

HH	HH	EEEEEEEEEEEE	RRRRRRRRRR	CCCCCCCCC	00000000	11	AAAAAAAAAA				
HH	HH	EEEEEEEEEEEE	RRRRRRRRRR	CCCCCCCCC	0000000000	111	AAAAAAAAAA				
HH	HH	EE	RR	RR	CC	CC	00	00	1111	AA	AA
HH	HH	EE	RR	RR	CC		00	00	11	AA	AA
HH	HH	EE	RR	RR	CC		00	00	11	AA	AA
HHHHHHHHHHHH	EEEEEE		RRRRRRRRRR	CC		00	00	11	AAAAAAAAAA		
HHHHHHHHHHHH	EEEEEE		RRRRRRRRRR	CC		00	00	11	AAAAAAAAAA		
HH	HH	EE	RR	RR	CC		00	00	11	AA	AA
HH	HH	EE	RR	RR	CC		00	00	11	AA	AA
HH	HH	EE	RR	RR	CC	CC	00	00	11	AA	AA
HH	HH	EEEEEEEEEEEE	RR	RR	CCCCCCCCC		0000000000	1111111111	AA	AA	
HH	HH	EEEEEEEEEEEE	RR	RR	CCCCCCCCC		00000000	1111111111	AA	AA	
	JJ	000000000000	BBBBBBBBBB				44	5555555555	00000000		
	JJ	000000000000	BBBBBBBBBB				444	5555555555	0000000000		
	JJ	OO	OO	BB	BB		4444	55	00	00	
	JJ	OO	OO	BB	BB		44 44	55	00	00	
	JJ	OO	OO	BB	BB		44 44	55	00	00	
	JJ	OO	OO	BBBBBBBBBB			44 44	5555555555	00	00	
	JJ	OO	OO	BBBBBBBBBB			44 44	5555555555	00	00	
	JJ	OO	OO	BB	BB		444444444444	55	00	00	
JJ	JJ	OO	OO	BB	BB		44444444444444	55	00	00	
JJ	JJ	OO	OO	BB	BB		44	55	55	00	00
JJJJJJJJJJJJ	000000000000		BBBBBBBBBB				44	5555555555	0000000000		
JJJJJJJJJJJJ	000000000000		BBBBBBBBBB				44	5555555555	00000000		
PPPPPPPPPP	RRRRRRRRRR	00000000	00000000	EEEEEEEEEE							
PPPPPPPPPP	RRRRRRRRRR	0000000000	0000000000	EEEEEEEEEE							
PP	PP	RR	RR	00	00	00	00	EE			
PP	PP	RR	RR	00	00	00	00	EE			
PP	PP	RR	RR	00	00	00	00	EE			
PPPPPPPPPP	RRRRRRRRRR	00	00	00	00	EEEEEE					
PPPPPPPPPP	RRRRRRRRRR	00	00	00	00	EEEEEE					
PP	RR	RR	00	00	00	00	EE				
PP	RR	RR	00	00	00	00	EE				
PP	RR	RR	00	00	00	00	EE				
PP	RR	RR	0000000000	0000000000	EEEEEEEEEE						
PP	RR	RR	00000000	00000000	EEEEEEEEEE						
PPPPPPPPPP	RRRRRRRRRR	TTTTTTTTTTT	11	44	00000000	33333333					
PPPPPPPPPP	RRRRRRRRRR	TTTTTTTTTTT	111	444	0000000000	3333333333					
PP	PP	RR	RR	TT	1111	4444	00	00	33	33	
PP	PP	RR	RR	TT	11	44 44	00	00		33	
PP	PP	RR	RR	TT	11	44 44	00	00		33	
PPPPPPPPPP	RRRRRRRRRR	TT	11	44 44	00	00			3333		
PPPPPPPPPP	RRRRRRRRRR	TT	11	44 44	00	00			3333		
PP	RR	RR	TT	11	444444444444	00	00			33	
PP	RR	RR	TT	11	444444444444	00	00			33	
PP	RR	RR	TT	11	44	00	00	33	33		
PP	RR	RR	TT	1111111111	44	0000000000			3333333333		
PP	RR	RR	TT	1111111111	44	00000000			33333333		

[illegible]

IAT6140 JOB ORIGIN FROM GROUP=ANYLOCAL, DSP=IR , DEVICE=INTRDR , 000
01:02:32 IAT4401 LOCATE FOR STEP=ASM DD=SYSLIB DSN=SYS1.MACLIB
01:02:32 IAT4402 UNIT=3350 ,VOL(S) N/A: UNIT NOT JES3
01:02:32 IAT4401 LOCATE FOR STEP=ASM DD=SYSLIB DSN=SYS2.MACLIB
01:02:32 IAT4402 UNIT=3350 ,VOL(S) N/A: UNIT NOT JES3
01:02:32 IAT4401 LOCATE FOR STEP=ASM DD=SYSLIB DSN=SYS1.MACLIB
01:02:32 IAT4402 UNIT=3350 ,VOL(S) N/A: UNIT NOT JES3
01:02:32 IAT4401 LOCATE FOR STEP=ASM DD=SYSLIB DSN=SYS1.MACLIB
01:02:32 IAT4402 UNIT=3350 ,VOL(S) N/A: UNIT NOT JES3
01:02:33 IAT2000 JOB 0450 HERC01A SELECTED TK4A GRP=JS3BATCH
01:02:33 IEF403I HERC01A - STARTED - TIME=01.02.33
01:02:33 IEFACTRT - Stepname Procstep Program Retcode
01:02:33 HERC01A PRIMES ASM IFOX00 RC= 0000
01:02:33 + 9592 primes up to 99999 found
01:02:33 HERC01A PRIMES GO LOADER RC= 0000
01:02:33 IEF404I HERC01A - ENDED - TIME=01.02.33

