 | 60931 | 60935 | 60945 | 60970 | 60975 | 60976 | 60980 | 61001 | 61002 | 61020 | 61042 | 61045 |
| | 61071 | 61081 | 61129 | 61136 | 61138 | 61146 | 61157 | 61158 | 61164 | 61168 | 61179 | 61191 | 61220 |
| | 61232 | 61242 | 61254 | 61271 | 61272 | 61282 | 61297 | 61356 | 61372 | 61376 | 61383 | 61388 | 61406 |
| | 61411 | 61422 | 61440 | 61445 | 61465 | 61476 | 61509 | 61516 | 61540 | 61557 | 61580 | 61582 | 61616 |
| | 61626 | 61628 | 61629 | 61644 | 61645 | 61648 | 61668 | 61670 | 61685 | 61686 | 61687 | 61711 | 61741 |
| | 61743 | 61759 | 61780 | 61785 | 61795 | 61808 | 61822 | 61832 | 61844 | 61852 | 61867 | 61869 | 61878 |
| | 61896 | 61914 | 61921 | 61932 | 61944 | 61951 | 61952 | 61975 | 61979 | 61986 | 62000 | 62006 | 62011 |
| | 62017 | 62031 | 62036 | 62040 | 62041 | 62048 | 62052 | 62057 | 62069 | 62076 | 62078 | 62079 | 62103 |
| | 62134 | 62187 | 62189 | 62203 | 62204 | 62207 | 62209 | 62213 | 62214 | 62225 | 62227 | 62266 | 62272 |
| | 62278 | 62298 | 62301 | 62302 | 62304 | 62327 | 62333 | 62345 | 62347 | 62363 | 62405 | 62406 | 62426 |
| | 62427 | 62444 | 62457 | 62470 | 62485 | 62490 | 62511 | 62513 | 62524 | 62530 | 62532 | 62542 | 62544 |
| | 62546 | 62549 | 62553 | 62554 | 62557 | 62559 | 62561 | 62589 | 62596 | 62597 | 62598 | 62615 | 62619 |
| | 62631 | 62643 | 62653 | 62654 | 62659 | 62662 | 62666 | 62693 | 62703 | 62727 | 62731 | 62733 | 62744 |
| | 62746 | 62747 | 62752 | 62754 | 62759 | 62767 | 62770 | 62772 | 62774 | 62777 | 62806 | 62816 | 62819 |
| | 62829 | 62841 | 62859 | 62875 | 62918 | 62926 | 62927 | 62940 | 62948 | 62954 | 62960 | 62994 | 63003 |
| | 63005 | 63006 | 63008 | 63016 | 63024 | 63025 | 63034 | 63036 | 63052 | 63053 | 63062 | 63074 | 63078 |
| | 63079 | 63086 | 63088 | 63095 | 63098 | 63105 | 63106 | 63111 | 63118 | 63120 | 63126 | 63139 | 63167 |
| | 63169 | 63174 | 63191 | 63194 | 63195 | 63198 | 63203 | 63208 | 63260 | 63262 | 63263 | 63265 | 63275 |
| | 63293 | 63317 | 63323 | 63334 | 63345 | 63346 | 63350 | 63351 | 63362 | 63364 | 63394 | 63400 | 63405 |
| | 63408 | 63411 | 63413 | 63429 | 63435 | 63437 | 63447 | 63457 | 63459 | 63488 | 63505 | 63507 | 63515 |
| | 63559 | 63569 | 63572 | 63575 | 63585 | 63586 | 63589 | 63604 | 63617 | 63622 | 63623 | 63629 | 63631 |
| | 63641 | 63643 | 63680 | 63686 | 63691 | 63692 | 63699 | 63702 | 63704 | 63705 | 63710 | 63714 | 63722 |
| | 63739 | 63742 | 63757 | 63780 | 63786 | 63788 | 63794 | 63799 | 63812 | 63814 | 63820 | 63823 | 63828 |
| | 63834 | 63837 | 63849 | 63853 | 63866 | 63877 | 63879 | 63881 | 63891 | 63908 | 63910 | 63916 | 63921 |
| | 63927 | 63931 | 63944 | 63954 | 63960 | 63969 | 63984 | 64016 | 64023 | 64027 | 64035 | 64038 | 64042 |
| | 64056 | 64060 | 64065 | 64074 | 64107 | 64116 | 64123 | 64137 | 64141 | 64161 | 64192 | 64193 | 64197 |
| | 64199 | 64235 | 64236 | 64243 | 64251 | 64252 | 64274 | 64286 | 64293 | 64300 | 64317 | 64329 | 64342 |
| | 64355 | 64359 | 64380 | 64381 | 64418 | 64461 | 64462 | 64472 | 64479 | 64487 | 64498 | 64509 | 64519 |
| | 64529 | 64532 | 64542 | 64544 | 64573 | 64580 | 64600 | 64604 | 64608 | 64619 | 64624 | 64635 | 64640 |
| | 64708 | 64718 | 64725 | 64734 | 64773 | 64787 | 64802 | 64804 | 64809 | 64810 | 64818 | 64853 | 64871 |
| | 64873 | 64874 | 64885 | 64894 | 64895 | 64896 | 64907 | 64914 | 64929 | 64973 | 64975 | 64982 | 64993 |
| | 65005 | 65017 | 65026 | 65033 | 65050 | 65056 | 65062 | 65063 | 65065 | 65067 | 65098 | 65128 | 65130 |
| | 65150 | 65151 | 65174 | 65175 | 65190 | 65192 | 65202 | 65222 | 65242 | 65259 | 65268 | 65271 | 65278 |
| | 65284 | 65291 | 65293 | 65295 | 65296 | 65300 | 65312 | 65316 | 65318 | 65325 | 65326 | 65331 | 65360 |
| | 65380 | 65395 | 65416 | 65422 | 65433 | 65453 | 65460 | 65465 | 65478 | 65510 | 65513 | 65514 | 65529 |
| | 65531 | 65536 | 65537 | 65559 | 65576 | 65583 | 65603 | 65612 | 65615 | 65628 | 65636 | 65640 | 65643 |
| | 65659 | 65677 | 65685 | 65702 | 65706 | 65710 | 65712 | 65717 | 65728 | 65734 | 65756 | 65768 | 65780 |
| | 65788 | 65797 | 65798 | 65803 | 65812 | 65822 | 65835 | 65838 | 65854 | 65861 | 65864 | 65867 | 65870 |
| | 65880 | 65912 | 65919 | 65927 | 65934 | 65940 | 65942 | 65946 | 65952 | 65953 | 65963 | 65965 | 65971 |
| | 65981 | 65987 | 65990 | 65998 | 66015 | 66029 | 66067 | 66080 | 66084 | 66095 | 66100 | 66104 | 66117 |
| | 66129 | 66155 | 66157 | 66177 | 66191 | 66207 | 66215 | 66222 | 66223 | 66234 | 66254 | 66281 | 66287 |
| | 66331 | 66341 | 66350 | 66370 | 66375 | 66376 | 66384 | 66388 | 66391 | 66397 | 66409 | 66410 | 66413 |
| | 66423 | 66430 | 66433 | 66439 | 66442 | 66448 | 66467 | 66468 | 66472 | 66482 | 66506 | 66507 | 66514 |
| | 66516 | 66522 | 66523 | 66543 | 66553 | 66554 | 66557 | 66574 | 66588 | 66590 | 66595 | 66624 | 66633 |
| | 66645 | 66648 | 66659 | 66662 | 66677 | 66688 | 66695 | 66697 | 66700 | 66708 | 66710 | 66713 | 66720 |
| | 66732 | 66735 | 66737 | 66758 | 66777 | 66790 | 66803 | 66820 | 66830 | 66856 | 66870 | 66878 | 66898 |
| | 66908 | 66915 | 66935 | 66953 | 66967 | 67004 | 67019 | 67023 | 67027 | 67031 | 67061 | 67065 | 67068 |
| | 67087 | 67123 | 67138 | 67151 | 67156 | 67168 | 67187 | 67189 | 67207 | 67213 | 67214 | 67215 | 67244 |
| | 67255 | 67265 | 67273 | 67277 | 67294 | 67304 | 67315 | 67324 | 67338 | 67353 | 67359 | 67370 | 67383 |
| | 67388 | 67400 | 67409 | 67415 | 67421 | 67433 | 67438 | 67450 | 67462 | 67477 | 67480 | 67489 | 67505 |

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 67527 | 67534 | 67577 | 67587 | 67589 | 67596 | 67599 | 67607 | 67614 | 67616 | 67618 | 67620 | 67632 |
| 67634 | 67637 | 67661 | 67668 | 67684 | 67686 | 67689 | 67707 | 67710 | 67713 | 67718 | 67728 | 67769 |
| 67773 | 67780 | 67790 | 67794 | 67810 | 67843 | 67845 | 67877 | 67899 | 67904 | 67929 | 67935 | 67943 |
| 67949 | 67954 | 68000 | 68004 | 68005 | 68008 | 68014 | 68029 | 68031 | 68046 | 68058 | 68059 | 68075 |
| 68076 | 68103 | 68109 | 68122 | 68147 | 68160 | 68168 | 68180 | 68193 | 68209 | 68226 | 68235 | 68239 |
| 68252 | 68262 | 68269 | 68275 | 68283 | 68297 | 68320 | 68324 | 68344 | 68351 | 68356 | 68379 | 68381 |
| 68391 | 68399 | 68402 | 68403 | 68405 | 68449 | 68453 | 68454 | 68456 | 68466 | 68473 | 68475 | 68479 |
| 68484 | 68492 | 68504 | 68525 | 68527 | 68531 | 68534 | 68535 | 68540 | 68548 | 68588 | 68589 | 68601 |
| 68614 | 68635 | 68640 | 68642 | 68669 | 68694 | 68698 | 68700 | 68703 | 68704 | 68725 | 68730 | 68731 |
| 68734 | 68735 | 68767 | 68785 | 68792 | 68810 | 68821 | 68822 | 68835 | 68837 | 68841 | 68848 | 68859 |
| 68869 | 68880 | 68886 | 68888 | 68899 | 68907 | 68916 | 68920 | 68921 | 68923 | 68925 | 68940 | 68948 |
| 68952 | 68961 | 68991 | 68992 | 68997 | 69000 | 69004 | 69008 | 69012 | 69013 | 69015 | 69020 | 69039 |
| 69051 | 69062 | 69063 | 69085 | 69090 | 69091 | 69101 | 69113 | 69123 | 69133 | 69153 | 69154 | 69157 |
| 69170 | 69176 | 69185 | 69191 | 69196 | 69206 | 69209 | 69223 | 69280 | 69282 | 69292 | 69295 | 69309 |
| 69326 | 69329 | 69332 | 69345 | 69347 | 69380 | 69383 | 69385 | 69390 | 69405 | 69411 | 69432 | 69436 |
| 69437 | 69455 | 69466 | 69467 | 69472 | 69497 | 69499 | 69523 | 69533 | 69541 | 69546 | 69549 | 69561 |
| 69570 | 69574 | 69588 | 69592 | 69597 | 69617 | 69672 | 69673 | 69685 | 69691 | 69696 | 69705 | 69706 |
| 69708 | 69710 | 69717 | 69727 | 69738 | 69741 | 69742 | 69774 | 69780 | 69784 | 69786 | 69788 | 69798 |
| 69799 | 69810 | 69813 | 69819 | 69822 | 69829 | 69840 | 69846 | 69849 | 69863 | 69872 | 69873 | 69888 |
| 69898 | 69914 | 69928 | 69945 | 69961 | 69963 | 69985 | 69987 | 69993 | 69995 | 70005 | 70026 | 70029 |
| 70033 | 70050 | 70063 | 70072 | 70084 | 70091 | 70122 | 70124 | 70148 | 70151 | 70164 | 70167 | 70177 |
| 70179 | 70187 | 70203 | 70212 | 70231 | 70232 | 70239 | 70255 | 70259 | 70267 | 70299 | 70302 | 70305 |
| 70308 | 70312 | 70315 | 70324 | 70338 | 70344 | 70349 | 70356 | 70366 | 70380 | 70390 | 70400 | 70412 |
| 70414 | 70419 | 70424 | 70433 | 70446 | 70462 | 70468 | 70470 | 70479 | 70511 | 70523 | 70528 | 70539 |
| 70541 | 70546 | 70552 | 70567 | 70588 | 70590 | 70599 | 70614 | 70619 | 70621 | 70658 | 70664 | 70678 |
| 70681 | 70691 | 70696 | 70728 | 70730 | 70746 | 70769 | 70771 | 70777 | 70781 | 70784 | 70788 | 70793 |
| 70810 | 70820 | 70825 | 70858 | 70882 | 70896 | 70917 | 70923 | 70929 | 70931 | 70960 | 70964 | 70979 |
| 70989 | 71015 | 71022 | 71023 | 71044 | 71072 | 71083 | 71088 | 71093 | 71094 | 71098 | 71119 | 71128 |
| 71136 | 71139 | 71146 | 71160 | 71167 | 71169 | 71186 | 71189 | 71198 | 71200 | 71204 | 71216 | 71230 |
| 71241 | 71261 | 71277 | 71301 | 71302 | 71310 | 71314 | 71326 | 71328 | 71336 | 71352 | 71353 | 71354 |
| 71361 | 71362 | 71364 | 71368 | 71373 | 71383 | 71384 | 71397 | 71400 | 71405 | 71411 | 71455 | 71457 |
| 71471 | 71493 | 71509 | 71510 | 71513 | 71515 | 71527 | 71531 | 71532 | 71562 | 71585 | 71589 | 71602 |
| 71604 | 71608 | 71627 | 71629 | 71641 | 71643 | 71651 | 71653 | 71654 | 71658 | 71662 | 71666 | 71694 |
| 71713 | 71717 | 71726 | 71731 | 71754 | 71756 | 71769 | 71786 | 71804 | 71805 | 71825 | 71829 | 71836 |
| 71853 | 71854 | 71865 | 71884 | 71918 | 71920 | 71933 | 71936 | 71957 | 71976 | 71988 | 71989 | 72033 |
| 72036 | 72037 | 72040 | 72051 | 72093 | 72117 | 72124 | 72126 | 72142 | 72153 | 72163 | 72170 | 72180 |
| 72186 | 72223 | 72234 | 72235 | 72243 | 72246 | 72257 | 72279 | 72283 | 72287 | 72293 | 72295 | 72297 |
| 72333 | 72343 | 72352 | 72400 | 72406 | 72442 | 72446 | 72451 | 72453 | 72457 | 72474 | 72478 | 72486 |
| 72499 | 72506 | 72511 | 72528 | 72529 | 72538 | 72539 | 72559 | 72563 | 72565 | 72569 | 72596 | 72609 |
| 72617 | 72626 | 72635 | 72636 | 72649 | 72660 | 72667 | 72679 | 72692 | 72696 | 72705 | 72706 | 72710 |
| 72712 | 72714 | 72716 | 72720 | 72722 | 72740 | 72757 | 72764 | 72768 | 72786 | 72804 | 72805 | 72811 |
| 72813 | 72816 | 72846 | 72861 | 72905 | 72922 | 72923 | 72937 | 72938 | 72960 | 72970 | 72987 | 73002 |
| 73016 | 73042 | 73056 | 73067 | 73072 | 73113 | 73119 | 73120 | 73124 | 73135 | 73138 | 73147 | 73150 |
| 73154 | 73162 | 73164 | 73169 | 73202 | 73217 | 73251 | 73254 | 73257 | 73262 | 73288 | 73294 | 73301 |
| 73317 | 73336 | 73337 | 73345 | 73352 | 73376 | 73384 | 73412 | 73415 | 73421 | 73426 | 73453 | 73472 |
| 73482 | 73501 | 73504 | 73506 | 73509 | 73515 | 73517 | 73525 | 73547 | 73552 | 73562 | 73572 | 73594 |
| 73598 | 73600 | 73609 | 73616 | 73631 | 73635 | 73650 | 73652 | 73653 | 73687 | 73690 | 73694 | 73700 |
| 73704 | 73707 | 73711 | 73730 | 73737 | 73738 | 73771 | 73776 | 73785 | 73787 | 73791 | 73798 | 73833 |
| 73835 | 73838 | 73870 | 73883 | 73892 | 73900 | 73906 | 73908 | 73913 | 73914 | 73917 | 73925 | 73930 |
| 73932 | 73934 | 73950 | 73951 | 73958 | 73976 | 73995 | 74019 | 74020 | 74025 | 74039 | 74040 | 74052 |
| 74063 | 74066 | 74076 | 74082 | 74085 | 74091 | 74093 | 74128 | 74137 | 74146 | 74149 | 74182 | 74183 |
| 74189 | 74223 | 74240 | 74270 | 74279 | 74285 | 74304 | 74310 | 74311 | 74316 | 74318 | 74333 | 74355 |
| 74358 | 74362 | 74369 | 74371 | 74375 | 74381 | 74382 | 74389 | 74393 | 74396 | 74397 | 74400 | 74411 |
| 74421 | 74429 | 74433 | 74436 | 74437 | 74447 | 74465 | 74475 | 74477 | 74478 | 74480 | 74482 | 74484 |
| 74488 | 74496 | 74501 | 74504 | 74509 | 74513 | 74529 | 74551 | 74562 | 74568 | 74587 | 74615 | 74619 |
| 74621 | 74630 | 74645 | 74655 | 74676 | 74701 | 74702 | 74706 | 74717 | 74723 | 74728 | 74737 | 74744 |
| 74763 | 74799 | 74804 | 74815 | 74828 | 74830 | 74831 | 74832 | 74840 | 74841 | 74861 | 74878 | 74884 |
| 74903 | 74914 | 74922 | 74924 | 74949 | 74959 | 74960 | 74964 | 74966 | 74971 | 74975 | 75015 | 75019 |