[illegible]

```

//HERC01A JOB (BAL),
//          'ASSEMBLER FX PRIME',
//          CLASS=A,
//          MSGCLASS=A,
//          TIME=1440,
//          MSGLEVEL=(1,1),
//          USER=HERC01,PASSWORD=
//*****
//*
//* Name: SYS2.JCLLIB(PRIMASM)
//*
//* Desc: Sieve of Eratosthenes programmed in Basic Assembler Language
//*       All prime numbers up to the value entered via PARM.GO
//*       are computed.
//*
//*****
//PRIMES EXEC ASMFCG,PARM.ASM=(OBJ,NODECK),MAC1='SYS2.MACLIB',
//          REGION.GO=928K,PARM.GO='/99999'
//ASM.SYSIN DD *
/*
//GO.SYSPRINT DD SYSOUT=*
1 //HERC01A JOB (BAL),
//          'ASSEMBLER FX PRIME',
//          CLASS=A,
//          MSGCLASS=A,
//          TIME=1440,
//          MSGLEVEL=(1,1),
//          USER=HERC01,PASSWORD=
//*****
//*
//* Name: SYS2.JCLLIB(PRIMASM)
//*
//* Desc: Sieve of Eratosthenes programmed in Basic Assembler Language
//*       All prime numbers up to the value entered via PARM.GO
//*       are computed.
//*
//*****
2 //PRIMES EXEC ASMFCG,PARM.ASM=(OBJ,NODECK),MAC1='SYS2.MACLIB',
//          REGION.GO=928K,PARM.GO='/99999'
3 XXASMFCG PROC MAC='SYS1.MACLIB',MAC1='SYS1.MACLIB',
XX MAC2='SYS1.MACLIB',MAC3='SYS1.MACLIB',SOUT='*'
4 XXASM EXEC PGM=IFOX00,PARM=OBJ,REGION=128K
5 XXSYSLIB DD DSN=&MAC,DISP=SHR
6 XX DD DSN=&MAC1,DISP=SHR
7 XX DD DSN=&MAC2,DISP=SHR
8 XX DD DSN=&MAC3,DISP=SHR
9 XXSYSUT1 DD DSN=&&SYSUT1,UNIT=SYSSQ,SPACE=(1700,(600,100)),
XX SEP=(SYSLIB)
10 XXSYSUT2 DD DSN=&&SYSUT2,UNIT=SYSSQ,SPACE=(1700,(300,50)),
XX SEP=(SYSLIB,SYSUT1)
11 XXSYSUT3 DD DSN=&&SYSUT3,UNIT=SYSSQ,SPACE=(1700,(300,50))
12 XXSYSPRINT DD SYSOUT=&SOUT,DCB=BLKSIZE=1089
13 XXSYSPUNCH DD SYSOUT=B
14 XXSYSGO DD DSN=&&OBJSET,UNIT=SYSSQ,SPACE=(80,(200,50)),
XX DISP=(MOD,PASS)
15 //ASM.SYSIN DD *,DCB=BLKSIZE=80
16 XXGO EXEC PGM=LOADER,PARM='MAP,PRINT,NOCALL,LET',
XX COND=(8,LT,ASM)
17 XXSYSLIN DD DSN=&&OBJSET,DISP=(OLD,DELETE)
18 XXSYSLOUT DD SYSOUT=&SOUT
19 //GO.SYSPRINT DD SYSOUT=*

```

[illegible]

```

STMT NO. MESSAGE
-
      5      IEF653I SUBSTITUTION JCL - DSN=SYS1.MACLIB,DISP=SHR
      6      IEF653I SUBSTITUTION JCL - DSN=SYS2.MACLIB,DISP=SHR
      7      IEF653I SUBSTITUTION JCL - DSN=SYS1.MACLIB,DISP=SHR
      8      IEF653I SUBSTITUTION JCL - DSN=SYS1.MACLIB,DISP=SHR
     12      IEF653I SUBSTITUTION JCL - SYSOUT=*,DCB=BLKSIZE=1089
     18      IEF653I SUBSTITUTION JCL - SYSOUT=*
IEF236I ALLOC. FOR HERC01A ASM PRIMES
IEF237I 148  ALLOCATED TO SYSLIB
IEF237I 148  ALLOCATED TO
IEF237I 148  ALLOCATED TO
IEF237I 148  ALLOCATED TO
IEF237I 170  ALLOCATED TO SYSUT1
IEF237I 190  ALLOCATED TO SYSUT2
IEF237I 140  ALLOCATED TO SYSUT3
IEF237I JES3 ALLOCATED TO SYSPRINT
IEF237I JES3 ALLOCATED TO SYSPUNCH
IEF237I 180  ALLOCATED TO SYSGO
IEF237I JES3 ALLOCATED TO SYSIN
IEF142I HERC01A ASM PRIMES - STEP WAS EXECUTED - COND CODE 0000
IEF285I      SYS1.MACLIB                      KEPT          *-----43
IEF285I      VOL SER NOS= MVSRES.
IEF285I      SYS2.MACLIB                      KEPT          *-----0
IEF285I      VOL SER NOS= MVSRES.
IEF285I      SYS1.MACLIB                      KEPT          *-----0
IEF285I      VOL SER NOS= MVSRES.
IEF285I      SYS1.MACLIB                      KEPT          *-----0
IEF285I      VOL SER NOS= MVSRES.
IEF285I      SYS16261.T010232.RA000.HERC01A.SYSUT1      DELETED      *-----243
IEF285I      VOL SER NOS= WORK01.
IEF285I      SYS16261.T010232.RA000.HERC01A.SYSUT2      DELETED      *-----43
IEF285I      VOL SER NOS= WORK03.
IEF285I      SYS16261.T010232.RA000.HERC01A.SYSUT3      DELETED      *-----10
IEF285I      VOL SER NOS= WORK00.
IEF285I      ASM.PRIMES.SYSPRINT                      SYSOUT
IEF285I      ASM.PRIMES.SYSPUNCH                      SYSOUT
IEF285I      SYS16261.T010232.RA000.HERC01A.OBJSET      PASSED          *-----23
IEF285I      VOL SER NOS= WORK02.
IEF285I      JESI0001                                SYSIN
IEF373I STEP /ASM      / START 16261.0102
IEF374I STEP /ASM      / STOP 16261.0102 CPU      0MIN 00.20SEC SRB      0MIN 00.02SEC VIRT      128K SYS      160K
*****
*      1. Jobstep of job: HERC01A      Stepname: ASM      Program name: IFOX00      Executed on 17.09.16 from 01.02.33 to 01.02.33 *
*      elapsed time 00:00:00,28      CPU-Identifier: TK4-      Page-in: 0 *
*      CPU time 00:00:00,22      Virtual Storage used: 128K      Page-out: 0 *
*      corr. CPU: 00:00:00,22      CPU time has been corrected by 1 / 1,0 multiplier *
* *
*      I/O Operation *
*      Number of records read via DD * or DD DATA: 284 *
*      148.....43 148.....0 148.....0 148.....0 170.....243 190.....43 140.....10 DMY.....0 DMY.....0 180.....23 *
*      DMY.....0 *
* *
*      Charge for step (w/o SYSOUT): 0,36 *
*****
IEF236I ALLOC. FOR HERC01A GO PRIMES
IEF237I 180  ALLOCATED TO SYSLIN
IEF237I JES3 ALLOCATED TO SYSLOUT
IEF237I JES3 ALLOCATED TO SYSPRINT
      9592 primes up to      99999 found
IEF142I HERC01A GO PRIMES - STEP WAS EXECUTED - COND CODE 0000
IEF285I      SYS16261.T010232.RA000.HERC01A.OBJSET      DELETED      *-----24
IEF285I      VOL SER NOS= WORK02.