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 75045 | 75069 | 75087 | 75098 | 75125 | 75132 | 75149 | 75178 | 75189 | 75199 | 75203 | 75229 | 75232 |
| 75245 | 75261 | 75264 | 75276 | 75278 | 75281 | 75284 | 75319 | 75329 | 75335 | 75343 | 75351 | 75366 |
| 75370 | 75371 | 75374 | 75380 | 75382 | 75402 | 75410 | 75421 | 75431 | 75435 | 75445 | 75450 | 75480 |
| 75493 | 75517 | 75525 | 75528 | 75530 | 75532 | 75542 | 75556 | 75570 | 75589 | 75591 | 75601 | 75622 |
| 75624 | 75643 | 75649 | 75660 | 75689 | 75700 | 75707 | 75722 | 75725 | 75737 | 75742 | 75756 | 75758 |
| 75764 | 75776 | 75782 | 75787 | 75791 | 75808 | 75809 | 75816 | 75831 | 75844 | 75859 | 75869 | 75870 |
| 75880 | 75887 | 75896 | 75897 | 75898 | 75910 | 75948 | 75977 | 75997 | 76008 | 76018 | 76028 | 76036 |
| 76045 | 76051 | 76055 | 76059 | 76074 | 76085 | 76090 | 76138 | 76142 | 76152 | 76174 | 76175 | 76179 |
| 76184 | 76194 | 76208 | 76223 | 76228 | 76244 | 76259 | 76280 | 76286 | 76303 | 76313 | 76325 | 76342 |
| 76346 | 76356 | 76360 | 76366 | 76370 | 76375 | 76385 | 76390 | 76396 | 76400 | 76404 | 76415 | 76418 |
| 76422 | 76441 | 76450 | 76452 | 76475 | 76491 | 76508 | 76515 | 76531 | 76543 | 76547 | 76583 | 76588 |
| 76621 | 76647 | 76659 | 76677 | 76698 | 76730 | 76746 | 76748 | 76753 | 76755 | 76758 | 76774 | 76783 |
| 76784 | 76785 | 76787 | 76802 | 76808 | 76814 | 76833 | 76835 | 76842 | 76856 | 76865 | 76916 | 76921 |
| 76946 | 76949 | 76955 | 76970 | 76980 | 76983 | 77004 | 77009 | 77015 | 77018 | 77025 | 77027 | 77046 |
| 77048 | 77049 | 77052 | 77055 | 77061 | 77063 | 77098 | 77108 | 77119 | 77138 | 77141 | 77184 | 77190 |
| 77202 | 77205 | 77210 | 77216 | 77225 | 77241 | 77262 | 77264 | 77272 | 77273 | 77278 | 77289 | 77294 |
| 77303 | 77325 | 77328 | 77350 | 77395 | 77396 | 77414 | 77418 | 77445 | 77448 | 77473 | 77479 | 77489 |
| 77492 | 77510 | 77518 | 77520 | 77540 | 77560 | 77572 | 77585 | 77610 | 77615 | 77637 | 77638 | 77642 |
| 77646 | 77676 | 77679 | 77683 | 77687 | 77695 | 77702 | 77709 | 77720 | 77726 | 77730 | 77736 | 77743 |
| 77747 | 77753 | 77755 | 77757 | 77769 | 77803 | 77840 | 77855 | 77858 | 77863 | 77875 | 77889 | 77891 |
| 77899 | 77900 | 77906 | 77907 | 77909 | 77916 | 77923 | 77928 | 77938 | 77941 | 77943 | 77948 | 77949 |
| 77986 | 78002 | 78007 | 78009 | 78015 | 78027 | 78041 | 78063 | 78064 | 78074 | 78075 | 78092 | 78093 |
| 78097 | 78131 | 78133 | 78135 | 78136 | 78138 | 78181 | 78189 | 78191 | 78195 | 78201 | 78213 | 78225 |
| 78233 | 78236 | 78248 | 78262 | 78272 | 78274 | 78277 | 78278 | 78280 | 78357 | 78362 | 78388 | 78393 |
| 78408 | 78414 | 78415 | 78417 | 78429 | 78439 | 78442 | 78455 | 78461 | 78467 | 78487 | 78490 | 78505 |
| 78521 | 78525 | 78530 | 78537 | 78540 | 78546 | 78549 | 78558 | 78570 | 78571 | 78574 | 78590 | 78597 |
| 78610 | 78617 | 78620 | 78624 | 78626 | 78641 | 78655 | 78664 | 78665 | 78673 | 78678 | 78684 | 78694 |
| 78697 | 78700 | 78702 | 78710 | 78714 | 78724 | 78737 | 78758 | 78796 | 78802 | 78813 | 78822 | 78844 |
| 78854 | 78864 | 78865 | 78901 | 78908 | 78916 | 78917 | 78926 | 78927 | 78928 | 78934 | 78936 | 78937 |
| 78949 | 78965 | 79001 | 79029 | 79050 | 79059 | 79064 | 79068 | 79072 | 79076 | 79082 | 79085 | 79091 |
| 79098 | 79115 | 79119 | 79121 | 79122 | 79125 | 79139 | 79145 | 79147 | 79149 | 79158 | 79161 | 79206 |
| 79221 | 79230 | 79233 | 79244 | 79245 | 79246 | 79255 | 79257 | 79266 | 79269 | 79297 | 79305 | 79335 |
| 79349 | 79354 | 79356 | 79364 | 79366 | 79375 | 79381 | 79384 | 79385 | 79387 | 79415 | 79416 | 79425 |
| 79452 | 79479 | 79486 | 79510 | 79519 | 79534 | 79538 | 79539 | 79545 | 79563 | 79569 | 79578 | 79582 |
| 79588 | 79591 | 79617 | 79634 | 79635 | 79646 | 79651 | 79652 | 79659 | 79664 | 79670 | 79671 | 79687 |
| 79691 | 79694 | 79715 | 79729 | 79735 | 79775 | 79779 | 79798 | 79800 | 79836 | 79839 | 79845 | 79849 |
| 79853 | 79854 | 79855 | 79866 | 79867 | 79871 | 79893 | 79897 | 79921 | 79923 | 79928 | 79933 | 79935 |
| 79941 | 79967 | 79978 | 79991 | 79993 | 80007 | 80009 | 80017 | 80022 | 80053 | 80072 | 80102 | 80103 |
| 80118 | 80127 | 80129 | 80139 | 80142 | 80152 | 80153 | 80154 | 80174 | 80177 | 80181 | 80184 | 80203 |
| 80217 | 80220 | 80223 | 80233 | 80250 | 80253 | 80256 | 80257 | 80289 | 80291 | 80293 | 80302 | 80312 |
| 80315 | 80344 | 80396 | 80418 | 80419 | 80421 | 80428 | 80452 | 80455 | 80464 | 80481 | 80487 | 80489 |
| 80506 | 80513 | 80516 | 80520 | 80521 | 80527 | 80551 | 80556 | 80558 | 80574 | 80584 | 80602 | 80604 |
| 80605 | 80612 | 80620 | 80634 | 80635 | 80648 | 80664 | 80669 | 80671 | 80672 | 80701 | 80710 | 80725 |
| 80744 | 80747 | 80749 | 80763 | 80766 | 80769 | 80778 | 80792 | 80809 | 80812 | 80816 | 80826 | 80835 |
| 80840 | 80841 | 80860 | 80868 | 80888 | 80896 | 80905 | 80922 | 80930 | 80947 | 80956 | 80963 | 80965 |
| 80976 | 80984 | 80993 | 80996 | 81000 | 81007 | 81009 | 81010 | 81012 | 81028 | 81054 | 81056 | 81065 |
| 81071 | 81075 | 81093 | 81096 | 81115 | 81121 | 81141 | 81146 | 81171 | 81180 | 81183 | 81194 | 81197 |
| 81209 | 81216 | 81219 | 81222 | 81225 | 81235 | 81243 | 81246 | 81257 | 81268 | 81270 | 81285 | 81295 |
| 81300 | 81305 | 81311 | 81319 | 81326 | 81375 | 81387 | 81388 | 81398 | 81436 | 81466 | 81471 | 81478 |
| 81487 | 81494 | 81496 | 81508 | 81563 | 81571 | 81577 | 81580 | 81587 | 81605 | 81613 | 81631 | 81637 |
| 81649 | 81656 | 81658 | 81681 | 81685 | 81698 | 81707 | 81717 | 81744 | 81745 | 81749 | 81753 | 81755 |
| 81757 | 81758 | 81767 | 81769 | 81770 | 81784 | 81786 | 81795 | 81797 | 81800 | 81809 | 81824 | 81834 |
| 81857 | 81859 | 81881 | 81931 | 81939 | 81952 | 81960 | 81969 | 81973 | 81981 | 81982 | 82008 | 82021 |
| 82031 | 82038 | 82040 | 82079 | 82080 | 82094 | 82126 | 82130 | 82145 | 82153 | 82159 | 82171 | 82179 |
| 82181 | 82183 | 82198 | 82225 | 82236 | 82242 | 82244 | 82246 | 82248 | 82258 | 82272 | 82311 | 82344 |
| 82357 | 82359 | 82372 | 82373 | 82380 | 82385 | 82387 | 82395 | 82400 | 82407 | 82412 | 82441 | 82449 |
| 82460 | 82476 | 82478 | 82482 | 82499 | 82508 | 82516 | 82524 | 82533 | 82539 | 82549 | 82557 | 82587 |
| 82603 | 82607 | 82630 | 82633 | 82637 | 82643 | 82658 | 82662 | 82725 | 82734 | 82752 | 82760 | 82761 |

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 82771 | 82778 | 82800 | 82814 | 82818 | 82846 | 82852 | 82857 | 82858 | 82861 | 82863 | 82869 | 82880 |
| 82892 | 82895 | 82902 | 82913 | 82917 | 82932 | 82941 | 82942 | 82948 | 82953 | 82961 | 82966 | 82970 |
| 82972 | 82976 | 82985 | 83008 | 83020 | 83032 | 83033 | 83039 | 83045 | 83051 | 83055 | 83066 | 83093 |
| 83098 | 83101 | 83106 | 83110 | 83111 | 83120 | 83122 | 83128 | 83132 | 83133 | 83144 | 83148 | 83166 |
| 83167 | 83170 | 83180 | 83194 | 83207 | 83236 | 83250 | 83266 | 83280 | 83289 | 83291 | 83293 | 83302 |
| 83325 | 83345 | 83353 | 83379 | 83386 | 83395 | 83411 | 83428 | 83444 | 83454 | 83466 | 83475 | 83484 |
| 83488 | 83496 | 83498 | 83520 | 83524 | 83554 | 83557 | 83582 | 83587 | 83594 | 83604 | 83608 | 83609 |
| 83612 | 83613 | 83621 | 83645 | 83651 | 83673 | 83692 | 83694 | 83695 | 83696 | 83708 | 83716 | 83740 |
| 83753 | 83754 | 83767 | 83786 | 83790 | 83800 | 83812 | 83814 | 83823 | 83835 | 83836 | 83837 | 83839 |
| 83840 | 83841 | 83843 | 83876 | 83879 | 83881 | 83914 | 83932 | 83938 | 83945 | 83977 | 83983 | 84017 |
| 84025 | 84036 | 84053 | 84065 | 84073 | 84075 | 84091 | 84094 | 84104 | 84112 | 84124 | 84127 | 84129 |
| 84131 | 84152 | 84164 | 84168 | 84180 | 84186 | 84198 | 84230 | 84241 | 84267 | 84276 | 84305 | 84309 |
| 84332 | 84354 | 84361 | 84363 | 84374 | 84395 | 84423 | 84427 | 84441 | 84443 | 84446 | 84454 | 84456 |
| 84465 | 84478 | 84488 | 84489 | 84494 | 84509 | 84517 | 84521 | 84525 | 84528 | 84530 | 84531 | 84541 |
| 84546 | 84576 | 84581 | 84584 | 84587 | 84588 | 84589 | 84597 | 84614 | 84629 | 84648 | 84656 | 84673 |
| 84690 | 84691 | 84702 | 84707 | 84710 | 84720 | 84721 | 84728 | 84739 | 84746 | 84752 | 84770 | 84773 |
| 84782 | 84787 | 84793 | 84807 | 84815 | 84827 | 84832 | 84839 | 84847 | 84875 | 84883 | 84896 | 84919 |
| 84924 | 84927 | 84931 | 84938 | 84941 | 84950 | 84952 | 84964 | 84979 | 84982 | 84985 | 84991 | 85004 |
| 85010 | 85015 | 85023 | 85046 | 85067 | 85080 | 85086 | 85100 | 85108 | 85125 | 85130 | 85139 | 85152 |
| 85177 | 85186 | 85191 | 85192 | 85200 | 85202 | 85206 | 85209 | 85210 | 85219 | 85235 | 85242 | 85245 |
| 85273 | 85275 | 85293 | 85331 | 85354 | 85359 | 85384 | 85386 | 85397 | 85414 | 85431 | 85457 | 85461 |
| 85499 | 85504 | 85507 | 85516 | 85538 | 85555 | 85556 | 85575 | 85580 | 85588 | 85589 | 85632 | 85638 |
| 85658 | 85673 | 85680 | 85687 | 85706 | 85717 | 85728 | 85751 | 85760 | 85766 | 85768 | 85770 | 85789 |
| 85793 | 85794 | 85807 | 85814 | 85831 | 85854 | 85868 | 85873 | 85874 | 85894 | 85904 | 85907 | 85909 |
| 85915 | 85916 | 85917 | 85919 | 85928 | 85930 | 85931 | 85950 | 85971 | 85973 | 85974 | 85981 | 85988 |
| 86034 | 86036 | 86038 | 86041 | 86044 | 86047 | 86051 | 86055 | 86060 | 86070 | 86072 | 86090 | 86093 |
| 86097 | 86101 | 86117 | 86137 | 86148 | 86158 | 86172 | 86210 | 86250 | 86254 | 86257 | 86260 | 86263 |
| 86279 | 86295 | 86297 | 86305 | 86335 | 86343 | 86362 | 86366 | 86379 | 86382 | 86384 | 86394 | 86401 |
| 86402 | 86420 | 86444 | 86463 | 86465 | 86467 | 86470 | 86483 | 86490 | 86506 | 86523 | 86526 | 86533 |
| 86534 | 86539 | 86554 | 86573 | 86575 | 86585 | 86614 | 86634 | 86635 | 86645 | 86661 | 86664 | 86679 |
| 86688 | 86709 | 86710 | 86712 | 86730 | 86742 | 86743 | 86759 | 86763 | 86765 | 86770 | 86801 | 86807 |
| 86827 | 86830 | 86847 | 86872 | 86880 | 86888 | 86892 | 86894 | 86905 | 86906 | 86908 | 86911 | 86913 |
| 86921 | 86929 | 86934 | 86943 | 86959 | 86960 | 86962 | 86964 | 86970 | 86971 | 86989 | 86994 | 87008 |
| 87032 | 87033 | 87042 | 87043 | 87046 | 87048 | 87053 | 87057 | 87070 | 87072 | 87077 | 87098 | 87121 |
| 87128 | 87134 | 87135 | 87142 | 87146 | 87157 | 87165 | 87169 | 87176 | 87183 | 87197 | 87203 | 87205 |
| 87220 | 87230 | 87235 | 87253 | 87284 | 87290 | 87300 | 87303 | 87310 | 87343 | 87347 | 87352 | 87354 |
| 87357 | 87359 | 87377 | 87383 | 87385 | 87387 | 87388 | 87391 | 87398 | 87400 | 87403 | 87404 | 87408 |
| 87423 | 87424 | 87428 | 87477 | 87502 | 87506 | 87510 | 87514 | 87515 | 87527 | 87537 | 87538 | 87539 |
| 87547 | 87552 | 87562 | 87568 | 87573 | 87575 | 87625 | 87664 | 87669 | 87694 | 87707 | 87718 | 87740 |
| 87752 | 87777 | 87782 | 87793 | 87794 | 87825 | 87826 | 87838 | 87840 | 87845 | 87848 | 87857 | 87860 |
| 87870 | 87871 | 87883 | 87895 | 87907 | 87911 | 87919 | 87923 | 87930 | 87953 | 87964 | 87977 | 87979 |
| 87987 | 87994 | 87999 | 88000 | 88014 | 88021 | 88035 | 88058 | 88061 | 88083 | 88094 | 88100 | 88105 |
| 88109 | 88110 | 88118 | 88119 | 88134 | 88135 | 88143 | 88144 | 88155 | 88162 | 88181 | 88199 | 88207 |
| 88224 | 88225 | 88235 | 88236 | 88243 | 88246 | 88251 | 88253 | 88275 | 88293 | 88300 | 88327 | 88337 |
| 88371 | 88373 | 88375 | 88417 | 88472 | 88474 | 88488 | 88496 | 88504 | 88505 | 88507 | 88508 | 88521 |
| 88528 | 88537 | 88542 | 88591 | 88605 | 88610 | 88619 | 88670 | 88680 | 88683 | 88701 | 88717 | 88723 |
| 88724 | 88735 | 88744 | 88745 | 88750 | 88766 | 88777 | 88779 | 88784 | 88788 | 88797 | 88801 | 88820 |
| 88822 | 88828 | 88838 | 88865 | 88883 | 88893 | 88897 | 88908 | 88925 | 88931 | 88942 | 88953 | 88955 |
| 88961 | 88966 | 88976 | 89011 | 89018 | 89027 | 89036 | 89052 | 89064 | 89076 | 89091 | 89121 | 89131 |
| 89135 | 89136 | 89141 | 89145 | 89146 | 89158 | 89179 | 89181 | 89189 | 89194 | 89207 | 89227 | 89228 |
| 89236 | 89237 | 89240 | 89261 | 89284 | 89285 | 89291 | 89294 | 89300 | 89323 | 89326 | 89329 | 89330 |
| 89338 | 89366 | 89370 | 89373 | 89376 | 89381 | 89383 | 89390 | 89393 | 89394 | 89398 | 89410 | 89412 |
| 89424 | 89426 | 89456 | 89461 | 89472 | 89490 | 89499 | 89502 | 89509 | 89513 | 89534 | 89535 | 89543 |
| 89544 | 89550 | 89568 | 89572 | 89577 | 89583 | 89585 | 89594 | 89597 | 89608 | 89613 | 89615 | 89619 |
| 89633 | 89645 | 89653 | 89654 | 89676 | 89681 | 89682 | 89713 | 89720 | 89727 | 89745 | 89752 | 89786 |
| 89790 | 89792 | 89793 | 89805 | 89821 | 89826 | 89846 | 89863 | 89872 | 89884 | 89900 | 89904 | 89908 |
| 89924 | 89929 | 89932 | 89939 | 89943 | 89953 | 89966 | 89968 | 89970 | 89977 | 89980 | 89982 | 89997 |
| 90006 | 90016 | 90025 | 90028 | 90034 | 90038 | 90046 | 90049 | 90087 | 90091 | 90100 | 90127 | 90154 |

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 90161 | 90170 | 90177 | 90178 | 90179 | 90192 | 90196 | 90201 | 90219 | 90235 | 90280 | 90284 | 90306 |
| 90307 | 90312 | 90314 | 90327 | 90330 | 90357 | 90363 | 90368 | 90394 | 90425 | 90429 | 90437 | 90458 |
| 90489 | 90490 | 90499 | 90503 | 90520 | 90534 | 90553 | 90558 | 90579 | 90581 | 90585 | 90592 | 90610 |
| 90613 | 90618 | 90628 | 90654 | 90700 | 90722 | 90724 | 90728 | 90731 | 90732 | 90740 | 90748 | 90750 |
| 90761 | 90788 | 90802 | 90809 | 90814 | 90833 | 90837 | 90838 | 90853 | 90878 | 90881 | 90884 | 90889 |
| 90895 | 90905 | 90911 | 90935 | 90941 | 90957 | 90961 | 90962 | 90985 | 90990 | 90993 | 90994 | 90995 |
| 90999 | 91030 | 91044 | 91046 | 91048 | 91054 | 91080 | 91097 | 91114 | 91128 | 91132 | 91142 | 91149 |
| 91159 | 91161 | 91170 | 91177 | 91178 | 91194 | 91200 | 91203 | 91233 | 91281 | 91284 | 91289 | 91295 |
| 91300 | 91302 | 91303 | 91309 | 91310 | 91316 | 91318 | 91322 | 91374 | 91377 | 91389 | 91408 | 91413 |
| 91425 | 91431 | 91439 | 91453 | 91491 | 91498 | 91527 | 91528 | 91531 | 91538 | 91539 | 91540 | 91548 |
| 91557 | 91576 | 91577 | 91579 | 91591 | 91599 | 91603 | 91610 | 91612 | 91624 | 91645 | 91648 | 91651 |
| 91660 | 91682 | 91690 | 91709 | 91728 | 91733 | 91748 | 91777 | 91782 | 91791 | 91815 | 91818 | 91830 |
| 91832 | 91854 | 91856 | 91857 | 91859 | 91867 | 91911 | 91933 | 91939 | 91947 | 91949 | 91950 | 91953 |
| 91961 | 91965 | 91979 | 92014 | 92025 | 92028 | 92040 | 92060 | 92062 | 92087 | 92107 | 92115 | 92129 |
| 92147 | 92148 | 92157 | 92178 | 92180 | 92182 | 92185 | 92193 | 92194 | 92198 | 92203 | 92257 | 92262 |
| 92281 | 92288 | 92326 | 92332 | 92333 | 92364 | 92384 | 92411 | 92424 | 92427 | 92431 | 92447 | 92460 |
| 92473 | 92480 | 92488 | 92517 | 92528 | 92532 | 92571 | 92584 | 92588 | 92592 | 92598 | 92613 | 92615 |
| 92616 | 92629 | 92635 | 92642 | 92648 | 92655 | 92681 | 92705 | 92708 | 92725 | 92744 | 92748 | 92762 |
| 92789 | 92824 | 92840 | 92848 | 92853 | 92858 | 92860 | 92863 | 92866 | 92879 | 92885 | 92905 | 92908 |
| 92915 | 92916 | 92944 | 92972 | 92975 | 92986 | 92996 | 93006 | 93012 | 93013 | 93039 | 93041 | 93046 |
| 93057 | 93068 | 93070 | 93078 | 93093 | 93102 | 93107 | 93110 | 93120 | 93158 | 93160 | 93175 | 93182 |
| 93196 | 93216 | 93219 | 93224 | 93242 | 93252 | 93285 | 93290 | 93313 | 93321 | 93342 | 93355 | 93359 |
| 93367 | 93378 | 93380 | 93385 | 93386 | 93393 | 93409 | 93431 | 93432 | 93440 | 93445 | 93457 | 93486 |
| 93488 | 93498 | 93505 | 93512 | 93513 | 93518 | 93519 | 93527 | 93535 | 93547 | 93568 | 93569 | 93576 |
| 93584 | 93585 | 93589 | 93594 | 93600 | 93615 | 93620 | 93621 | 93624 | 93631 | 93638 | 93648 | 93649 |
| 93655 | 93658 | 93660 | 93662 | 93672 | 93677 | 93681 | 93687 | 93692 | 93696 | 93699 | 93703 | 93706 |
| 93710 | 93731 | 93734 | 93742 | 93751 | 93769 | 93788 | 93790 | 93808 | 93809 | 93810 | 93848 | 93858 |
| 93866 | 93888 | 93893 | 93898 | 93900 | 93903 | 93909 | 93912 | 93920 | 93927 | 93928 | 93934 | 93972 |
| 93989 | 94012 | 94034 | 94035 | 94049 | 94051 | 94055 | 94057 | 94065 | 94069 | 94075 | 94079 | 94104 |
| 94111 | 94139 | 94159 | 94162 | 94166 | 94189 | 94194 | 94197 | 94206 | 94215 | 94228 | 94240 | 94248 |
| 94255 | 94258 | 94268 | 94269 | 94276 | 94283 | 94292 | 94298 | 94336 | 94343 | 94354 | 94380 | 94398 |
| 94418 | 94422 | 94447 | 94451 | 94454 | 94466 | 94467 | 94472 | 94504 | 94505 | 94506 | 94515 | 94517 |
| 94518 | 94527 | 94531 | 94537 | 94547 | 94556 | 94561 | 94570 | 94587 | 94604 | 94607 | 94613 | 94617 |
| 94625 | 94635 | 94639 | 94644 | 94649 | 94678 | 94682 | 94692 | 94711 | 94737 | 94740 | 94763 | 94859 |
| 94864 | 94868 | 94876 | 94886 | 94898 | 94899 | 94912 | 94914 | 94923 | 94924 | 94929 | 94930 | 94940 |
| 94942 | 94951 | 94965 | 94986 | 95001 | 95012 | 95034 | 95035 | 95036 | 95051 | 95062 | 95078 | 95086 |
| 95096 | 95105 | 95112 | 95126 | 95136 | 95154 | 95179 | 95191 | 95196 | 95219 | 95235 | 95236 | 95243 |
| 95249 | 95265 | 95274 | 95279 | 95282 | 95283 | 95287 | 95312 | 95324 | 95333 | 95351 | 95381 | 95385 |
| 95386 | 95390 | 95398 | 95400 | 95406 | 95408 | 95415 | 95423 | 95427 | 95434 | 95448 | 95454 | 95465 |
| 95467 | 95472 | 95476 | 95480 | 95498 | 95520 | 95521 | 95542 | 95557 | 95565 | 95580 | 95602 | 95622 |
| 95632 | 95640 | 95644 | 95652 | 95653 | 95662 | 95682 | 95685 | 95688 | 95691 | 95698 | 95702 | 95715 |
| 95718 | 95742 | 95746 | 95757 | 95761 | 95775 | 95784 | 95805 | 95808 | 95819 | 95826 | 95846 | 95861 |
| 95878 | 95925 | 95936 | 95944 | 95947 | 95958 | 95960 | 95968 | 95971 | 95987 | 95999 | 96001 | 96005 |
| 96038 | 96039 | 96055 | 96066 | 96079 | 96097 | 96104 | 96105 | 96108 | 96120 | 96178 | 96184 | 96226 |
| 96230 | 96238 | 96247 | 96248 | 96252 | 96267 | 96276 | 96289 | 96297 | 96325 | 96341 | 96347 | 96349 |
| 96352 | 96353 | 96354 | 96367 | 96368 | 96382 | 96407 | 96414 | 96415 | 96425 | 96426 | 96428 | 96432 |
| 96457 | 96463 | 96466 | 96470 | 96485 | 96499 | 96510 | 96527 | 96549 | 96555 | 96556 | 96588 | 96598 |
| 96619 | 96627 | 96644 | 96648 | 96663 | 96679 | 96680 | 96689 | 96700 | 96710 | 96740 | 96749 | 96751 |
| 96763 | 96771 | 96774 | 96780 | 96782 | 96802 | 96805 | 96826 | 96837 | 96838 | 96842 | 96843 | 96852 |
| 96854 | 96857 | 96859 | 96875 | 96879 | 96885 | 96887 | 96898 | 96904 | 96911 | 96919 | 96952 | 96953 |
| 96989 | 97015 | 97017 | 97027 | 97035 | 97041 | 97047 | 97074 | 97097 | 97131 | 97133 | 97137 | 97141 |
| 97144 | 97146 | 97151 | 97187 | 97221 | 97224 | 97228 | 97234 | 97238 | 97243 | 97257 | 97262 | 97271 |
| 97278 | 97280 | 97298 | 97304 | 97309 | 97311 | 97322 | 97325 | 97327 | 97332 | 97337 | 97339 | 97357 |
| 97371 | 97383 | 97392 | 97399 | 97407 | 97409 | 97425 | 97430 | 97454 | 97467 | 97479 | 97490 | 97511 |
| 97530 | 97533 | 97548 | 97554 | 97564 | 97567 | 97569 | 97669 | 97674 | 97676 | 97686 | 97693 | 97696 |
| 97698 | 97702 | 97711 | 97721 | 97731 | 97756 | 97758 | 97759 | 97767 | 97780 | 97825 | 97834 | 97844 |
| 97851 | 97862 | 97867 | 97878 | 97885 | 97886 | 97889 | 97890 | 97903 | 97921 | 97926 | 97927 | 97932 |
| 97939 | 97952 | 97970 | 97996 | 97998 | 98004 | 98012 | 98013 | 98031 | 98032 | 98049 | 98051 | 98058 |

98067 98068 98074 98095 98104 98106 98122 98126 98134 98140 98161 98165 98172
98181 98185 98191 98208 98219 98221 98222 98231 98253 98256 98258 98259 98263
98265 98269 98291 98300 98302 98308 98329 98342 98350 98380 98387 98396 98402
98408 98428 98444 98448 98458 98469 98470 98472 98494 98524 98543 98549 98574
98582 98583 98587 98593 98623 98631 98647 98650 98663 98678 98681 98686 98691
98712 98722 98725 98729 98731 98732 98734 98761 98783 98785 98804 98818 98822
98847 98869 98875 98890 98899 98906 98909 98927 98928 98935 98976 98994 99003
99026 99034 99036 99054 99065 99068 99069 99075 99080 99085 99093 99096 99113
99126 99146 99154 99157 99164 99176 99177 99180 99182 99193 99238 99240 99241
99246 99286 99288 99305 99317 99320 99331 99353 99356 99365 99410 99412 99419
99434 99440 99444 99447 99448 99453 99465 99471 99477 99506 99508 99534 99539
99563 99587 99597 99599 99608 99613 99633 99668 99706 99718 99722 99723 99736
99749 99751 99766 99771 99774 99776 99784 99801 99813 99819 99828 99830 99849
99852 99854 99888 99899 99914 99924 99929 99941 99977 99980 99987 21 34 36 50
61 71 79 99 104 108 109 113 120 128 130 132 138 144 149 164 171 181 184 188
205 211 214 217 221 222 236 241 263 279 280 282 284 293 305 314 329 333 343
345 346 354 356 371 409 411 413 418 422 433 449 456 458 499 504 509 531 545
562 568 578 587 598 634 656 677 683 703 704 716 723 727 729 730 751 758 773
791 802 812 815 829 835 839 840 869 878 890 894 915 928 930 932 939 940 945
957 961 971 972 981 985 1003 1006 1007 1036 1043 1049 1053 1061 1065 1080
1091 1096 1097 1101 1109 1119 1123 1133 1137 1148 1150 1159 1161 1177 1191
1192 1203 1210 1223 1230 1237 1241 1256 1259 1260 1264 1270 1283 1293 1299
1344 1350 1356 1375 1376 1389 1411 1434 1435 1437 1438 1449 1454 1459 1464
1475 1512 1513 1537 1541 1543 1563 1568 1600 1608 1610 1619 1621 1630 1648
1655 1668 1671 1691 1698 1738 1740 1742 1756 1761 1764 1766 1783 1790 1807
1813 1815 1821 1824 1826 1831 1838 1842 1845 1851 1853 1881 1892 1910 1921
1928 1938 1940 1967 1975 1982 1990 1995 2014 2016 2035 2054 2059 2075 2097
2106 2124 2125 2137 2140 2143 2146 2163 2182 2209 2211 2212 2227 2228 2232
2234 2235 2238 2243 2256 2261 2263 2265 2267 2270 2283 2294 2298 2306 2319
2323 2330 2332 2340 2351 2365 2370 2404 2409 2420 2440 2459 2464 2473 2476
2484 2494 2495 2514 2536 2539 2549 2562 2579 2583 2584 2591 2607 2616 2627
2663 2666 2678 2687 2690 2703 2715 2719 2731 2766 2777 2794 2797 2798 2805
2820 2830 2836 2843 2845 2849 2851 2862 2868 2869 2879 2880 2881 2887 2897
2916 2926 2928 2934 2942 2954 2961 2967 2989 2993 2996 3001 3020 3045 3051
3063 3064 3073 3074 3115 3136 3144 3145 3146 3152 3155 3167 3196 3208 3209
3231 3242 3261 3269 3284 3295 3322 3334 3354 3372 3376 3391 3396 3402 3419
3425 3434 3440 3441 3442 3451 3477 3489 3493 3505 3508 3512 3547 3550 3560
3567 3577 3584 3591 3595 3615 3616 3621 3625 3627 3670 3680 3694 3701 3744
3779 3784 3792 3812 3817 3821 3825 3827 3834 3845 3854 3856 3869 3884 3885
3888 3890 3891 3899 3906 3910 3915 3924 3925 3943 3945 3951 3976 4000 4009
4010 4013 4027 4029 4063 4065 4074 4080 4081 4084 4091 4097 4107 4118 4125
4141 4144 4158 4160 4163 4172 4184 4186 4209 4213 4214 4233 4234 4242 4245
4248 4259 4260 4262 4264 4273 4279 4293 4312 4318 4321 4326 4338 4346 4364
4369 4379 4393 4395 4401 4412 4446 4450 4474 4507 4515 4521 4558 4561 4566
4573 4574 4586 4589 4593 4596 4619 4634 4642 4650 4654 4657 4658 4661 4678
4688 4694 4697 4705 4714 4721 4723 4728 4735 4742 4773 4801 4803 4809 4826
4842 4843 4850 4851 4854 4866 4867 4872 4882 4885 4895 4899 4932 4955 4977
4983 4989 4999 5006 5011 5020 5031 5055 5057 5058 5061 5070 5080 5106 5109
5118 5136 5149 5168 5171 5188 5191 5194 5195 5198 5206 5226 5231 5233 5242
5272 5286 5296 5300 5325 5332 5338 5340 5360 5364 5367 5380 5387 5389 5390
5397 5408 5415 5450 5456 5459 5467 5484 5491 5515 5516 5523 5528 5538 5556
5580 5584 5585 5586 5595 5600 5607 5625 5629 5648 5656 5661 5667 5680 5686
5688 5703 5742 5757 5792 5831 5849 5866 5874 5879 5891 5909 5916 5930 5951
5954 5970 5976 5993 5997 6009 6011 6018 6045 6055 6063 6066 6073 6125 6132
6153 6182 6183 6202 6203 6209 6215 6227 6233 6248 6249 6266 6285 6289 6295
6307 6309 6318 6324 6333 6334 6338 6342 6345 6350 6358 6364 6378 6382 6396
6431 6435 6436 6459 6478 6524 6532 6589 6592 6609 6611 6623 6632 6647 6649
6669 6674 6684 6689 6706 6720 6736 6755 6774 6777 6783 6784 6786 6788 6799

| | | | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 6814 | 6823 | 6834 | 6839 | 6843 | 6849 | 6863 | 6870 | 6878 | 6882 | 6908 | 6914 | 6917 | 6918 | 6931 |
| 6953 | 6954 | 6955 | 6968 | 6980 | 6983 | 6994 | 6995 | 6997 | 6999 | 7009 | 7011 | 7032 | 7033 | 7036 |
| 7058 | 7059 | 7084 | 7101 | 7114 | 7119 | 7139 | 7146 | 7149 | 7164 | 7165 | 7183 | 7186 | 7196 | 7200 |
| 7217 | 7239 | 7253 | 7258 | 7283 | 7296 | 7298 | 7322 | 7328 | 7346 | 7350 | 7354 | 7356 | 7361 | 7391 |
| 7402 | 7403 | 7427 | 7443 | 7460 | 7466 | 7467 | 7513 | 7516 | 7519 | 7543 | 7544 | 7546 | 7547 | 7572 |
| 7582 | 7590 | 7619 | 7621 | 7644 | 7693 | 7695 | 7702 | 7707 | 7710 | 7713 | 7714 | 7738 | 7754 | 7758 |
| 7776 | 7786 | 7796 | 7797 | 7798 | 7811 | 7812 | 7813 | 7815 | 7825 | 7869 | 7878 | 7881 | 7895 | 7898 |
| 7908 | 7931 | 7937 | 7940 | 7979 | 7982 | 7988 | 7990 | 7999 | 8001 | 8004 | 8010 | 8014 | 8018 | 8030 |
| 8057 | 8075 | 8082 | 8085 | 8098 | 8100 | 8119 | 8130 | 8131 | 8137 | 8187 | 8193 | 8201 | 8209 | 8238 |
| 8256 | 8278 | 8290 | 8293 | 8296 | 8297 | 8302 | 8303 | 8308 | 8314 | 8315 | 8321 | 8322 | 8335 | 8350 |
| 8361 | 8368 | 8375 | 8376 | 8389 | 8391 | 8400 | 8402 | 8432 | 8433 | 8444 | 8448 | 8456 | 8465 | 8468 |
| 8470 | 8473 | 8495 | 8510 | 8512 | 8513 | 8524 | 8533 | 8547 | 8577 | 8588 | 8598 | 8599 | 8605 | 8612 |
| 8626 | 8641 | 8648 | 8655 | 8669 | 8696 | 8702 | 8704 | 8706 | 8724 | 8733 | 8757 | 8766 | 8781 | 8782 |
| 8792 | 8841 | 8845 | 8849 | 8856 | 8858 | 8862 | 8863 | 8876 | 8877 | 8884 | 8898 | 8900 | 8905 | 8953 |
| 8956 | 8958 | 8964 | 8975 | 8978 | 8983 | 8989 | 8992 | 8994 | 9000 | 9013 | 9031 | 9049 | 9055 | 9071 |
| 9076 | 9091 | 9111 | 9113 | 9132 | 9139 | 9147 | 9153 | 9175 | 9198 | 9202 | 9209 | 9215 | 9216 | 9219 |
| 9222 | 9225 | 9229 | 9231 | 9239 | 9245 | 9257 | 9264 | 9273 | 9291 | 9308 | 9318 | 9324 | 9345 | 9368 |
| 9370 | 9373 | 9386 | 9388 | 9394 | 9399 | 9407 | 9435 | 9449 | 9477 | 9479 | 9487 | 9526 | 9528 | 9529 |
| 9553 | 9567 | 9574 | 9576 | 9577 | 9583 | 9592 | 9623 | 9628 | 9638 | 9644 | 9645 | 9658 | 9665 | 9701 |
| 9708 | 9713 | 9715 | 9716 | 9718 | 9722 | 9738 | 9741 | 9771 | 9776 | 9784 | 9790 | 9793 | 9808 | 9810 |
| 9823 | 9829 | 9830 | 9842 | 9844 | 9848 | 9849 | 9857 | 9861 | 9882 | 9904 | 9910 | 9932 | 9946 | 9951 |
| 9965 | 9984 | 9988 | 9992 | 9995 | 10003 | 10013 | 10030 | 10038 | 10068 | 10104 | 10110 | 10124 | | |
| 10136 | 10139 | 10142 | 10144 | 10154 | 10171 | 10173 | 10182 | 10186 | 10197 | 10198 | 10202 | 10206 | | |
| 10217 | 10228 | 10230 | 10231 | 10238 | 10247 | 10251 | 10278 | 10303 | 10311 | 10318 | 10321 | 10324 | | |
| 10326 | 10353 | 10375 | 10376 | 10379 | 10380 | 10384 | 10401 | 10423 | 10424 | 10430 | 10442 | 10449 | | |
| 10453 | 10473 | 10475 | 10476 | 10481 | 10516 | 10571 | 10575 | 10579 | 10585 | 10602 | 10614 | 10618 | | |
| 10627 | 10636 | 10639 | 10686 | 10690 | 10693 | 10709 | 10722 | 10758 | 10770 | 10771 | 10777 | 10781 | | |
| 10783 | 10786 | 10806 | 10810 | 10823 | 10849 | 10853 | 10855 | 10860 | 10870 | 10871 | 10883 | 10887 | | |
| 10895 | 10899 | 10917 | 10919 | 10928 | 10932 | 10941 | 10951 | 10960 | 10967 | 10976 | 10986 | 10994 | | |
| 11014 | 11016 | 11026 | 11029 | 11052 | 11054 | 11068 | 11077 | 11089 | 11094 | 11115 | 11117 | 11139 | | |
| 11143 | 11148 | 11154 | 11159 | 11163 | 11171 | 11180 | 11201 | 11208 | 11231 | 11237 | 11269 | 11290 | | |
| 11294 | 11298 | 11308 | 11316 | 11323 | 11336 | 11338 | 11346 | 11347 | 11350 | 11364 | 11366 | 11378 | | |
| 11380 | 11419 | 11420 | 11426 | 11438 | 11439 | 11450 | 11469 | 11471 | 11482 | 11521 | 11559 | 11567 | | |
| 11571 | 11596 | 11601 | 11606 | 11608 | 11621 | 11624 | 11626 | 11632 | 11646 | 11651 | 11652 | 11654 | | |
| 11656 | 11658 | 11664 | 11666 | 11677 | 11679 | 11680 | 11684 | 11685 | 11735 | 11740 | 11743 | 11755 | | |
| 11783 | 11787 | 11796 | 11802 | 11808 | 11821 | 11822 | 11829 | 11838 | 11846 | 11851 | 11886 | 11887 | | |
| 11891 | 11903 | 11907 | 11931 | 11946 | 11962 | 11964 | 12002 | 12039 | 12043 | 12045 | 12046 | 12055 | | |
| 12056 | 12067 | 12079 | 12082 | 12095 | 12105 | 12121 | 12137 | 12143 | 12146 | 12147 | 12164 | 12171 | | |
| 12177 | 12189 | 12193 | 12202 | 12203 | 12212 | 12227 | 12231 | 12240 | 12254 | 12271 | 12272 | 12288 | | |
| 12289 | 12292 | 12304 | 12310 | 12315 | 12321 | 12329 | 12334 | 12336 | 12363 | 12366 | 12402 | 12411 | | |
| 12417 | 12418 | 12419 | 12431 | 12435 | 12442 | 12458 | 12464 | 12472 | 12481 | 12485 | 12501 | 12505 | | |
| 12508 | 12525 | 12553 | 12573 | 12576 | 12578 | 12583 | 12607 | 12621 | 12634 | 12636 | 12639 | 12640 | | |
| 12646 | 12649 | 12665 | 12667 | 12686 | 12691 | 12697 | 12704 | 12725 | 12730 | 12732 | 12733 | 12738 | | |
| 12755 | 12777 | 12803 | 12817 | 12832 | 12844 | 12845 | 12848 | 12856 | 12859 | 12868 | 12874 | 12876 | | |
| 12886 | 12888 | 12896 | 12911 | 12915 | 12918 | 12938 | 12956 | 12957 | 12973 | 12982 | 13027 | 13030 | | |
| 13032 | 13040 | 13050 | 13066 | 13110 | 13113 | 13116 | 13122 | 13126 | 13129 | 13141 | 13171 | 13176 | | |
| 13199 | 13220 | 13226 | 13228 | 13267 | 13278 | 13294 | 13295 | 13310 | 13316 | 13345 | 13348 | 13381 | | |
| 13401 | 13402 | 13407 | 13417 | 13427 | 13428 | 13460 | 13463 | 13466 | 13467 | 13482 | 13496 | 13522 | | |
| 13523 | 13525 | 13528 | 13536 | 13555 | 13558 | 13573 | 13619 | 13653 | 13655 | 13662 | 13663 | 13669 | | |
| 13672 | 13673 | 13725 | 13727 | 13733 | 13753 | 13755 | 13760 | 13764 | 13766 | 13777 | 13794 | 13801 | | |
| 13805 | 13808 | 13813 | 13814 | 13841 | 13843 | 13857 | 13858 | 13870 | 13879 | 13890 | 13910 | 13913 | | |
| 13920 | 13922 | 13960 | 13976 | 13982 | 13991 | 13998 | 14019 | 14020 | 14021 | 14023 | 14028 | 14044 | | |
| 14075 | 14088 | 14090 | 14094 | 14102 | 14105 | 14113 | 14121 | 14126 | 14133 | 14142 | 14143 | 14147 | | |
| 14150 | 14162 | 14180 | 14193 | 14207 | 14211 | 14227 | 14247 | 14248 | 14254 | 14256 | 14257 | 14276 | | |
| 14282 | 14288 | 14303 | 14318 | 14326 | 14337 | 14338 | 14346 | 14362 | 14368 | 14378 | 14381 | 14405 | | |
| 14418 | 14421 | 14426 | 14440 | 14441 | 14443 | 14458 | 14478 | 14480 | 14485 | 14487 | 14499 | 14510 | | |
| 14514 | 14518 | 14537 | 14555 | 14556 | 14559 | 14572 | 14592 | 14600 | 14621 | 14629 | 14640 | 14660 | | |
| 14661 | 14663 | 14672 | 14677 | 14679 | 14696 | 14699 | 14702 | 14703 | 14706 | 14714 | 14717 | 14727 | | |

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 14729 | 14750 | 14757 | 14776 | 14822 | 14827 | 14830 | 14856 | 14872 | 14879 | 14883 | 14885 | 14888 |
| 14904 | 14931 | 14942 | 14944 | 14957 | 14963 | 14993 | 15011 | 15018 | 15019 | 15033 | 15066 | 15077 |
| 15078 | 15110 | 15130 | 15151 | 15155 | 15176 | 15195 | 15204 | 15209 | 15219 | 15242 | 15269 | 15290 |
| 15305 | 15309 | 15315 | 15348 | 15352 | 15363 | 15370 | 15371 | 15377 | 15378 | 15387 | 15399 | 15406 |
| 15421 | 15424 | 15426 | 15433 | 15436 | 15439 | 15442 | 15451 | 15469 | 15480 | 15481 | 15485 | 15489 |
| 15490 | 15505 | 15508 | 15514 | 15521 | 15522 | 15533 | 15552 | 15554 | 15560 | 15565 | 15571 | 15572 |
| 15574 | 15576 | 15577 | 15619 | 15622 | 15664 | 15676 | 15697 | 15723 | 15731 | 15754 | 15762 | 15806 |
| 15813 | 15821 | 15837 | 15847 | 15849 | 15863 | 15868 | 15886 | 15918 | 15922 | 15925 | 15928 | 15958 |
| 15970 | 15976 | 15984 | 15988 | 15989 | 16021 | 16030 | 16034 | 16039 | 16051 | 16080 | 16086 | 16089 |
| 16091 | 16100 | 16131 | 16140 | 16144 | 16153 | 16168 | 16226 | 16228 | 16233 | 16234 | 16244 | 16256 |
| 16279 | 16285 | 16287 | 16302 | 16303 | 16318 | 16329 | 16332 | 16341 | 16347 | 16359 | 16374 | 16383 |
| 16384 | 16389 | 16393 | 16404 | 16408 | 16414 | 16430 | 16449 | 16469 | 16476 | 16478 | 16484 | 16491 |
| 16498 | 16527 | 16533 | 16564 | 16575 | 16580 | 16582 | 16593 | 16604 | 16611 | 16618 | 16620 | 16624 |
| 16634 | 16637 | 16643 | 16645 | 16653 | 16658 | 16662 | 16678 | 16691 | 16693 | 16701 | 16707 | 16709 |
| 16715 | 16746 | 16755 | 16845 | 16848 | 16888 | 16899 | 16918 | 16950 | 16957 | 16969 | 16978 | 16983 |
| 16993 | 17000 | 17009 | 17021 | 17036 | 17063 | 17073 | 17090 | 17100 | 17118 | 17126 | 17129 | 17133 |
| 17157 | 17159 | 17166 | 17173 | 17176 | 17177 | 17195 | 17198 | 17204 | 17210 | 17211 | 17222 | 17231 |
| 17236 | 17255 | 17280 | 17284 | 17288 | 17290 | 17304 | 17315 | 17324 | 17330 | 17336 | 17364 | 17369 |
| 17371 | 17377 | 17380 | 17387 | 17391 | 17400 | 17413 | 17418 | 17422 | 17423 | 17427 | 17431 | 17448 |
| 17449 | 17473 | 17484 | 17511 | 17538 | 17551 | 17553 | 17561 | 17568 | 17578 | 17583 | 17586 | 17614 |
| 17625 | 17633 | 17638 | 17639 | 17640 | 17647 | 17660 | 17670 | 17672 | 17673 | 17675 | 17682 | 17693 |
| 17707 | 17716 | 17717 | 17722 | 17737 | 17754 | 17758 | 17770 | 17832 | 17834 | 17854 | 17875 | 17879 |
| 17908 | 17909 | 17912 | 17928 | 17930 | 17944 | 17946 | 17950 | 17961 | 17970 | 17974 | 17976 | 17982 |
| 17985 | 17986 | 17992 | 17996 | 17998 | 17999 | 18004 | 18010 | 18012 | 18016 | 18023 | 18036 | 18040 |
| 18044 | 18045 | 18050 | 18060 | 18067 | 18079 | 18084 | 18117 | 18135 | 18155 | 18156 | 18166 | 18181 |
| 18196 | 18230 | 18231 | 18235 | 18242 | 18243 | 18254 | 18271 | 18273 | 18275 | 18280 | 18307 | 18310 |
| 18311 | 18321 | 18329 | 18334 | 18335 | 18350 | 18356 | 18363 | 18386 | 18395 | 18400 | 18407 | 18413 |
| 18421 | 18422 | 18430 | 18440 | 18453 | 18455 | 18461 | 18484 | 18487 | 18497 | 18509 | 18510 | 18522 |
| 18528 | 18537 | 18550 | 18553 | 18555 | 18575 | 18579 | 18588 | 18594 | 18604 | 18606 | 18621 | 18634 |
| 18640 | 18672 | 18714 | 18721 | 18726 | 18732 | 18734 | 18744 | 18745 | 18746 | 18747 | 18758 | 18763 |
| 18764 | 18777 | 18782 | 18823 | 18830 | 18873 | 18890 | 18938 | 18959 | 18969 | 18981 | 18984 | 18985 |
| 18995 | 18999 | 19000 | 19008 | 19011 | 19020 | 19037 | 19041 | 19051 | 19056 | 19107 | 19112 | 19120 |
| 19122 | 19124 | 19126 | 19143 | 19147 | 19148 | 19158 | 19164 | 19176 | 19178 | 19180 | 19183 | 19184 |
| 19186 | 19198 | 19202 | 19205 | 19208 | 19210 | 19225 | 19231 | 19232 | 19259 | 19265 | 19266 | 19285 |
| 19286 | 19306 | 19326 | 19338 | 19344 | 19356 | 19363 | 19366 | 19372 | 19383 | 19387 | 19390 | 19398 |
| 19410 | 19421 | 19443 | 19446 | 19449 | 19456 | 19467 | 19485 | 19486 | 19488 | 19498 | 19499 | 19502 |
| 19507 | 19532 | 19551 | 19555 | 19570 | 19572 | 19577 | 19633 | 19646 | 19653 | 19691 | 19703 | 19705 |
| 19724 | 19725 | 19744 | 19760 | 19773 | 19779 | 19786 | 19793 | 19794 | 19795 | 19803 | 19806 | 19809 |
| 19813 | 19839 | 19850 | 19857 | 19869 | 19874 | 19902 | 19908 | 19914 | 19926 | 19936 | 19945 | 19955 |
| 19976 | 19994 | 20004 | 20006 | 20020 | 20034 | 20041 | 20047 | 20050 | 20060 | 20073 | 20081 | 20087 |
| 20115 | 20130 | 20143 | 20152 | 20167 | 20176 | 20183 | 20187 | 20196 | 20210 | 20223 | 20231 | 20233 |
| 20245 | 20264 | 20265 | 20287 | 20304 | 20320 | 20337 | 20346 | 20350 | 20360 | 20361 | 20391 | 20399 |
| 20414 | 20419 | 20420 | 20421 | 20432 | 20433 | 20443 | 20455 | 20460 | 20467 | 20471 | 20473 | 20488 |
| 20490 | 20503 | 20505 | 20524 | 20526 | 20543 | 20544 | 20570 | 20579 | 20587 | 20598 | 20608 | 20612 |
| 20613 | 20622 | 20635 | 20640 | 20642 | 20648 | 20651 | 20673 | 20676 | 20679 | 20681 | 20684 | 20685 |
| 20727 | 20744 | 20760 | 20769 | 20782 | 20790 | 20796 | 20818 | 20826 | 20827 | 20828 | 20834 | 20837 |
| 20843 | 20846 | 20863 | 20867 | 20879 | 20884 | 20900 | 20912 | 20914 | 20919 | 20928 | 20929 | 20938 |
| 20952 | 20957 | 20970 | 20988 | 20992 | 20998 | 20999 | 21020 | 21033 | 21044 | 21051 | 21053 | 21059 |
| 21064 | 21072 | 21073 | 21092 | 21099 | 21102 | 21109 | 21112 | 21125 | 21126 | 21135 | 21140 | 21169 |
| 21171 | 21177 | 21206 | 21208 | 21224 | 21227 | 21232 | 21238 | 21242 | 21253 | 21262 | 21281 | 21297 |
| 21307 | 21316 | 21348 | 21353 | 21379 | 21380 | 21382 | 21394 | 21399 | 21405 | 21408 | 21409 | 21410 |
| 21426 | 21450 | 21454 | 21455 | 21462 | 21469 | 21477 | 21482 | 21500 | 21506 | 21517 | 21523 | 21533 |
| 21542 | 21544 | 21549 | 21565 | 21566 | 21568 | 21571 | 21573 | 21584 | 21586 | 21589 | 21604 | 21608 |
| 21611 | 21624 | 21645 | 21647 | 21665 | 21666 | 21683 | 21740 | 21743 | 21745 | 21753 | 21761 | 21764 |
| 21768 | 21772 | 21783 | 21795 | 21798 | 21799 | 21805 | 21845 | 21850 | 21865 | 21886 | 21899 | 21912 |
| 21928 | 21936 | 21939 | 21954 | 21962 | 21983 | 21986 | 21992 | 21999 | 22001 | 22040 | 22056 | 22063 |
| 22108 | 22144 | 22171 | 22187 | 22205 | 22207 | 22231 | 22271 | 22274 | 22292 | 22301 | 22310 | 22319 |
| 22340 | 22365 | 22366 | 22371 | 22378 | 22379 | 22388 | 22399 | 22401 | 22405 | 22421 | 22424 | 22427 |