```

```
IEF285I    GO.PRIMES.SYSLOUT          SYSOUT
IEF285I    GO.PRIMES.SYSPRINT         SYSOUT
IEF373I STEP /GO          / START 16261.0102
IEF374I STEP /GO          / STOP  16261.0102 CPU      OMIN 00.03SEC SRB      OMIN 00.00SEC VIRT   928K SYS   168K
*****
*      2. Jobstep of job: HERC01A      Stepname: GO          Program name: LOADER      Executed on 17.09.16 from 01.02.33 to 01.02.33 *
*      elapsed time 00:00:00,04          CPU-Identifier:  TK4-          Page-in:      0          *
*      CPU time 00:00:00,03          Virtual Storage used:  928K          Page-out:      0          *
*      corr. CPU: 00:00:00,03    CPU time has been corrected by 1 / 1,0 multiplier *
*
*      I/O Operation *
*      Number of records read via DD * or DD DATA:      0 *
*      180.....24 DMY.....0 DMY.....0 *
*
*      Charge for step (w/o SYSOUT):      0,05 *
*****
IEF375I JOB /HERC01A / START 16261.0102
IEF376I JOB /HERC01A / STOP  16261.0102 CPU      OMIN 00.23SEC SRB      OMIN 00.02SEC
```


SYMBOL	TYPE	ID	ADDR	LENGTH	LDID
--------	------	----	------	--------	------

ASM 0201 01.02 09/17/16

PRIMASM	SD	0001	000000	000450
---------	----	------	--------	--------

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	ASM 0201 01.02 09/17/16
				2	*****	00020000
				3	***	*** 00030000
				4	*** Program: PRIMASM	*** 00040000
				5	***	*** 00050000
				6	*** Purpose: Find all prime numbers up to a given limit	*** 00060000
				7	*** using Eratosthenes' sieve algorithm.	*** 00070000
				8	***	*** 00080000
				9	*** Usage: The following JCL is required to run PRIMASM:	*** 00090000
				10	***	*** 00100000
				11	*** //PRIMASM EXEC PGM=PRIMASM,REGION=<size>,PARM=<limit>	*** 00110000
				12	*** //STEPLIB DD DSN=<loadlib>,DISP=SHR	*** 00120000
				13	*** //SYSPRINT DD SYSOUT=*	*** 00130000
				14	***	*** 00140000
				15	*** The parameters are defined as follows:	*** 00150000
				16	***	*** 00160000
				17	*** <limit> the largest number to sieve. All primes	*** 00170000
				18	*** up to this number will be found. If the	*** 00180000
				19	*** limit given is too high for the algorithm	*** 00190000
				20	*** to execute within the bounds of the	*** 00200000
				21	*** available virtual storage, <limit> will be	*** 00210000
				22	*** adjusted to fit into the given region. If	*** 00220000
				23	*** no PARM value is given, a default limit of	*** 00230000
				24	*** 2000 will be used.	*** 00240000
				25	***	*** 00250000
				26	*** <size> the amount of virtual storage the program	*** 00260000
				27	*** is allowed to use. The program will always	*** 00270000
				28	*** allocate the maximum amount of storage	*** 00280000
				29	*** allowed by the REGION parameter. If no	*** 00290000
				30	*** REGION parameter is specified, results will	*** 00300000
				31	*** be unpredictable.	*** 00310000
				32	***	*** 00320000
				33	*** <loadlib> the load library containing the PRIMASM	*** 00330000
				34	*** program.	*** 00340000
				35	***	*** 00350000
				36	*** Function: 1. Allocate all virtual storage available and adjust	*** 00360000
				37	*** the sieve limit if necessary. This storage is	*** 00370000
				38	*** used as flags, where each bit indicates whether	*** 00380000
				39	*** the odd number corresponding to the bit's position	*** 00390001
				40	*** is prime or not. Odd numbers are assigned to these	*** 00394001
				41	*** bits in sequence, i.e. numbers 1,3,5,7,9,11,13,15	*** 00398001
				42	*** correspond to bits 0,1,2,3,4,5,6,7 and so forth.	*** 00402001
				43	***	*** 00410000
				44	*** 2. Set all prime flags to one, except the first.	*** 00420001
				45	*** The first flag corresponds to the number one,	*** 00425001
				46	*** which isn't prime. Note that there don't exist	*** 00430001
				47	*** flags for even numbers, because even numbers	*** 00435001
				48	*** (except the two) are never prime.	*** 00440001
				49	***	*** 00450000
				50	*** 3. Run Eratosthenes' sieve which will result in	*** 00460000
				51	*** clearing the prime flags of all none prime numbers	*** 00470000
				52	*** up to the given limit.	*** 00480000
				53	***	*** 00490000
				54	*** 4. Print all numbers having their prime flag set to	*** 00500000
				55	*** SYSPRINT. The "irregular" two is printed manually	*** 00510001
				56	*** for the sake of completeness.	*** 00513001

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	ASM 0201 01.02 09/17/16
				57 ***		*** 00520000
				58 ***	5. Print a summary message indicating the number of	*** 00530000
				59 ***	primes found up to the given limit to SYSPRINT and	*** 00540000
				60 ***	to the job log.	*** 00550000
				61 ***		*** 00560000
				62 ***	6. Release the allocated storage.	*** 00570000
				63 ***		*** 00580000
				64 ***	7. Exit.	*** 00590000
				65 ***		*** 00600000
				66 ***	Updates: 2014/07/18 original implementation.	*** 00610001
				67 ***	2014/07/21 eliminate even numbers from prime flags.	*** 00613001
				68 ***		*** 00620000
				69 ***	Author: Juergen Winkelmann, ETH Zuerich.	*** 00630001
				70 ***		*** 00640000
				71 *****		*** 00650000
000000				72 PRIMASM	CSECT	00660000
				73	SAVE (14,12),,* save registers	00670000
000000	47F0 F00C	0000C		74+	B 12(0,15) BRANCH AROUND ID	02150000
000004	07			75+	DC AL1(7)	02200000
000005	D7D9C9D4C1E2D4			76+	DC CL7'PRIMASM' IDENTIFIER	02250000
00000C	90EC D00C	0000C		77+	STM 14,12,12(13) SAVE REGISTERS	02950000
000010	18CF			78	LR R12,R15 establish module addressability	00680000
			00000	79	USING PRIMASM,R12 tell assembler of base	00690000
000012	4120 C278	00278		80	LA R2,SAVEA chain ..	00700000
000016	50D0 2004	00004		81	ST R13,4(,R2) .. the ..	00710000
00001A	5020 D008	00008		82	ST R2,8(,R13) .. save ..	00720000
00001E	18D2			83	LR R13,R2 .. areas	00730000
				84 *		00740000
				85 *	Initialize sieve limit and virtual storage	00750000
				86 *		00760000
000020	5820 1000	00000		87	L R2,0(,R1) parameter list address	00770000
000024	4810 2000	00000		88	LH R1,0(,R2) length of PARM field	00780000
000028	1211			89	LTR R1,R1 PARM field specified?	00790000
00002A	4780 C058	00058		90	BZ NOPARM no, use default sieve limit	00800000
00002E	5830 C2D8	002D8		91	L R3,HIGHLIM maximum PARM allowed	00810000
000032	4140 000A	0000A		92	LA R4,10 maximum PARM length allowed	00820000
000036	1914			93	CR R1,R4 maximum PARM length exceeded?	00830000
000038	4720 C052	00052		94	BH HIGHPARM yes -> use maximum as sieve limit	00840000
00003C	4130 C2F4	002F4		95	LA R3,PARM+10 right justify ..	00850000
000040	1B31			96	SR R3,R1 .. to 10 digits	00860000
000042	0610			97	BCTR R1,0 decrement for EXecute	00870000
000044	4410 C2C0	002C0		98	EX R1,MOVEPARM get PARM	00880000
000048	F279 C2D0 C2EA	002D0 002EA		99	PACK NUMDEC(8),PARM(10) pack PARM and ..	00890000
00004E	4F30 C2D0	002D0		100	CVB R3,NUMDEC .. convert to binary	00900000
000052	5030 C2DC	002DC		101	HIGHPARM ST R3,LIMIT set sieve limit	00910000
				102	NOPARM OPEN (SYSPRINT,OUTPUT) open SYSPRINT	00920000
000056	0700			103+	CNOP 0,4 ALIGN LIST TO FULLWORD	01740001
000058	4510 C060	00060		104+NOPARM	BAL 1,*+8 LOAD REG1 W/LIST ADDR.	01780000
00005C	8F			105+	DC AL1(143) OPTION BYTE	01900000
00005D	0003E0			106+	DC AL3(SYSPRINT) DCB ADDRESS	01920000
000060	0A13			107+	SVC 19 ISSUE OPEN SVC	04000000
				108	GETMAIN VU,LA=GETMAX,A=ISPRIME allocate all available storage	00930000
				109+*	OS/VS2 RELEASE 4 VERSION -- 10/21/75	00004804
000062	0700			110+	CNOP 0,4	00366000
000064	4510 C072	00072		111+	BAL 1,*+14 BRANCH AROUND LIST	00368000