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 22429 | 22442 | 22450 | 22452 | 22460 | 22469 | 22470 | 22472 | 22478 | 22484 | 22490 | 22495 | 22497 |
| 22502 | 22509 | 22512 | 22517 | 22547 | 22548 | 22549 | 22551 | 22556 | 22557 | 22567 | 22576 | 22579 |
| 22591 | 22592 | 22595 | 22599 | 22603 | 22606 | 22610 | 22628 | 22665 | 22669 | 22679 | 22691 | 22693 |
| 22698 | 22711 | 22736 | 22744 | 22745 | 22774 | 22780 | 22789 | 22811 | 22813 | 22821 | 22840 | 22844 |
| 22852 | 22859 | 22868 | 22873 | 22880 | 22891 | 22900 | 22902 | 22914 | 22932 | 22948 | 22949 | 22952 |
| 22999 | 23013 | 23034 | 23050 | 23052 | 23059 | 23067 | 23068 | 23093 | 23114 | 23121 | 23132 | 23136 |
| 23142 | 23160 | 23170 | 23176 | 23181 | 23182 | 23194 | 23208 | 23211 | 23224 | 23225 | 23243 | 23270 |
| 23301 | 23303 | 23317 | 23320 | 23325 | 23339 | 23341 | 23344 | 23354 | 23366 | 23379 | 23387 | 23403 |
| 23409 | 23415 | 23416 | 23417 | 23438 | 23441 | 23448 | 23468 | 23475 | 23482 | 23485 | 23493 | 23513 |
| 23535 | 23537 | 23539 | 23542 | 23560 | 23564 | 23579 | 23587 | 23592 | 23602 | 23606 | 23613 | 23619 |
| 23625 | 23643 | 23644 | 23646 | 23658 | 23664 | 23667 | 23673 | 23675 | 23683 | 23688 | 23699 | 23709 |
| 23717 | 23734 | 23741 | 23744 | 23750 | 23762 | 23784 | 23785 | 23788 | 23806 | 23817 | 23826 | 23831 |
| 23833 | 23834 | 23835 | 23836 | 23840 | 23852 | 23856 | 23858 | 23872 | 23877 | 23884 | 23900 | 23903 |
| 23911 | 23915 | 23934 | 23980 | 23994 | 23995 | 24002 | 24010 | 24034 | 24040 | 24054 | 24061 | 24065 |
| 24068 | 24069 | 24070 | 24076 | 24101 | 24118 | 24123 | 24128 | 24129 | 24142 | 24147 | 24160 | 24161 |
| 24162 | 24164 | 24167 | 24178 | 24181 | 24188 | 24191 | 24194 | 24219 | 24225 | 24226 | 24246 | 24261 |
| 24290 | 24315 | 24319 | 24321 | 24324 | 24350 | 24373 | 24394 | 24396 | 24407 | 24414 | 24447 | 24448 |
| 24452 | 24471 | 24480 | 24487 | 24500 | 24512 | 24516 | 24519 | 24535 | 24537 | 24541 | 24544 | 24551 |
| 24590 | 24596 | 24599 | 24655 | 24660 | 24661 | 24687 | 24694 | 24702 | 24707 | 24724 | 24741 | 24742 |
| 24757 | 24779 | 24782 | 24788 | 24810 | 24817 | 24818 | 24821 | 24828 | 24839 | 24840 | 24851 | 24854 |
| 24858 | 24861 | 24895 | 24898 | 24905 | 24906 | 24911 | 24922 | 24930 | 24940 | 24947 | 24956 | 24966 |
| 24988 | 24989 | 24991 | 24996 | 25017 | 25027 | 25034 | 25038 | 25043 | 25044 | 25050 | 25052 | 25054 |
| 25056 | 25077 | 25080 | 25084 | 25087 | 25100 | 25104 | 25109 | 25128 | 25141 | 25153 | 25164 | 25189 |
| 25201 | 25211 | 25218 | 25231 | 25235 | 25238 | 25251 | 25266 | 25271 | 25274 | 25275 | 25282 | 25286 |
| 25288 | 25290 | 25293 | 25313 | 25344 | 25360 | 25373 | 25376 | 25383 | 25385 | 25402 | 25410 | 25414 |
| 25415 | 25431 | 25437 | 25441 | 25464 | 25480 | 25482 | 25485 | 25500 | 25506 | 25507 | 25514 | 25523 |
| 25535 | 25538 | 25546 | 25567 | 25571 | 25578 | 25583 | 25599 | 25632 | 25643 | 25645 | 25663 | 25675 |
| 25678 | 25685 | 25687 | 25693 | 25716 | 25723 | 25737 | 25742 | 25761 | 25770 | 25775 | 25796 | 25797 |
| 25815 | 25823 | 25844 | 25853 | 25855 | 25879 | 25884 | 25891 | 25898 | 25909 | 25935 | 25942 | 25944 |
| 25955 | 25957 | 25961 | 25967 | 25988 | 25995 | 26007 | 26010 | 26029 | 26030 | 26031 | 26046 | 26053 |
| 26057 | 26062 | 26064 | 26066 | 26086 | 26089 | 26101 | 26122 | 26129 | 26130 | 26134 | 26154 | 26156 |
| 26175 | 26212 | 26221 | 26224 | 26230 | 26232 | 26246 | 26268 | 26269 | 26274 | 26307 | 26313 | 26323 |
| 26334 | 26355 | 26360 | 26381 | 26382 | 26412 | 26415 | 26431 | 26434 | 26435 | 26441 | 26445 | 26448 |
| 26453 | 26458 | 26479 | 26491 | 26510 | 26519 | 26541 | 26545 | 26563 | 26564 | 26594 | 26597 | 26600 |
| 26602 | 26626 | 26647 | 26652 | 26656 | 26660 | 26683 | 26691 | 26692 | 26695 | 26721 | 26729 | 26748 |
| 26754 | 26766 | 26771 | 26773 | 26798 | 26805 | 26806 | 26817 | 26839 | 26841 | 26847 | 26849 | 26850 |
| 26880 | 26892 | 26906 | 26915 | 26930 | 26933 | 26938 | 26942 | 26946 | 26948 | 26969 | 26971 | 26974 |
| 26981 | 26985 | 27007 | 27030 | 27045 | 27066 | 27074 | 27085 | 27139 | 27140 | 27143 | 27147 | 27186 |
| 27188 | 27202 | 27227 | 27237 | 27238 | 27250 | 27264 | 27266 | 27280 | 27283 | 27290 | 27304 | 27306 |
| 27314 | 27329 | 27335 | 27337 | 27356 | 27372 | 27411 | 27412 | 27419 | 27420 | 27428 | 27443 | 27450 |
| 27454 | 27464 | 27473 | 27480 | 27492 | 27497 | 27500 | 27508 | 27512 | 27514 | 27515 | 27519 | 27522 |
| 27524 | 27540 | 27551 | 27556 | 27557 | 27558 | 27574 | 27580 | 27595 | 27601 | 27605 | 27612 | 27615 |
| 27626 | 27633 | 27649 | 27675 | 27677 | 27678 | 27680 | 27687 | 27716 | 27733 | 27756 | 27781 | 27783 |
| 27809 | 27818 | 27822 | 27842 | 27846 | 27848 | 27861 | 27885 | 27886 | 27891 | 27898 | 27904 | 27924 |
| 27978 | 27984 | 27991 | 28003 | 28006 | 28008 | 28013 | 28037 | 28039 | 28046 | 28064 | 28071 | 28088 |
| 28091 | 28105 | 28116 | 28119 | 28120 | 28129 | 28138 | 28164 | 28175 | 28184 | 28199 | 28201 | 28207 |
| 28209 | 28225 | 28269 | 28281 | 28296 | 28298 | 28314 | 28333 | 28349 | 28373 | 28380 | 28381 | 28388 |
| 28404 | 28409 | 28417 | 28419 | 28427 | 28463 | 28464 | 28466 | 28467 | 28469 | 28472 | 28492 | 28499 |
| 28524 | 28525 | 28528 | 28546 | 28554 | 28580 | 28590 | 28595 | 28602 | 28607 | 28620 | 28641 | 28648 |
| 28649 | 28677 | 28683 | 28685 | 28691 | 28697 | 28710 | 28712 | 28728 | 28733 | 28741 | 28748 | 28767 |
| 28812 | 28839 | 28852 | 28855 | 28857 | 28860 | 28869 | 28875 | 28886 | 28891 | 28909 | 28918 | 28930 |
| 28958 | 28967 | 28973 | 28974 | 28977 | 28978 | 28980 | 28986 | 29006 | 29010 | 29016 | 29037 | 29043 |
| 29093 | 29096 | 29104 | 29112 | 29113 | 29115 | 29119 | 29147 | 29156 | 29184 | 29212 | 29230 | 29242 |
| 29256 | 29260 | 29261 | 29266 | 29277 | 29286 | 29289 | 29298 | 29303 | 29322 | 29325 | 29347 | 29350 |
| 29381 | 29401 | 29415 | 29418 | 29421 | 29434 | 29436 | 29446 | 29447 | 29451 | 29463 | 29465 | 29467 |
| 29475 | 29478 | 29488 | 29494 | 29502 | 29508 | 29537 | 29539 | 29560 | 29561 | 29573 | 29578 | 29589 |
| 29597 | 29608 | 29613 | 29616 | 29641 | 29643 | 29653 | 29699 | 29705 | 29715 | 29722 | 29724 | 29765 |
| 29768 | 29770 | 29786 | 29787 | 29803 | 29822 | 29824 | 29827 | 29847 | 29854 | 29856 | 29864 | 29869 |

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 29889 | 29896 | 29909 | 29930 | 29932 | 29933 | 29941 | 29943 | 29955 | 29961 | 29970 | 29980 | 29991 |
| 29994 | 30004 | 30013 | 30056 | 30072 | 30074 | 30086 | 30089 | 30091 | 30094 | 30115 | 30118 | 30132 |
| 30137 | 30139 | 30161 | 30165 | 30177 | 30189 | 30195 | 30227 | 30239 | 30265 | 30275 | 30294 | 30297 |
| 30306 | 30307 | 30318 | 30319 | 30329 | 30332 | 30346 | 30358 | 30364 | 30374 | 30377 | 30382 | 30390 |
| 30420 | 30421 | 30428 | 30436 | 30445 | 30449 | 30467 | 30469 | 30473 | 30478 | 30514 | 30544 | 30546 |
| 30550 | 30556 | 30571 | 30581 | 30585 | 30586 | 30588 | 30598 | 30599 | 30607 | 30613 | 30622 | 30624 |
| 30626 | 30638 | 30646 | 30690 | 30701 | 30708 | 30710 | 30716 | 30742 | 30771 | 30779 | 30790 | 30807 |
| 30814 | 30815 | 30817 | 30856 | 30871 | 30874 | 30889 | 30894 | 30902 | 30917 | 30919 | 30948 | 30956 |
| 30957 | 30958 | 30966 | 30971 | 30973 | 30974 | 30978 | 30984 | 30985 | 30988 | 30991 | 30993 | 31001 |
| 31013 | 31023 | 31024 | 31025 | 31034 | 31042 | 31067 | 31068 | 31074 | 31103 | 31108 | 31126 | 31132 |
| 31134 | 31181 | 31194 | 31197 | 31208 | 31209 | 31225 | 31243 | 31245 | 31247 | 31263 | 31272 | 31277 |
| 31280 | 31285 | 31322 | 31329 | 31338 | 31339 | 31348 | 31349 | 31353 | 31355 | 31370 | 31371 | 31375 |
| 31380 | 31410 | 31411 | 31424 | 31427 | 31429 | 31432 | 31450 | 31454 | 31464 | 31487 | 31488 | 31505 |
| 31508 | 31519 | 31520 | 31521 | 31531 | 31534 | 31537 | 31550 | 31561 | 31577 | 31586 | 31590 | 31594 |
| 31596 | 31599 | 31606 | 31615 | 31627 | 31630 | 31648 | 31649 | 31651 | 31661 | 31692 | 31699 | 31721 |
| 31730 | 31732 | 31736 | 31739 | 31742 | 31744 | 31761 | 31773 | 31795 | 31816 | 31817 | 31820 | 31849 |
| 31869 | 31872 | 31877 | 31885 | 31887 | 31893 | 31904 | 31912 | 31929 | 31930 | 31936 | 31937 | 31943 |
| 31951 | 31958 | 31964 | 31969 | 31978 | 31979 | 31990 | 31993 | 32007 | 32014 | 32017 | 32022 | 32042 |
| 32046 | 32072 | 32075 | 32081 | 32084 | 32088 | 32110 | 32119 | 32126 | 32139 | 32147 | 32150 | 32155 |
| 32172 | 32196 | 32208 | 32212 | 32213 | 32214 | 32217 | 32230 | 32252 | 32255 | 32258 | 32280 | 32289 |
| 32291 | 32296 | 32310 | 32343 | 32344 | 32352 | 32364 | 32368 | 32375 | 32398 | 32414 | 32444 | 32446 |
| 32453 | 32462 | 32481 | 32496 | 32506 | 32524 | 32533 | 32535 | 32543 | 32566 | 32581 | 32588 | 32590 |
| 32617 | 32623 | 32630 | 32639 | 32642 | 32647 | 32651 | 32660 | 32668 | 32673 | 32694 | 32708 | 32715 |
| 32716 | 32729 | 32736 | 32737 | 32751 | 32760 | 32763 | 32785 | 32814 | 32820 | 32824 | 32825 | 32830 |
| 32833 | 32837 | 32838 | 32858 | 32866 | 32867 | 32868 | 32872 | 32877 | 32885 | 32888 | 32895 | 32902 |
| 32905 | 32917 | 32920 | 32936 | 32940 | 32956 | 32957 | 32961 | 32985 | 32988 | 33006 | 33013 | 33014 |
| 33027 | 33037 | 33045 | 33050 | 33059 | 33062 | 33064 | 33079 | 33092 | 33102 | 33113 | 33116 | 33117 |
| 33118 | 33122 | 33136 | 33144 | 33145 | 33149 | 33150 | 33155 | 33165 | 33172 | 33192 | 33201 | 33225 |
| 33249 | 33253 | 33277 | 33278 | 33291 | 33293 | 33306 | 33309 | 33311 | 33317 | 33332 | 33340 | 33351 |
| 33377 | 33378 | 33379 | 33392 | 33393 | 33417 | 33448 | 33461 | 33462 | 33468 | 33471 | 33475 | 33500 |
| 33507 | 33509 | 33521 | 33530 | 33539 | 33543 | 33546 | 33569 | 33591 | 33600 | 33604 | 33636 | 33638 |
| 33651 | 33664 | 33698 | 33707 | 33726 | 33727 | 33738 | 33747 | 33749 | 33751 | 33767 | 33776 | 33803 |
| 33810 | 33814 | 33824 | 33852 | 33861 | 33881 | 33887 | 33891 | 33902 | 33905 | 33910 | 33913 | 33919 |
| 33928 | 33929 | 33939 | 33946 | 33955 | 33957 | 33958 | 33970 | 33975 | 33979 | 33986 | 33993 | 34008 |
| 34039 | 34053 | 34063 | 34074 | 34080 | 34086 | 34098 | 34102 | 34124 | 34131 | 34139 | 34142 | 34158 |
| 34162 | 34181 | 34182 | 34185 | 34187 | 34194 | 34202 | 34211 | 34212 | 34216 | 34230 | 34231 | 34235 |
| 34238 | 34273 | 34277 | 34291 | 34303 | 34327 | 34347 | 34368 | 34414 | 34426 | 34429 | 34433 | 34436 |
| 34437 | 34463 | 34474 | 34482 | 34485 | 34488 | 34490 | 34497 | 34519 | 34545 | 34548 | 34570 | 34576 |
| 34578 | 34585 | 34590 | 34627 | 34638 | 34639 | 34658 | 34664 | 34665 | 34670 | 34678 | 34693 | 34695 |
| 34727 | 34735 | 34747 | 34748 | 34750 | 34758 | 34781 | 34790 | 34802 | 34814 | 34823 | 34840 | 34848 |
| 34856 | 34859 | 34865 | 34868 | 34869 | 34870 | 34878 | 34896 | 34907 | 34913 | 34914 | 34924 | 34934 |
| 34938 | 34940 | 34943 | 34950 | 34951 | 34955 | 34959 | 34993 | 34996 | 35011 | 35017 | 35020 | 35021 |
| 35024 | 35044 | 35054 | 35062 | 35064 | 35078 | 35082 | 35087 | 35123 | 35126 | 35128 | 35136 | 35142 |
| 35163 | 35165 | 35166 | 35169 | 35170 | 35178 | 35194 | 35202 | 35204 | 35216 | 35229 | 35245 | 35253 |
| 35258 | 35260 | 35267 | 35269 | 35270 | 35273 | 35285 | 35296 | 35298 | 35303 | 35304 | 35305 | 35328 |
| 35334 | 35350 | 35385 | 35404 | 35410 | 35452 | 35453 | 35464 | 35466 | 35473 | 35478 | 35487 | 35491 |
| 35500 | 35512 | 35515 | 35526 | 35542 | 35561 | 35562 | 35570 | 35580 | 35589 | 35605 | 35625 | 35632 |
| 35640 | 35644 | 35647 | 35666 | 35667 | 35672 | 35697 | 35706 | 35714 | 35715 | 35726 | 35755 | 35762 |
| 35767 | 35769 | 35787 | 35803 | 35829 | 35836 | 35849 | 35852 | 35854 | 35856 | 35858 | 35877 | 35890 |
| 35897 | 35899 | 35902 | 35908 | 35909 | 35915 | 35916 | 35923 | 35930 | 35933 | 35940 | 35945 | 35946 |
| 35949 | 35951 | 35961 | 35971 | 35972 | 35976 | 35980 | 35991 | 36001 | 36003 | 36009 | 36020 | 36025 |
| 36036 | 36046 | 36070 | 36074 | 36078 | 36098 | 36102 | 36106 | 36108 | 36143 | 36148 | 36150 | 36164 |
| 36186 | 36188 | 36204 | 36227 | 36230 | 36249 | 36250 | 36256 | 36262 | 36289 | 36295 | 36303 | 36307 |
| 36308 | 36309 | 36322 | 36326 | 36363 | 36378 | 36393 | 36399 | 36400 | 36427 | 36431 | 36451 | 36456 |
| 36457 | 36472 | 36491 | 36492 | 36501 | 36511 | 36517 | 36532 | 36538 | 36545 | 36550 | 36552 | 36560 |
| 36573 | 36581 | 36583 | 36585 | 36606 | 36612 | 36626 | 36636 | 36640 | 36646 | 36647 | 36648 | 36656 |
| 36669 | 36670 | 36690 | 36705 | 36706 | 36714 | 36719 | 36724 | 36730 | 36737 | 36743 | 36752 | 36757 |
| 36773 | 36782 | 36807 | 36809 | 36811 | 36814 | 36819 | 36822 | 36825 | 36832 | 36839 | 36849 | 36851 |