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT	ASM 0201 01.02 09/17/16
000068	00000440				112+	DC	A(GETMAX)	ADDR. OF LENGTH LIST 00386000
00006C	00000448				113+	DC	A(ISPRIME)	ADDR. OF ADDR. LIST 00406002
000070	C0				114+	DC	BL1'11000000'	MODE AND OPTION FLAGS 00462002
000071	00				115+	DC	AL1(0)	SUBPOOL VALUE 00510000
000072	0A04				116+	SVC	4	ISSUE GETMAIN SVC 00820002
000074	5870	C44C	0044C		117	L	R7,MAXMEM	storage amount obtained times 16 .. 00940001
000078	8970	0004	00004		118	SLL	R7,4	.. is maximum sieve limit possible 00946001
00007C	5970	C2DC	002DC		119	C	R7,LIMIT	does requested limit fit into storage? 00960000
000080	47B0	C088	00088		120	BNL	*+8	yes -> use requested limit 00970000
000084	5070	C2DC	002DC		121	ST	R7,LIMIT	no -> use maximum possible 00980000
000088	5860	C448	00448		122	L	R6,ISPRIME	address of storage obtained 00990000
00008C	5880	C2DC	002DC		123	L	R8,LIMIT	sieve limit 01000000
000090	1799				124	XR	R9,R9	clear R9 for modulo 01010000
000092	8C80	0004	00004		125	SRDL	R8,4	divide sieve limit by 16 01020001
000096	1878				126	LR	R7,R8	amount of storage to be initialized 01030000
000098	1299				127	LTR	R9,R9	sieve limit modulo 16 = 0? 01040001
00009A	4780	C0A2	000A2		128	BZ	*+8	yes -> use computed storage amount 01050000
00009E	4170	7001	00001		129	LA	R7,1(,R7)	no -> increment amount by one 01060000
0000A2	1788				130	XR	R8,R8	clear R8 for MVCL 01070000
0000A4	5890	C2E0	002E0		131	L	R9,FF	get initialization pattern for MVCL 01080001
0000A8	0E68				132	MVCL	R6,R8	initialize prime indication flags 01090000
0000AA	5860	C448	00448		133	L	R6,ISPRIME	start of prime indication flags 01100000
0000AE	927F	6000	00000		134	MVI	0(R6),X'7F'	make one not prime 01110001
					135	*		01120000
					136	*	Sieve of Eratosthenes	01130000
					137	*		01140000
0000B2	5810	C448	00448		138	L	R1,ISPRIME	address of prime flag array 01150000
0000B6	4120	C2FC	002FC		139	LA	R2,CROSSOUT	masks to cross out primes 01160000
0000BA	1733				140	XR	R3,R3	clear for prime test EXecuted later 01170000
0000BC	4140	C2F4	002F4		141	LA	R4,PRIMFLGS	masks for prime test 01180000
0000C0	4150	0001	00001		142	LA	R5,1	candidate bit offset \ sieve starts 01190001
0000C4	1861				143	LR	R6,R1	candidate address > at 01200000
0000C6	4170	0003	00003		144	LA	R7,3	candidate value / three 01210000
0000CA	41E0	0002	00002		145	LA	R14,2	incrementor for large numbers 01220001
0000CE	1897				146	SIEVE	LR R9,R7	is square of .. 01230000
0000D0	1C87				147	MR	R8,R7	.. candidate value .. 01240000
0000D2	5990	C2DC	002DC		148	C	R9,LIMIT	.. higher than sieve limit? 01250000
0000D6	4720	C12C	0012C		149	BH	PRNTPRIM	yes -> sieve complete, go print 01260000
0000DA	4335	4000	00000		150	IC	R3,0(R5,R4)	is prime flag for .. 01270000
0000DE	4430	C2C6	002C6		151	EX	R3,TESTPRIM	.. this candidate set? 01280000
0000E2	47E0	C112	00112		152	BNO	SIEVENXT	no -> check next candidate 01290000
0000E6	8970	0001	00001		153	CLRMULT	SLL R7,1	only odd multiples need to be cleared 01300001
0000EA	18A9				154	CLRMULTL	LR R10,R9	current prime multiple 01303001
0000EC	06A0				155	BCTR	R10,0	decrement for addressing 01310000
0000EE	88A0	0001	00001		156	SRL	R10,1	divide by two (address compression) 01315001
0000F2	8CA0	0003	00003		157	SRDL	R10,3	divide by eight 01320000
0000F6	1AA1				158	AR	R10,R1	address of prime multiple 01330000
0000F8	88B0	001D	0001D		159	SRL	R11,29	bit offset of prime multiple 01340000
0000FC	433B	2000	00000		160	IC	R3,0(R11,R2)	get cross out mask 01350000
000100	4430	C2CA	002CA		161	EX	R3,CLRPRIM	cross out prime multiple 01360000
000104	1A97				162	AR	R9,R7	is next odd prime multiple .. 01370001
000106	5990	C2DC	002DC		163	C	R9,LIMIT	.. not higher than sieve limit? 01380000
00010A	47D0	C0EA	000EA		164	BNH	CLRMULTL	yes -> go cross it out 01390001
00010E	8870	0001	00001		165	SRL	R7,1	restore candidate value 01393001
000112	1A7E				166	SIEVENXT	AR R7,R14	next please, skip even numbers 01400000

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT	ASM 0201 01.02 09/17/16
000114	4150	5001	00001		167	LA	R5,1(,R5)	next bit position 01410001
000118	4950	C2E8	002E8		168	CH	R5,EIGHT	end of byte reached 01420000
00011C	4740	C0CE	000CE		169	BL	SIEVE	no -> check candidate 01430000
000120	4150	0000	00000		170	LA	R5,0	yes -> reset candidate bit offset .. 01440001
000124	4160	6001	00001		171	LA	R6,1(,R6)	.. and increment to next byte 01450001
000128	47F0	C0CE	000CE		172	B	SIEVE	go check it 01470000
					173	*		01480000
					174	* Print primes		01490000
					175	*		01500000
00012C	4150	0001	00001		176	PRNTPRIM LA	R5,1	candidate bit offset \ print starts 01510001
000130	1861				177	LR	R6,R1	candidate address > at 01520000
000132	4170	0003	00003		178	LA	R7,3	candidate value / three 01530000
000136	4120	0002	00002		179	LA	R2,2	incrementor for large limits 01540000
00013A	4180	0001	00001		180	LA	R8,1	number of primes found, the two is .. 01550000
00013E	41A0	0001	00001		181	LA	R10,1	.. pre set and .. 01560000
000142	4190	C313	00313		182	LA	R9,PRNTLINE+11	.. pre printed 01570000
000146	17BB				183	XR	R11,R11	no lines printed on this page yet 01580000
000148	47F0	C158	00158		184	B	*+16	skip page initialization on first page 01590000
00014C	D2A5	C307	C306 00307	00306	185	NEWLINE MVC	CC(166),NL	new line 01600000
000152	4190	C308	00308		186	LA	R9,PRNTLINE	current print position 01610000
000156	17AA				187	XR	R10,R10	no numbers printed on this line yet 01620000
000158	49B0	C2E4	002E4		188	CH	R11,LPP	page full? 01630000
00015C	4770	C166	00166		189	BNE	CHKPRIME	no -> check next number 01640000
000160	17BB				190	XR	R11,R11	no lines printed on this page yet 01650000
000162	92F1	C307	00307		191	MVI	CC,C'1'	next line starts a new page 01660000
000166	5970	C2DC	002DC		192	CHKPRIME C	R7,LIMIT	sieve limit reached? 01670000
00016A	4720	C1D2	001D2		193	BH	LASTLINE	yes -> print last line 01680000
00016E	4335	4000	00000		194	IC	R3,0(R5,R4)	is prime flag for .. 01690000
000172	4430	C2C6	002C6		195	EX	R3,TESTPRIM	.. this candidate set? 01700000
000176	47E0	C1B8	001B8		196	BNO	CHKNEXT	no -> check next candidate 01710000
00017A	4180	8001	00001		197	LA	R8,1(,R8)	yes -> increment number of primes found 01720000
00017E	4E70	C2D0	002D0		198	CVD	R7,NUMDEC	convert prime to decimal 01730000
000182	D20A	9000	C3B6 00000	003B6	199	MVC	0(11,R9),EDIT	get print format into print position 01740000
000188	DE0A	9001	C2D3 00001	002D3	200	ED	1(11,R9),NUMDEC+3	format prime 01750000
00018E	41A0	A001	00001		201	LA	R10,1(,R10)	increment number of primes and .. 01760000
000192	4190	900B	0000B		202	LA	R9,11(,R9)	.. print position 01770000
000196	49A0	C2E6	002E6		203	CH	R10,NPL	is current line filled up? 01780000
00019A	4770	C1B8	001B8		204	BNE	CHKNEXT	no -> check next candidate 01790000
					205	PUT	SYSPRINT,CC	yes -> print line 01800000
00019E	4110	C3E0	003E0		206+	LA	1,SYSPRINT	LOAD PARAMETER REG 1 01900002
0001A2	4100	C307	00307		207+	LA	0,CC	LOAD PARAMETER REG 0 02500002
0001A6	58F0	1030	00030		208+	L	15,48(0,1)	LOAD PUT ROUTINE ADDR 00550000
0001AA	05EF				209+	BALR	14,15	LINK TO PUT ROUTINE 00600000
0001AC	41B0	B001	00001		210	LA	R11,1(,R11)	increment number of lines on this page 01810000
0001B0	41F0	C14C	0014C		211	LA	R15,NEWLINE	next loop initializes a new line 01820000
0001B4	47F0	C1BC	001BC		212	B	*+8	skip adding to current line 01830000
0001B8	41F0	C166	00166		213	CHKNEXT LA	R15,CHKPRIME	next loop adds to current line 01840000
0001BC	1A72				214	AR	R7,R2	next please, skip even numbers 01850000
0001BE	4150	5001	00001		215	LA	R5,1(,R5)	next bit position 01860001
0001C2	4950	C2E8	002E8		216	CH	R5,EIGHT	end of byte reached 01870000
0001C6	074F				217	BLR	R15	no -> check candidate 01880000
0001C8	4150	0000	00000		218	LA	R5,0	yes -> reset candidate bit offset .. 01890001
0001CC	4160	6001	00001		219	LA	R6,1(,R6)	.. and increment to next byte 01900001
0001D0	07FF				220	BR	R15	go check it 01920000
0001D2	12AA				221	LASTLINE LTR	R10,R10	not yet printed primes in this line? 01930000

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT	ASM 0201 01.02 09/17/16
0001D4	4780	C1F0	001F0		222	BZ	SUMMARY no -> print summary	01940000
					223	PUT	SYSPRINT,CC yes -> print last primes	01950000
0001D8	4110	C3E0	003E0		224+	LA	1,SYSPRINT LOAD PARAMETER REG 1	01900002
0001DC	4100	C307	00307		225+	LA	0,CC LOAD PARAMETER REG 0	02500002
0001E0	58F0	1030	00030		226+	L	15,48(0,1) LOAD PUT ROUTINE ADDR	00550000
0001E4	05EF				227+	BALR	14,15 LINK TO PUT ROUTINE	00600000
0001E6	D2A5	C307	C306	00307	00306	228	MVC CC(166),NL new line	01960000
0001EC	41B0	B001	00001		229	LA	R11,1(,R11) increment number of lines on this page	01970000
0001F0	95F1	C307	00307		230	SUMMARY CLI	CC,C'1' new page already started?	01980000
0001F4	4780	C210	00210		231	BE	PRINTSUM yes -> print summary line	01990000
0001F8	41B0	B001	00001		232	LA	R11,1(,R11) no -> increment number of lines	02000000
0001FC	49B0	C2E4	002E4		233	CH	R11,LPP page almost full?	02010000
000200	47B0	C20C	0020C		234	BNL	*+12 yes -> start new page	02020000
000204	92F0	C307	00307		235	MVI	CC,C'0' no -> skip one line	02030000
000208	47F0	C210	00210		236	B	*+8 print summary	02040000
00020C	92F1	C307	00307		237	MVI	CC,C'1' start new page	02050000
000210	4E80	C2D0	002D0		238	PRINTSUM CVD	R8,NUMDEC convert number of primes to decimal	02060000
000214	D228	C308	C3B6	00308	003B6	239	MVC PRNTLINE(LSUMMARY),EDIT get summary line and formats	02070000
00021A	DE0A	C309	C2D3	00309	002D3	240	ED PRNTLINE+1(11),NUMDEC+3 format number of lines	02080000
000220	5880	C2DC	002DC		241	L	R8,LIMIT get sieve limit	02090000
000224	4E80	C2D0	002D0		242	CVD	R8,NUMDEC convert to decimal	02100000
000228	DE0A	C321	C2D3	00321	002D3	243	ED PRNTLINE+LIMITEBC+1(11),NUMDEC+3 format sieve limit	02110000
					244	PUT	SYSPRINT,CC print number of primes and sieve limit	02120000
00022E	4110	C3E0	003E0		245+	LA	1,SYSPRINT LOAD PARAMETER REG 1	01900002
000232	4100	C307	00307		246+	LA	0,CC LOAD PARAMETER REG 0	02500002
000236	58F0	1030	00030		247+	L	15,48(0,1) LOAD PUT ROUTINE ADDR	00550000
00023A	05EF				248+	BALR	14,15 LINK TO PUT ROUTINE	00600000
00023C	D203	C304	C3AE	00304	003AE	249	MVC TELLUSER(4),SUMWTOP get WTO prefix and suffix ..	02130000
000242	D203	C331	C3B2	00331	003B2	250	MVC PRNTLINE+LSUMMARY(4),SUMWTOS .. around summary line	02140000
					251	WTO	MF=(E,TELLUSER) print summary line in job log	02150000
000248	4110	C304	00304		252+	LA	1,TELLUSER LOAD PARAMETER REG 1	01900002
00024C	0A23				253+	SVC	35 ISSUE SVC	01500002
					254	*		02160000
					255	*	Cleanup and return	02170000
					256	*		02180000
					257		FREEMAIN VU,A=ISPRIME release storage	02190000
					258+	*	OS/VS2 RELEASE 3 VERSION -- 10/25/74	00001603
00024E	0700				259+	CNOP	0,4	00092000
000250	4510	C25E	0025E		260+	BAL	1,*+14 BRANCH AROUND LIST	00093000
000254	00000000				261+	DC	A(0)	00107000
000258	00000448				262+	DC	A(ISPRIME) AREA LIST ADDRESS	00109000
00025C	C0				263+	DC	AL1(192) MODE BYTE	00119000
00025D	00				264+	DC	AL1(0) SUBPOOL VALUE	00127000
00025E	0A05				265+	SVC	5 ISSUE FREEMAIN SVC	00311202
					266	CLOSE	SYSPRINT close printer	02200000
000260					267+	CNOP	0,4	ALIGN LIST TO FULLWORD 02420002
000260	4510	C268	00268		268+	BAL	1,*+8 LOAD REG1 W/LIST ADDR	02460002
000264	80				269+	DC	AL1(128) OPTION BYTE	02580000
000265	0003E0				270+	DC	AL3(SYSPRINT) DCB ADDRESS	02600000
000268	0A14				271+	SVC	20 ISSUE CLOSE SVC	01640000
00026A	58D0	D004	00004		272	L	R13,4(,R13) caller's save area pointer	02210000
					273	RETURN	(14,12),RC=0 restore registers and return	02220000
00026E	98EC	D00C	0000C		274+	LM	14,12,12(13) RESTORE THE REGISTERS	00650000
000272	41F0	0000	00000		275+	LA	15,0(0,0) LOAD RETURN CODE	01750000
000276	07FE				276+	BR	14 RETURN	02000000