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 36868 | 36872 | 36882 | 36889 | 36894 | 36896 | 36900 | 36908 | 36911 | 36914 | 36923 | 36927 | 36928 |
| 36942 | 36946 | 36973 | 36982 | 37005 | 37008 | 37009 | 37019 | 37032 | 37039 | 37042 | 37051 | 37057 |
| 37066 | 37077 | 37087 | 37088 | 37095 | 37103 | 37107 | 37117 | 37128 | 37144 | 37145 | 37157 | 37161 |
| 37163 | 37175 | 37176 | 37180 | 37181 | 37207 | 37217 | 37222 | 37235 | 37246 | 37270 | 37275 | 37281 |
| 37288 | 37305 | 37321 | 37350 | 37355 | 37359 | 37361 | 37365 | 37367 | 37369 | 37375 | 37403 | 37414 |
| 37418 | 37421 | 37448 | 37452 | 37484 | 37492 | 37496 | 37520 | 37523 | 37536 | 37539 | 37562 | 37567 |
| 37571 | 37574 | 37578 | 37595 | 37601 | 37610 | 37620 | 37631 | 37659 | 37670 | 37698 | 37708 | 37713 |
| 37724 | 37730 | 37733 | 37736 | 37748 | 37770 | 37779 | 37781 | 37817 | 37820 | 37839 | 37847 | 37876 |
| 37882 | 37885 | 37898 | 37901 | 37925 | 37931 | 37951 | 37973 | 37983 | 37988 | 37989 | 38001 | 38030 |
| 38042 | 38065 | 38093 | 38107 | 38122 | 38130 | 38135 | 38142 | 38143 | 38153 | 38161 | 38169 | 38174 |
| 38186 | 38199 | 38203 | 38221 | 38227 | 38231 | 38257 | 38258 | 38282 | 38284 | 38288 | 38296 | 38318 |
| 38324 | 38334 | 38348 | 38363 | 38375 | 38398 | 38415 | 38439 | 38461 | 38464 | 38468 | 38525 | 38527 |
| 38528 | 38536 | 38543 | 38548 | 38554 | 38601 | 38645 | 38657 | 38662 | 38664 | 38678 | 38685 | 38693 |
| 38700 | 38703 | 38711 | 38712 | 38726 | 38729 | 38732 | 38740 | 38746 | 38751 | 38767 | 38770 | 38785 |
| 38793 | 38807 | 38817 | 38822 | 38824 | 38831 | 38837 | 38842 | 38848 | 38860 | 38868 | 38896 | 38911 |
| 38920 | 38952 | 38956 | 38963 | 38964 | 38966 | 38969 | 38982 | 38984 | 38994 | 38997 | 39014 | 39037 |
| 39053 | 39057 | 39072 | 39074 | 39097 | 39102 | 39124 | 39190 | 39196 | 39203 | 39206 | 39217 | 39224 |
| 39233 | 39235 | 39237 | 39242 | 39244 | 39263 | 39278 | 39287 | 39293 | 39294 | 39314 | 39315 | 39324 |
| 39337 | 39340 | 39342 | 39344 | 39351 | 39354 | 39355 | 39358 | 39379 | 39396 | 39397 | 39431 | 39432 |
| 39438 | 39444 | 39446 | 39456 | 39464 | 39470 | 39477 | 39487 | 39488 | 39496 | 39503 | 39525 | 39528 |
| 39534 | 39535 | 39540 | 39544 | 39548 | 39564 | 39568 | 39570 | 39594 | 39595 | 39613 | 39615 | 39623 |
| 39644 | 39690 | 39694 | 39700 | 39708 | 39709 | 39713 | 39717 | 39736 | 39777 | 39791 | 39798 | 39800 |
| 39805 | 39815 | 39819 | 39855 | 39868 | 39870 | 39905 | 39931 | 39938 | 39956 | 39957 | 39958 | 39978 |
| 39988 | 40000 | 40004 | 40013 | 40028 | 40075 | 40081 | 40093 | 40111 | 40128 | 40130 | 40133 | 40135 |
| 40136 | 40149 | 40156 | 40157 | 40165 | 40177 | 40194 | 40211 | 40233 | 40248 | 40251 | 40260 | 40261 |
| 40266 | 40288 | 40294 | 40307 | 40308 | 40338 | 40343 | 40366 | 40372 | 40393 | 40403 | 40405 | 40410 |
| 40411 | 40415 | 40424 | 40429 | 40435 | 40443 | 40452 | 40459 | 40463 | 40469 | 40470 | 40476 | 40495 |
| 40497 | 40500 | 40507 | 40511 | 40513 | 40514 | 40527 | 40528 | 40537 | 40539 | 40582 | 40591 | 40611 |
| 40616 | 40647 | 40652 | 40655 | 40656 | 40666 | 40668 | 40675 | 40696 | 40699 | 40702 | 40729 | 40731 |
| 40755 | 40758 | 40763 | 40773 | 40793 | 40795 | 40814 | 40816 | 40824 | 40833 | 40881 | 40895 | 40900 |
| 40907 | 40908 | 40910 | 40913 | 40918 | 40923 | 40933 | 40934 | 40948 | 40962 | 40963 | 40970 | 40991 |
| 41016 | 41025 | 41038 | 41063 | 41082 | 41090 | 41116 | 41128 | 41133 | 41140 | 41145 | 41149 | 41151 |
| 41152 | 41159 | 41165 | 41168 | 41192 | 41204 | 41208 | 41212 | 41231 | 41233 | 41250 | 41251 | 41259 |
| 41262 | 41300 | 41318 | 41324 | 41344 | 41349 | 41357 | 41360 | 41380 | 41382 | 41388 | 41390 | 41407 |
| 41433 | 41457 | 41480 | 41488 | 41490 | 41496 | 41497 | 41502 | 41515 | 41529 | 41535 | 41542 | 41557 |
| 41564 | 41567 | 41570 | 41571 | 41587 | 41588 | 41589 | 41616 | 41623 | 41628 | 41634 | 41644 | 41652 |
| 41653 | 41682 | 41707 | 41732 | 41750 | 41788 | 41794 | 41848 | 41862 | 41895 | 41955 | 41960 | 41985 |
| 42010 | 42028 | 42031 | 42037 | 42047 | 42048 | 42052 | 42056 | 42078 | 42099 | 42107 | 42127 | 42172 |
| 42175 | 42179 | 42207 | 42228 | 42232 | 42242 | 42245 | 42268 | 42300 | 42304 | 42318 | 42335 | 42338 |
| 42348 | 42355 | 42358 | 42374 | 42387 | 42389 | 42405 | 42414 | 42439 | 42440 | 42442 | 42447 | 42452 |
| 42481 | 42494 | 42501 | 42523 | 42531 | 42537 | 42538 | 42539 | 42560 | 42573 | 42580 | 42581 | 42614 |
| 42624 | 42630 | 42636 | 42650 | 42665 | 42667 | 42671 | 42677 | 42685 | 42694 | 42714 | 42719 | 42724 |
| 42747 | 42754 | 42766 | 42767 | 42777 | 42779 | 42790 | 42795 | 42796 | 42829 | 42832 | 42838 | 42859 |
| 42861 | 42875 | 42882 | 42894 | 42911 | 42919 | 42921 | 42922 | 42926 | 42942 | 42943 | 42949 | 42950 |
| 42962 | 42963 | 42965 | 42966 | 42970 | 42974 | 42979 | 42984 | 42996 | 43010 | 43024 | 43036 | 43067 |
| 43076 | 43079 | 43092 | 43095 | 43098 | 43101 | 43105 | 43112 | 43113 | 43139 | 43173 | 43174 | 43186 |
| 43190 | 43191 | 43216 | 43221 | 43229 | 43233 | 43261 | 43265 | 43269 | 43296 | 43301 | 43312 | 43323 |
| 43347 | 43351 | 43374 | 43377 | 43379 | 43392 | 43397 | 43401 | 43409 | 43414 | 43415 | 43425 | 43426 |
| 43432 | 43441 | 43445 | 43448 | 43458 | 43471 | 43478 | 43479 | 43505 | 43525 | 43530 | 43541 | 43582 |
| 43591 | 43625 | 43628 | 43635 | 43639 | 43649 | 43668 | 43670 | 43689 | 43694 | 43726 | 43739 | 43747 |
| 43748 | 43751 | 43755 | 43776 | 43789 | 43791 | 43805 | 43807 | 43809 | 43814 | 43843 | 43852 | 43855 |
| 43862 | 43874 | 43911 | 43919 | 43920 | 43929 | 43939 | 43960 | 43963 | 43966 | 43975 | 43985 | 43986 |
| 43987 | 44017 | 44060 | 44075 | 44076 | 44082 | 44088 | 44099 | 44100 | 44115 | 44117 | 44122 | 44129 |
| 44133 | 44147 | 44150 | 44156 | 44178 | 44182 | 44190 | 44191 | 44207 | 44211 | 44221 | 44232 | 44244 |
| 44247 | 44249 | 44257 | 44265 | 44284 | 44292 | 44293 | 44300 | 44306 | 44311 | 44335 | 44362 | 44368 |
| 44397 | 44401 | 44403 | 44411 | 44418 | 44422 | 44429 | 44430 | 44452 | 44474 | 44489 | 44515 | 44526 |
| 44548 | 44558 | 44560 | 44565 | 44566 | 44591 | 44601 | 44613 | 44623 | 44635 | 44650 | 44655 | 44663 |
| 44666 | 44671 | 44687 | 44693 | 44710 | 44714 | 44732 | 44734 | 44745 | 44752 | 44755 | 44756 | 44764 |