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	ASM 0201 01.02 09/17/16
				277 *		02230000
				278 * Data area		02240000
				279 *		02250000
000278				280 SAVEA DS 18F	save area	02260000
0002C0	D200 3000 2002 00000 00002			281 MOVEPARM MVC 0(1,R3),2(R2)	EXecuted to retrieve PARM field	02270000
0002C6	9100 6000 00000			282 TESTPRIM TM 0(R6),0	EXecuted to test for being prime	02280000
0002CA	9400 A000 00000			283 CLRPRIM NI 0(R10),0	EXecuted to cross out a prime multiple	02290000
0002D0				284 NUMDEC DS D	target for decimal conversion	02300000
0002D8	7FFFFFFF			285 HIGHLIM DC F'2147483647'	highest possible fullword value	02310000
0002DC	000007D0			286 LIMIT DC F'2000'	default sieve limit	02320000
0002E0	FF000000			287 FF DC X'FF000000'	prime flags initialization pattern	02330001
0002E4	0040			288 LPP DC H'64'	lines to print per page	02340000
0002E6	000F			289 NPL DC H'15'	prime numbers to print per line	02350000
0002E8	0008			290 EIGHT DC H'8'	used for loops and comparisons	02360000
0002EA	4040404040404040			291 PARM DC 10C' '	PARM field goes here	02370000
0002F4	80			292 PRIMFLGS DC B'10000000'	.. the set ..	02380000
0002F5	40			293 DC B'01000000'	.. bit's ..	02390000
0002F6	20			294 DC B'00100000'	.. position ..	02400000
0002F7	10			295 DC B'00010000'	.. represents ..	02410000
0002F8	08			296 DC B'00001000'	.. a ..	02420000
0002F9	04			297 DC B'00000100'	.. potential ..	02430000
0002FA	02			298 DC B'00000010'	.. prime ..	02440000
0002FB	01			299 DC B'00000001'	.. number ..	02450000
0002FC	7F			300 CROSSOUT DC B'01111111'	.. masks ..	02460000
0002FD	BF			301 DC B'10111111'	.. used ..	02470000
0002FE	DF			302 DC B'11011111'	.. to ..	02480000
0002FF	EF			303 DC B'11101111'	.. cross ..	02490000
000300	F7			304 DC B'11110111'	.. out ..	02500000
000301	FB			305 DC B'11111011'	.. none ..	02510000
000302	FD			306 DC B'11111101'	.. prime ..	02520000
000303	FE			307 DC B'11111110'	.. numbers ..	02530000
000304				308 DS 0F		02540000
000304				309 TELLUSER DS H	WTO plist for summary message goes here	02550000
000306	40			310 NL DC C' '	newline carriage control	02560000
000307	F1			311 CC DC C'1'	formfeed on first output line	02570000
000308	4040404040404040			312 PRNTLINE DC 10C' '	line to be printed ..	02580000
000312	F2			313 DC C'2'	.. the prime two is ..	02590000
000313	4040404040404040			314 DC 154C' '	.. pre printed on initial line	02600000
0003AD	40			315 DC C' '	filler to receive EDit garbage	02610000
0003AE	002D8000			316 SUMWTOP DC X'002D8000'	prefix for summary message WTO	02620000
0003B2	02000020			317 SUMWTOS DC X'02000020'	suffix for summery message WTO	02630000
0003B6	4040202020202020			318 EDIT DC 2C' ',9X'20'	EDit pattern to format 9 digits	02640000
0003C1	409799899485A240			319 DC C' primes up to'	.. skeleton ..	02650000
		00018		320 LIMITEBC EQU *-EDIT	.. for ..	02660000
0003CE	4040202020202020			321 DC 2C' ',9X'20'	.. summary ..	02670000
0003D9	408696A49584			322 DC C' found'	.. line ..	02680000
		00029		323 LSUMMARY EQU *-EDIT	summary line length	02690001
				324 SYSPRINT DCB DSORG=PS,MACRF=PM,DDNAME=SYSPRINT,		X02700000
					RECFM=FBA,LRECL=166,BLKSIZE=16600 DCB for SYSPRINT	02710000
				326+*	DATA CONTROL BLOCK	22770000
				327+*		22860000
0003DF 00						
0003E0				328+SYSPRINT DC 0F'0'	ORIGIN ON WORD BOUNDARY	22914000