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 44790 | 44800 | 44806 | 44810 | 44824 | 44855 | 44879 | 44932 | 44935 | 44937 | 44938 | 44945 | 44965 |
| 44978 | 44993 | 45002 | 45005 | 45006 | 45007 | 45020 | 45051 | 45056 | 45062 | 45072 | 45083 | 45090 |
| 45093 | 45108 | 45126 | 45159 | 45161 | 45163 | 45181 | 45206 | 45216 | 45218 | 45232 | 45254 | 45261 |
| 45275 | 45277 | 45280 | 45290 | 45296 | 45299 | 45323 | 45328 | 45329 | 45331 | 45335 | 45368 | 45381 |
| 45396 | 45402 | 45435 | 45440 | 45446 | 45453 | 45470 | 45487 | 45489 | 45491 | 45492 | 45510 | 45511 |
| 45524 | 45529 | 45530 | 45538 | 45547 | 45553 | 45560 | 45574 | 45584 | 45607 | 45615 | 45625 | 45627 |
| 45633 | 45647 | 45655 | 45659 | 45661 | 45670 | 45673 | 45680 | 45689 | 45696 | 45753 | 45760 | 45763 |
| 45771 | 45799 | 45803 | 45811 | 45814 | 45831 | 45835 | 45839 | 45849 | 45850 | 45852 | 45855 | 45884 |
| 45887 | 45889 | 45891 | 45902 | 45903 | 45904 | 45905 | 45915 | 45927 | 45931 | 45970 | 45984 | 45995 |
| 45997 | 45998 | 46007 | 46014 | 46022 | 46049 | 46057 | 46066 | 46067 | 46070 | 46072 | 46095 | 46097 |
| 46102 | 46111 | 46114 | 46127 | 46137 | 46139 | 46140 | 46146 | 46148 | 46170 | 46173 | 46178 | 46193 |
| 46194 | 46199 | 46204 | 46206 | 46212 | 46213 | 46220 | 46237 | 46242 | 46263 | 46264 | 46293 | 46296 |
| 46312 | 46344 | 46357 | 46371 | 46374 | 46383 | 46389 | 46390 | 46397 | 46400 | 46401 | 46402 | 46411 |
| 46418 | 46421 | 46431 | 46436 | 46447 | 46460 | 46471 | 46472 | 46475 | 46480 | 46482 | 46484 | 46492 |
| 46493 | 46505 | 46517 | 46527 | 46531 | 46544 | 46558 | 46560 | 46568 | 46573 | 46582 | 46584 | 46594 |
| 46633 | 46635 | 46639 | 46656 | 46659 | 46666 | 46674 | 46679 | 46682 | 46684 | 46692 | 46693 | 46696 |
| 46708 | 46714 | 46732 | 46744 | 46750 | 46758 | 46798 | 46810 | 46811 | 46850 | 46881 | 46919 | 46926 |
| 46930 | 46938 | 46985 | 46990 | 47012 | 47019 | 47020 | 47027 | 47046 | 47050 | 47053 | 47065 | 47081 |
| 47094 | 47099 | 47111 | 47121 | 47122 | 47130 | 47138 | 47152 | 47163 | 47172 | 47195 | 47198 | 47220 |
| 47223 | 47225 | 47241 | 47244 | 47245 | 47259 | 47268 | 47280 | 47292 | 47298 | 47304 | 47312 | 47329 |
| 47335 | 47360 | 47365 | 47370 | 47371 | 47385 | 47392 | 47404 | 47429 | 47437 | 47445 | 47446 | 47468 |
| 47498 | 47514 | 47529 | 47530 | 47561 | 47562 | 47565 | 47569 | 47576 | 47578 | 47583 | 47594 | 47607 |
| 47632 | 47633 | 47643 | 47651 | 47656 | 47658 | 47678 | 47694 | 47710 | 47719 | 47724 | 47753 | 47764 |
| 47776 | 47778 | 47800 | 47808 | 47811 | 47815 | 47839 | 47855 | 47862 | 47871 | 47896 | 47904 | 47905 |
| 47911 | 47913 | 47923 | 47924 | 47932 | 47933 | 47934 | 47945 | 47971 | 47985 | 47995 | 48004 | 48018 |
| 48026 | 48043 | 48047 | 48069 | 48074 | 48077 | 48079 | 48087 | 48105 | 48114 | 48126 | 48127 | 48141 |
| 48151 | 48160 | 48173 | 48177 | 48206 | 48210 | 48212 | 48217 | 48236 | 48255 | 48285 | 48307 | 48357 |
| 48367 | 48369 | 48374 | 48378 | 48389 | 48400 | 48417 | 48420 | 48429 | 48441 | 48449 | 48450 | 48452 |
| 48460 | 48463 | 48475 | 48490 | 48495 | 48496 | 48498 | 48501 | 48503 | 48507 | 48520 | 48523 | 48526 |
| 48563 | 48574 | 48576 | 48579 | 48582 | 48584 | 48609 | 48618 | 48620 | 48626 | 48636 | 48643 | 48649 |
| 48650 | 48660 | 48666 | 48678 | 48684 | 48694 | 48701 | 48703 | 48741 | 48765 | 48766 | 48770 | 48775 |
| 48780 | 48784 | 48787 | 48790 | 48802 | 48815 | 48820 | 48833 | 48845 | 48849 | 48853 | 48858 | 48871 |
| 48872 | 48879 | 48881 | 48896 | 48972 | 48978 | 48983 | 48984 | 48992 | 48997 | 49010 | 49017 | 49049 |
| 49055 | 49059 | 49066 | 49087 | 49102 | 49114 | 49117 | 49120 | 49121 | 49122 | 49145 | 49147 | 49154 |
| 49165 | 49168 | 49176 | 49202 | 49203 | 49204 | 49214 | 49220 | 49236 | 49239 | 49254 | 49257 | 49267 |
| 49277 | 49284 | 49285 | 49300 | 49316 | 49330 | 49342 | 49356 | 49380 | 49397 | 49404 | 49412 | 49415 |
| 49419 | 49443 | 49444 | 49447 | 49453 | 49459 | 49476 | 49479 | 49485 | 49488 | 49504 | 49513 | 49526 |
| 49531 | 49532 | 49572 | 49573 | 49575 | 49581 | 49594 | 49595 | 49609 | 49654 | 49675 | 49680 | 49694 |
| 49696 | 49699 | 49701 | 49706 | 49711 | 49713 | 49760 | 49782 | 49789 | 49791 | 49795 | 49798 | 49808 |
| 49818 | 49821 | 49837 | 49839 | 49853 | 49879 | 49883 | 49884 | 49885 | 49899 | 49905 | 49923 | 49932 |
| 49934 | 49940 | 49958 | 49961 | 49966 | 49970 | 50054 | 50060 | 50061 | 50097 | 50104 | 50105 | 50110 |
| 50111 | 50119 | 50134 | 50140 | 50152 | 50158 | 50162 | 50171 | 50178 | 50185 | 50191 | 50232 | 50234 |
| 50249 | 50259 | 50264 | 50280 | 50281 | 50288 | 50293 | 50297 | 50302 | 50347 | 50362 | 50365 | 50370 |
| 50414 | 50470 | 50481 | 50487 | 50491 | 50495 | 50502 | 50510 | 50511 | 50526 | 50543 | 50560 | 50561 |
| 50567 | 50571 | 50573 | 50585 | 50596 | 50600 | 50607 | 50612 | 50618 | 50630 | 50637 | 50652 | 50655 |
| 50661 | 50689 | 50692 | 50700 | 50702 | 50708 | 50722 | 50737 | 50745 | 50751 | 50763 | 50768 | 50787 |
| 50812 | 50820 | 50829 | 50841 | 50844 | 50856 | 50865 | 50870 | 50880 | 50886 | 50892 | 50893 | 50896 |
| 50905 | 50926 | 50933 | 50934 | 50950 | 50951 | 50959 | 50969 | 50975 | 50977 | 50986 | 50990 | 51006 |
| 51008 | 51013 | 51027 | 51031 | 51035 | 51049 | 51054 | 51096 | 51100 | 51102 | 51110 | 51113 | 51123 |
| 51124 | 51130 | 51131 | 51134 | 51138 | 51140 | 51147 | 51149 | 51150 | 51157 | 51160 | 51163 | 51172 |
| 51176 | 51179 | 51187 | 51196 | 51202 | 51210 | 51222 | 51223 | 51233 | 51240 | 51247 | 51250 | 51254 |
| 51291 | 51297 | 51298 | 51300 | 51308 | 51309 | 51312 | 51317 | 51318 | 51319 | 51346 | 51359 | 51364 |
| 51369 | 51385 | 51389 | 51391 | 51404 | 51406 | 51407 | 51431 | 51432 | 51440 | 51450 | 51461 | 51468 |
| 51471 | 51483 | 51487 | 51489 | 51500 | 51511 | 51522 | 51554 | 51571 | 51579 | 51581 | 51592 | 51603 |
| 51609 | 51610 | 51619 | 51623 | 51627 | 51637 | 51644 | 51655 | 51661 | 51673 | 51675 | 51679 | 51683 |
| 51695 | 51697 | 51719 | 51722 | 51729 | 51731 | 51739 | 51745 | 51751 | 51764 | 51768 | 51772 | 51779 |
| 51789 | 51808 | 51817 | 51830 | 51837 | 51844 | 51846 | 51855 | 51859 | 51866 | 51887 | 51904 | 51915 |
| 51922 | 51926 | 51944 | 51969 | 51973 | 51976 | 51992 | 51998 | 52007 | 52033 | 52080 | 52091 | 52095 |

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 52102 | 52103 | 52105 | 52111 | 52133 | 52145 | 52161 | 52166 | 52169 | 52182 | 52207 | 52216 | 52246 |
| 52256 | 52258 | 52263 | 52264 | 52272 | 52273 | 52281 | 52303 | 52326 | 52329 | 52349 | 52350 | 52367 |
| 52370 | 52375 | 52383 | 52387 | 52390 | 52404 | 52440 | 52445 | 52489 | 52491 | 52492 | 52496 | 52500 |
| 52502 | 52513 | 52527 | 52536 | 52540 | 52543 | 52551 | 52561 | 52571 | 52590 | 52596 | 52607 | 52616 |
| 52625 | 52628 | 52635 | 52637 | 52644 | 52661 | 52675 | 52677 | 52679 | 52685 | 52720 | 52743 | 52745 |
| 52751 | 52758 | 52761 | 52773 | 52795 | 52821 | 52843 | 52852 | 52872 | 52873 | 52879 | 52905 | 52913 |
| 52914 | 52922 | 52923 | 52929 | 52940 | 52945 | 52951 | 52952 | 52957 | 52966 | 52985 | 53003 | 53020 |
| 53026 | 53051 | 53056 | 53065 | 53076 | 53089 | 53094 | 53127 | 53129 | 53132 | 53135 | 53158 | 53184 |
| 53211 | 53212 | 53226 | 53230 | 53233 | 53242 | 53243 | 53267 | 53278 | 53285 | 53293 | 53304 | 53310 |
| 53313 | 53323 | 53335 | 53344 | 53345 | 53366 | 53375 | 53388 | 53393 | 53397 | 53407 | 53410 | 53417 |
| 53420 | 53459 | 53463 | 53472 | 53481 | 53483 | 53498 | 53514 | 53522 | 53524 | 53525 | 53546 | 53555 |
| 53576 | 53581 | 53593 | 53597 | 53601 | 53609 | 53613 | 53615 | 53623 | 53625 | 53648 | 53671 | 53672 |
| 53691 | 53703 | 53706 | 53713 | 53728 | 53755 | 53765 | 53800 | 53803 | 53807 | 53811 | 53819 | 53831 |
| 53855 | 53861 | 53863 | 53870 | 53886 | 53890 | 53911 | 53925 | 53932 | 53960 | 53966 | 53968 | 53969 |
| 53993 | 53996 | 54013 | 54021 | 54038 | 54043 | 54053 | 54069 | 54080 | 54085 | 54120 | 54122 | 54129 |
| 54133 | 54135 | 54143 | 54144 | 54153 | 54164 | 54168 | 54181 | 54188 | 54192 | 54199 | 54213 | 54224 |
| 54229 | 54232 | 54249 | 54251 | 54263 | 54264 | 54269 | 54272 | 54288 | 54301 | 54305 | 54306 | 54311 |
| 54318 | 54340 | 54355 | 54357 | 54365 | 54376 | 54379 | 54381 | 54384 | 54393 | 54416 | 54463 | 54485 |
| 54493 | 54499 | 54510 | 54523 | 54531 | 54534 | 54567 | 54570 | 54571 | 54572 | 54573 | 54575 | 54580 |
| 54590 | 54599 | 54604 | 54639 | 54672 | 54688 | 54700 | 54716 | 54723 | 54738 | 54753 | 54764 | 54767 |
| 54768 | 54775 | 54784 | 54802 | 54809 | 54816 | 54819 | 54825 | 54835 | 54847 | 54858 | 54868 | 54873 |
| 54884 | 54888 | 54898 | 54933 | 54934 | 54947 | 54949 | 54960 | 54970 | 54984 | 54994 | 55023 | 55028 |
| 55029 | 55034 | 55038 | 55044 | 55046 | 55062 | 55078 | 55098 | 55113 | 55125 | 55143 | 55145 | 55152 |
| 55166 | 55213 | 55222 | 55224 | 55232 | 55234 | 55260 | 55261 | 55266 | 55270 | 55272 | 55279 | 55302 |
| 55307 | 55329 | 55330 | 55347 | 55372 | 55373 | 55389 | 55392 | 55408 | 55410 | 55416 | 55419 | 55433 |
| 55437 | 55441 | 55446 | 55462 | 55500 | 55501 | 55512 | 55530 | 55567 | 55570 | 55575 | 55577 | 55579 |
| 55595 | 55596 | 55604 | 55616 | 55624 | 55634 | 55639 | 55652 | 55667 | 55671 | 55684 | 55690 | 55701 |
| 55705 | 55710 | 55717 | 55719 | 55760 | 55762 | 55763 | 55775 | 55801 | 55823 | 55825 | 55836 | 55867 |
| 55871 | 55884 | 55905 | 55910 | 55959 | 55960 | 55963 | 55987 | 55989 | 55997 | 56001 | 56004 | 56019 |
| 56029 | 56034 | 56049 | 56056 | 56058 | 56062 | 56124 | 56165 | 56187 | 56190 | 56192 | 56208 | 56219 |
| 56230 | 56235 | 56240 | 56267 | 56272 | 56284 | 56286 | 56301 | 56305 | 56333 | 56343 | 56344 | 56345 |
| 56346 | 56347 | 56370 | 56373 | 56379 | 56381 | 56384 | 56385 | 56388 | 56398 | 56400 | 56403 | 56405 |
| 56410 | 56416 | 56419 | 56430 | 56474 | 56475 | 56489 | 56491 | 56503 | 56508 | 56510 | 56515 | 56521 |
| 56537 | 56539 | 56544 | 56548 | 56573 | 56574 | 56588 | 56596 | 56597 | 56607 | 56620 | 56628 | 56633 |
| 56649 | 56661 | 56672 | 56689 | 56715 | 56716 | 56729 | 56735 | 56745 | 56749 | 56761 | 56768 | 56774 |
| 56793 | 56809 | 56844 | 56858 | 56870 | 56898 | 56906 | 56927 | 56930 | 56943 | 56950 | 56963 | 56990 |
| 57012 | 57025 | 57027 | 57028 | 57044 | 57050 | 57052 | 57056 | 57084 | 57089 | 57101 | 57102 | 57113 |
| 57116 | 57129 | 57137 | 57157 | 57158 | 57173 | 57203 | 57205 | 57207 | 57225 | 57243 | 57246 | 57254 |
| 57258 | 57262 | 57275 | 57297 | 57301 | 57307 | 57326 | 57329 | 57333 | 57343 | 57388 | 57391 | 57422 |
| 57424 | 57431 | 57442 | 57448 | 57465 | 57468 | 57471 | 57478 | 57506 | 57513 | 57544 | 57563 | 57569 |
| 57574 | 57580 | 57610 | 57624 | 57630 | 57632 | 57638 | 57664 | 57669 | 57673 | 57674 | 57682 | 57696 |
| 57698 | 57703 | 57708 | 57725 | 57733 | 57771 | 57778 | 57797 | 57805 | 57812 | 57823 | 57824 | 57829 |
| 57846 | 57852 | 57866 | 57877 | 57896 | 57897 | 57900 | 57908 | 57909 | 57937 | 57961 | 57982 | 57999 |
| 58000 | 58001 | 58004 | 58015 | 58020 | 58028 | 58031 | 58048 | 58065 | 58072 | 58073 | 58080 | 58085 |
| 58091 | 58100 | 58110 | 58112 | 58133 | 58143 | 58145 | 58146 | 58156 | 58164 | 58166 | 58180 | 58188 |
| 58191 | 58194 | 58198 | 58199 | 58200 | 58238 | 58251 | 58254 | 58261 | 58278 | 58340 | 58341 | 58369 |
| 58376 | 58377 | 58379 | 58383 | 58396 | 58397 | 58404 | 58407 | 58409 | 58425 | 58431 | 58436 | 58450 |
| 58468 | 58488 | 58491 | 58500 | 58501 | 58504 | 58508 | 58509 | 58510 | 58522 | 58523 | 58526 | 58527 |
| 58534 | 58536 | 58541 | 58549 | 58558 | 58588 | 58598 | 58599 | 58603 | 58615 | 58624 | 58647 | 58678 |
| 58690 | 58694 | 58700 | 58701 | 58702 | 58710 | 58731 | 58759 | 58766 | 58790 | 58793 | 58802 | 58807 |
| 58814 | 58822 | 58825 | 58837 | 58838 | 58840 | 58846 | 58852 | 58854 | 58856 | 58869 | 58872 | 58886 |
| 58889 | 58907 | 58911 | 58924 | 58937 | 58939 | 58940 | 58951 | 58955 | 58964 | 58968 | 58974 | 58984 |
| 58997 | 58998 | 59000 | 59014 | 59016 | 59017 | 59021 | 59024 | 59032 | 59062 | 59077 | 59082 | 59087 |
| 59088 | 59109 | 59114 | 59116 | 59117 | 59146 | 59156 | 59161 | 59170 | 59176 | 59188 | 59190 | 59198 |
| 59207 | 59211 | 59215 | 59217 | 59223 | 59228 | 59244 | 59260 | 59266 | 59286 | 59287 | 59293 | 59295 |
| 59303 | 59307 | 59316 | 59317 | 59318 | 59324 | 59325 | 59339 | 59342 | 59350 | 59365 | 59368 | 59386 |
| 59389 | 59397 | 59399 | 59400 | 59406 | 59413 | 59414 | 59416 | 59424 | 59425 | 59431 | 59459 | 59471 |
| 59477 | 59495 | 59498 | 59508 | 59510 | 59522 | 59539 | 59568 | 59591 | 59599 | 59610 | 59613 | 59618 |

```
59653 59654 59656 59673 59678 59679 59690 59731 59739 59759 59767 59769 59779
59790 59805 59817 59822 59829 59833 59835 59844 59874 59886 59899 59906 59916
59917 59920 59924 59925 59942 59954 59968 59971 60009 60031 60033 60036 60044
60052 60056 60058 60061 60067
2 9000
3 65000
```

output

```
1 | True
```

Private Test case 5

input

```
1 25 27 75 77 157 210 221 234 240 241 316 396 435 467 557 643 643 716 720 798
824 893 929 979 1054 1067 1260 1322 1391 1393 1540 1580 1770 1794 1824 1835
1915 1983 1996 2034 2036 2086 2184 2311 2327 2354 2367 2372 2390 2401 2489
2490 2500 2523 2528 2582 2697 2732 2763 2779 2838 2976 2985 2990 3007 3098
3115 3163 3191 3269 3306 3439 3502 3505 3536 3573 3590 3645 3702 3705 3861
3913 4144 4238 4244 4363 4407 4667 4689 4767 4854 4894 4985 5000 5001 5068
5119 5309 5339 5398 5496 5533 5562 5575 5589 5661 5704 5786 5829 5924 5957
6015 6103 6133 6214 6226 6244 6258 6276 6306 6318 6327 6363 6388 6406 6436
6454 6572 6735 6881 6952 6966 6971 7041 7070 7093 7248 7275 7283 7307 7308
7330 7352 7365 7390 7436 7516 7531 7585 7600 7626 7660 7731 7742 7758 7791
7848 7871 7872 7898 7932 7972 8017 8033 8089 8127 8280 8324 8390 8425 8471
8485 8553 8636 8713 8781 8931 8990 8999 9024 9087 9107 9107 9188 9213 9218
9228 9285 9372 9456 9556 9568 9574 9574 9678 9816 9848 9954 9968 9985 45 53
71 79 98 112 119 131 164 173 184 210 245 286 359 391 398 418 446 449 460 462
467 472 499 509 511 525 527 547 570 575 579 634 641 655 661 679 692 715 719
757 771 806 808 854 873 919 922 961 1051 1052 1060 1121 1165 1187 1221 1245
1251 1252 1287 1343 1362 1363 1384 1460 1471 1533 1555 1587 1594 1608 1612
1638 1730 1730 1766 1766 1767 1774 1843 1865 1872 1874 1925 1982 2010 2113
2114 2121 2132 2148 2175 2191 2228 2274 2279 2280 2326 2337 2443 2455 2464
2467 2494 2502 2567 2570 2584 2586 2587 2595 2597 2617 2659 2689 2712 2722
2724 2725 2733 2751 2752 2757 2813 2878 2914 2940 2943 2946 2955 2965 2987
2998 3050 3068 3108 3129 3154 3171 3225 3274 3281 3298 3309 3318 3329 3335
3351 3354 3357 3405 3413 3440 3486 3490 3495 3505 3518 3521 3541 3543 3548
3560 3588 3605 3612 3614 3655 3683 3689 3709 3734 3745 3770 3778 3783 3787
3788 3811 3825 3828 3838 3850 3858 3863 3871 3884 3887 3896 3907 3920 3969
3995 4030 4037 4077 4089 4115 4139 4159 4169 4178 4204 4220 4253 4258 4267
4279 4280 4290 4343 4373 4385 4403 4414 4433 4446 4466 4480 4493 4521 4533
4538 4563 4588 4622 4641 4645 4656 4715 4726 4749 4783 4797 4799 4866 4877
4881 4911 4916 4961 4970 4990 5005 5019 5030 5039 5045 5054 5076 5077 5093
5102 5119 5131 5135 5154 5166 5178 5179 5204 5252 5259 5276 5316 5326 5345
5374 5375 5397 5406 5410 5416 5418 5433 5442 5492 5500 5531 5565 5568 5571
5714 5719 5757 5768 5813 5822 5832 5839 5865 5877 5905 5925 5926 5958 5967
5968 5988 6008 6027 6029 6033 6055 6077 6086 6087 6088 6111 6128 6133 6146
6159 6199 6218 6237 6260 6316 6354 6377 6420 6420 6457 6468 6473 6550 6553
6564 6570 6573 6590 6645 6645 6682 6694 6697 6698 6728 6747 6751 6760 6762
6765 6778 6779 6788 6794 6818 6821 6824 6844 6844 6892 6906 6938 6968 7029
7040 7041 7063 7095 7101 7102 7119 7142 7200 7222 7225 7231 7233 7243 7253
7254 7297 7303 7315 7317 7328 7365 7372 7389 7391 7410 7439 7445 7458 7464
7476 7540 7571 7585 7628 7628 7631 7642 7643 7711 7728 7734 7749 7750 7755
7759 7768 7826 7836 7881 7902 7950 7997 8000 8004 8026 8037 8042 8077 8096
8116 8127 8135 8148 8170 8189 8191 8223 8223 8236 8258 8278 8285 8296 8315
8319 8322 8331 8358 8373 8404 8423 8435 8466 8489 8490 8494 8531 8543 8548
8585 8613 8639 8698 8703 8706 8708 8735 8740 8743 8754 8756
2 200
3 2002
```

output

```
1 True
```

Problem 2

Function **heapSort(arr)** sorts the array `arr` using max heap. Complete the function **heapify(arr, n, i)**, that takes three arguments, `arr` is the max heap array, `n` is the number of elements in heap `arr` and `i` is the index of element that needs to be heapified and heapifies the array from index `0` to `n-1` with respect to element at index `i`.

```
1 def heapify(arr, n, i):
2     #Complete this function
3
4 def heapSort(arr):
5     n = len(arr)
6     for i in range(n//2, -1, -1):
7         heapify(arr, n, i)
8     for i in range(n-1, 0, -1):
9         arr[i], arr[0] = arr[0], arr[i]
10        heapify(arr, i, 0)
```

sample input

```
1 | 45 23 6 12 9 1 22 58
```

sample output

```
1 | 1 6 9 12 22 23 45 58
```

Solution

```
1 def heapify(arr, n, i):
2     largest = i
3     l = 2 * i + 1
4     r = 2 * i + 2
5     if l < n and arr[i] < arr[l]:
6         largest = l
7     if r < n and arr[largest] < arr[r]:
8         largest = r
9     if largest != i:
10        arr[i], arr[largest] = arr[largest], arr[i]
11        heapify(arr, n, largest)
```

Suffix

```

1  def heapSort(arr):
2      n = len(arr)
3      for i in range(n//2, -1, -1):
4          heapify(arr, n, i)
5      for i in range(n-1, 0, -1):
6          arr[i], arr[0] = arr[0], arr[i]
7          heapify(arr, i, 0)
8
9  L = [int(item) for item in input().split(" ")]
10 heapSort(L)
11 print(*L)

```

Public test case 2

Input

```
1 | 45 23 6 12 9 1 22 58
```

Output

```
1 | 1 6 9 12 22 23 45 58
```

Public test case 2

Input

```
1 | 45 22 57 12 33 73 55 2 80 62
```

Output

```
1 | 2 12 22 33 45 55 57 62 73 80
```

Private test case 1

Input

```
1 | 45 23 6 12 9 1 22 58
```

Output

```
1 | 1 6 9 12 22 23 45 58
```

Private test case 2

Input

```
1 | 45 22 57 12 33 73 55 2 80 62
```

Output

```
1 | 2 12 22 33 45 55 57 62 73 80
```

Private test case 3

Input

```
1 284 276 201 126 463 475 234 319 343 356 441 68 335 101 268 71 202 363 82 90
   380 349 198 31 479 471 28 95 224 400 259 39 66 254 70 80 183 107 343 15 434
   204 387 370 280
```

Output

```
1 15 28 31 39 66 68 70 71 80 82 90 95 101 107 126 183 198 201 202 204 224 234
   254 259 268 276 280 284 319 335 343 343 349 356 363 370 380 387 400 434 441
   463 471 475 479
```

Private test case 4

Input

```
1 1246 1423 646 36 1179 1022 159 76 1026 847 1214 830 1018 846 737 1164 423
   1421 369 360 1208 711 618 760 664 685 1250 623 127 139 30 948 966 660 1262
   1137 1176 959 942 1494 1213 1057 1240 136 954 293 251 692 5 254 563 162 181
   1103 898 153 1286 1148 628 8 214 460 40 152 487 627 1164 1098 609 643 1265
   1454 907 1194 1127 593 1155 1120 160 202 39 252 762 1005 1338 858 435 1252
   803 872 1068 86 1098 275 836
```

Output

```
1 5 8 30 36 39 40 76 86 127 136 139 152 153 159 160 162 181 202 214 251 252 254
   275 293 360 369 423 435 460 487 563 593 609 618 623 627 628 643 646 660 664
   685 692 711 737 760 762 803 830 836 846 847 858 872 898 907 942 948 954 959
   966 1005 1018 1022 1026 1057 1068 1098 1098 1103 1120 1127 1137 1148 1155
   1164 1164 1176 1179 1194 1208 1213 1214 1240 1246 1250 1252 1262 1265 1286
   1338 1421 1423 1454 1494
```

Private test case 5

Input


```

1 13119 3066 7450 8605 3059 7586 14747 4488 14219 12774 9409 2658 14338 12196
13622 11005 10273 10069 14784 14275 11451 10232 2325 11572 4172 4830 12502
2961 6152 14738 7465 2131 10200 4896 10890 10525 161 5356 5792 10723 1563
6397 6588 10048 2744 548 14995 3136 14092 169 4338 6999 14244 11584 4838 9937
12128 14681 5201 1609 9085 2001 7509 6875 3010 5456 12611 11972 4096 12131
8424 7680 2060 2804 10561 11208 7376 11734 4514 13269 7038 10287 7884 14685
13821 6251 189 13507 13660 6941 7497 13957 974 14458 5153 5650 11644 6809
12643 7517 6979 14501 5413 1335 8476 7586 2048 10099 1693 14227 7977 8643
12315 13632 3357 9132 10987 10042 1143 13162 14497 11321 14058 8660 7817 104
8859 2909 869 14164 9418 10292 5500 1994 11055 13146 5434 1520 950 10091
14592 7637 12639 1802 2677 2265 11810 14782 1725 8482 12738 4977 10559 7869
7445 7767 12552 10172 4521 1958 4536 1299 8008 13855 7372 187 3390 7349 13123
4241 14125 7384 175 14390 14383 8940 7302 10516 4589 7054 11492 2261 6681
6633 12187 5611 2235 3255 6865 1787 13112 11703 1810 8649 13705 10045 14750
6975 12006 11945 14680 585 6935 7023 3638 773 12605 9139 12868 10719 3503
5645 7429 14093 4847 7462 7695 5674 14588 4977 7200 585 4884 4663 7095 13041
334 4705 7063 3787 12631 14273 11698 8831 12214 1470 13827 8217 9588 14463
12238 12398 9334 2461 8001 7345 11112 6017 7961 3701 9354 7072 3353 4046 670
9725 4668 10399 7718 14196 4568 7734 7538 11506 2610 6076 1522 6842 13882
10333 8071 12185 3718 11455 909 14908 14638

```

Output

```

1 104 161 169 175 187 189 334 548 585 585 670 773 869 909 950 974 1143 1299
1335 1470 1520 1522 1563 1609 1693 1725 1787 1802 1810 1958 1994 2001 2048
2060 2131 2235 2261 2265 2325 2461 2610 2658 2677 2744 2804 2909 2961 3010
3059 3066 3136 3255 3353 3357 3390 3503 3638 3701 3718 3787 4046 4096 4172
4241 4338 4488 4514 4521 4536 4568 4589 4663 4668 4705 4830 4838 4847 4884
4896 4977 4977 5153 5201 5356 5413 5434 5456 5500 5611 5645 5650 5674 5792
6017 6076 6152 6251 6397 6588 6633 6681 6809 6842 6865 6875 6935 6941 6975
6979 6999 7023 7038 7054 7063 7072 7095 7200 7302 7345 7349 7372 7376 7384
7429 7445 7450 7462 7465 7497 7509 7517 7538 7586 7586 7637 7680 7695 7718
7734 7767 7817 7869 7884 7961 7977 8001 8008 8071 8217 8424 8476 8482 8605
8643 8649 8660 8831 8859 8940 9085 9132 9139 9334 9354 9409 9418 9588 9725
9937 10042 10045 10048 10069 10091 10099 10172 10200 10232 10273 10287 10292
10333 10399 10516 10525 10559 10561 10719 10723 10890 10987 11005 11055 11112
11208 11321 11451 11455 11492 11506 11572 11584 11644 11698 11703 11734 11810
11945 11972 12006 12128 12131 12185 12187 12196 12214 12238 12315 12398 12502
12552 12605 12611 12631 12639 12643 12738 12774 12868 13041 13112 13119 13123
13146 13162 13269 13507 13622 13632 13660 13705 13821 13827 13855 13882 13957
14058 14092 14093 14125 14164 14196 14219 14227 14244 14273 14275 14338 14383
14390 14458 14463 14497 14501 14588 14592 14638 14680 14681 14685 14738 14747
14750 14782 14784 14908 14995

```

Problem 3

A country's defense organization wants to setup a private fiber network to connect all its camps around the country which will be disconnected from the INTERNET(world wide web). It wants to excluding only one camp, which will be connected to the INTERNET. Camps that can be connected to each other via fiber and the associated cable cost to connect them is given as an adjacency list representation `A[i]` for all `n` camp of the company in the format below.

```

1 {'camp_1': [(camp_a, cost_1_a), (camp_b, cost_1_b)] . . . ,
2   'camp_2': [(camp_c, cost_2_c), (camp_d, cost_2_d)] . . . ,
3   .
4   .
5   .
6   'camp_n']: [(camp_x, cost_2_x), (camp_y, cost_2_y)] . . . }

```

In the above `Alist`, `camp_1` can be connected to `camp_a` with a cable cost of `cost_1_a` units and to `camp_b` with cable cost as `cost_1_b` units, and so on for all the `n` camps. The cable cost two connect any two cities will always be positive.

Write a Python function **connectCamps(Alist, exCamp)** that accepts the `Alist` as described above and a camp `exCamp`, returns the minimum cost required to connect all the camps excluding the `exCamp`. If the camps cannot be connected after excluding `exCamp` return `-1`. The function will be called to check for the cost excluding each camp one by one so try to make it efficient that runs in $O((m + n) \log n)$, where `m` is the number of pairs of camps that can be connected.

```

1 def connectCamps(Alist, exCamp):
2     #Complete the function

```

Sample Input

```

1 7 # number of camps
2 [(0,1,10),(0,2,50),(0,3,300),(5,6,45),(2,1,30),(6,4,37),(1,6,65),(2,5,76),
  (1,3,40),(3,4,60),(2,4,20)] #edges, camps that can be connected and the cost
  associated
3 4 # excluded camp

```

Sample Output

```

1 190

```

Sample Input

```

1 8 # number of camps
2 [(0,1,10),(0,2,50),(0,3,300),(5,6,45),(2,1,30),(6,4,37),(1,6,65),(2,5,76),
  (1,3,40),(3,4,60),(2,4,20),(6,7,77)] #edges, camps that can be connected and
  the cost associated
3 6 # excluded camp

```

Sample Output

```

1 -1

```

Solution:

```

1 from collections import deque
2 # Helper function
3 class myStack:
4     def __init__(self):
5         self.Q = deque()

```

```

6
7     def pop(self):
8         return self.Q.pop()
9
10    def push(self, x):
11        return self.Q.append(x)
12
13    def isempty(self):
14        return False if self.Q else True
15
16    # Checks using BFS if the graph is connected excluding the node exCamp
17    def isConnectedExcluding(Alist, exCamp):
18        vertices = [v for v in Alist.keys() if v!=exCamp]
19        visited = {k:False for k in vertices}
20        st = myStack()
21        st.push(vertices[0])
22
23        while not st.isempty():
24            curr = st.pop()
25            visited[curr] = True
26            for (v, d) in Alist[curr]:
27                if (v != exCamp and not visited[v]):
28                    st.push(v)
29
30        # Check if all are visited
31        return all(value == True for value in visited.values())
32
33    # Do not remove the site from graph, rather exclude it from each comparison
    and calculation.
34    def connectSites(Alist, exCamp):
35        # Check if the graph is connected
36        if not isConnectedExcluding(Alist, exCamp):
37            return -1
38
39        edges, te = [], []
40        components, members, size = {}, {}, {}
41        minCost = 0
42
43        # Create edge list and union find data structure excluding exCamp
    connected edges
44        for u in Alist.keys():
45            if (u != exCamp):
46                edges.extend([(d,u,v) for (v,d) in Alist[u] if v!=exCamp])
47                components[u], members[u], size[u] = u, [u], 1
48
49        edges.sort()
50
51        # For undirected graph remove duplicate edges
52        distinctEdges = [edges[0]]
53        for i in range(len(edges)-1):
54            if not ((edges[i][0] == edges[i+1][0])
55                    and edges[i][1]==edges[i+1][2] and edges[i][2]==edges[i+1][1]):
56                distinctEdges.append(edges[i+1])
57        edges=distinctEdges
58
59        # Calculate MST and minimum cost
60        for (d,u,v) in edges:
61            if (components[u] != components[v]):

```

```

62         te.append((u,v))
63         minCost += d
64         c_old = components[u]
65         c_new = components[v]
66         for k in members[c_old]:
67             components[k] = c_new
68             members[c_new].append(k)
69             size[c_new] += 1
70
71     return minCost

```

Suffix(hidden)

```

1  size = int(input())
2  edges = eval(input())
3  exCamp = int(input())
4  WL = {}
5  for i in range(size):
6      WL[i] = []
7  for ed in edges:
8      WL[ed[0]].append((ed[1],ed[2]))
9      WL[ed[1]].append((ed[0],ed[2]))
10 print(connectSites(WL, exCamp))

```

Public Test case

Input 1

```

1  7
2  [(0,1,10),(0,2,50),(0,3,300),(5,6,45),(2,1,30),(6,4,37),(1,6,65),(2,5,76),
   (1,3,40),(3,4,60),(2,4,20)]
3  4

```

Output 1

```

1  190

```

Input 2

```

1  4
2  [(0,1,1),(1,2,2),(2,3,3),(0,3,4)]
3  1

```

Output 2

```

1  7

```

Input 3

```

1  8
2  [(0,1,10),(0,2,50),(0,3,300),(5,6,45),(2,1,30),(6,4,37),(1,6,65),(2,5,76),
   (1,3,40),(3,4,60),(2,4,20),(6,7,77)]
3  6

```

Output 3

1 | -1

Private Test Case

Input 1

1 | 6
2 | [(0,1,1),(0,2,6),(1,2,3),(1,3,4),(2,4,4),(2,3,2),(3,4,3),(1,5,2),(2,5,7),
(3,5,1),(4,5,5)]
3 | 3

Output 1

1 | 10

Input 2

1 | 6
2 | [(0,1,16),(0,3,2),(1,2,4),(3,4,10),(0,4,9),(3,5,15),(1,5,7),(2,5,6)]
3 | 4

Output 2

1 | 27

Input 3

1 | 6
2 | [(0,1,1),(0,2,4),(1,2,7),(0,5,14),(0,4,12),(2,5,17),(3,5,22)]
3 | 5

Output 3

1 | -1

Input 4

1 | 7
2 | [(0,1,10),(0,2,50),(0,3,300),(5,6,45),(2,1,30),(6,4,37),(1,6,65),(2,5,76),
(1,3,40),(3,4,60),(2,4,20)]
3 | 2

Output 4

1 | 192

Input 5

| | |
|---|--|
| 1 | 8 |
| 2 | [(0,1,10),(0,2,50),(0,3,300),(5,6,45),(2,1,30),(6,4,37),(1,6,65),(2,5,76), (1,3,40),(3,4,60),(2,4,20),(6,7,77)] |
| 3 | 6 |

Output 5

| | |
|---|----|
| 1 | -1 |
|---|----|