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT	ASM 0201 01.02 09/17/16
				330+*		DIRECT ACCESS DEVICE INTERFACE	27360000
0003E0	0000000000000000			332+	DC	BL16'0'	27540000
0003F0	00000000			333+	DC	A(0)	27720000
				335+*		COMMON ACCESS METHOD INTERFACE	48690000
0003F4	00			337+	DC	AL1(0)	49050000
0003F5	000001			338+	DC	AL3(1)	54720000
0003F8	0000			339+	DC	AL2(0)	55170000
0003FA	4000			340+	DC	BL2'0100000000000000'	*55800000
				+			55890000
0003FC	00000001			341+	DC	A(1)	56340000
				343+*		FOUNDATION EXTENSION	56610000
000400	00			345+	DC	BL1'00000000'	59850000
000401	000001			346+	DC	AL3(1)	65970000
000404	94			347+	DC	BL1'10010100'	*66150000
				+			66240000
000405	000000			348+	DC	AL3(0)	66330000
				350+*		FOUNDATION BLOCK	66690000
000408	E2E8E2D7D9C9D5E3			352+	DC	CL8'SYSPRINT'	66870000
000410	02			353+	DC	BL1'00000010'	68220000
000411	00			354+	DC	BL1'00000000'	68310000
000412	0050			355+	DC	BL2'0000000001010000'	*68400000
				+			*68490000
				+		MACR	68580000
				357+*		BSAM-BPAM-QSAM INTERFACE	74430000
000414	00			359+	DC	BL1'00000000'	*74610000
				+			RER1 74700000
000415	000001			360+	DC	AL3(1)	74790000
000418	00000001			361+	DC	A(1)	74880000
00041C	0000			362+	DC	H'0'	74970000
00041E	40D8			363+	DC	AL2(16600)	75240000
000420	00000000			364+	DC	F'0'	75870000
000424	00000001			365+	DC	A(1)	75960000
000428	00			366+	DC	AL1(0)	76050000
000429	000001			367+	DC	AL3(1)	76140000
				369+*		QSAM INTERFACE	81450000
00042C	00000001			371+	DC	A(1)	81630000
000430	0000			372+	DC	H'0'	81810000
000432	00A6			373+	DC	AL2(166)	80730000
000434	00			374+	DC	BL1'00000000'	82530000
000435	000001			375+	DC	AL3(1)	82620000
000438	00000000			376+	DC	F'0'	82710000
00043C	00000001			377+	DC	A(1)	82800000
000440	00000008			378	GETMAX DC	F'8'	02720000
000444	00FFFFFF8			379	DC	X'00FFFFFF8'	02730000

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT	ASM	0201	01.02	09/17/16
000448					380	ISPRIME	DS F	address of allocated storage			02740000
00044C					381	MAXMEM	DS F	amount of storage allocated			02750000
					382		YREGS ,	register equates			02760000
				00000	384+R0		EQU 0				00060000
				00001	385+R1		EQU 1				00070000
				00002	386+R2		EQU 2				00080000
				00003	387+R3		EQU 3				00090000
				00004	388+R4		EQU 4				00100000
				00005	389+R5		EQU 5				00110000
				00006	390+R6		EQU 6				00120000
				00007	391+R7		EQU 7				00130000
				00008	392+R8		EQU 8				00140000
				00009	393+R9		EQU 9				00150000
				0000A	394+R10		EQU 10				00160000
				0000B	395+R11		EQU 11				00170000
				0000C	396+R12		EQU 12				00180000
				0000D	397+R13		EQU 13				00190000
				0000E	398+R14		EQU 14				00200000
				0000F	399+R15		EQU 15				00210000
000000					401		END PRIMASM	end of PRIMASM			02770000

POS.ID	REL.ID	FLAGS	ADDRESS	ASM 0201 01.02 09/17/16
--------	--------	-------	---------	-------------------------

0001	0001	08	00005D
------	------	----	--------

0001	0001	0C	000068
------	------	----	--------

0001 0001 0C 00006C

0001	0001	0C	000258
------	------	----	--------

0001	0001	08	000265
------	------	----	--------

ASM 0201 01.02 09/17/16

NO STATEMENTS FLAGGED IN THIS ASSEMBLY
HIGHEST SEVERITY WAS 0
OPTIONS FOR THIS ASSEMBLY
ALIGN, ALOGIC, BUFSIZE(STD), NODECK, ESD, FLAG(0), LINECOUNT(55), LIST, NOMCALL, YFLAG, WORKSIZE(2097152)
NOMLOGIC, NONUMBER, OBJECT, NORENT, RLD, NOSTMT, NOLIBMAC, NOTERMINAL, NOTEST, XREF(SHORT)
SYSPARM()
WORK FILE BUFFER SIZE/NUMBER = 8702/ 1
TOTAL RECORDS READ FROM SYSTEM INPUT284
TOTAL RECORDS READ FROM SYSTEM LIBRARY4443
TOTAL RECORDS PUNCHED23
TOTAL RECORDS PRINTED507

GGGGGGGGGG	000000000000
GGGGGGGGGGG	000000000000
GG GG	00 00
GG	00 00
GG	00 00
GG	00 00
GG GGGGG	00 00
GG GGGGG	00 00
GG GG	00 00
GG GG	00 00
GGGGGGGGGGGG	000000000000
GGGGGGGGGG	000000000000
PPPPPPPPPPP	RRRRRRRRRRR IIIIIIIIII MM MM EEEEEEEEEEE SSSSSSSSSS
PPPPPPPPPPP	RRRRRRRRRRR IIIIIIIIII MMM MM EEEEEEEEEEE SSSSSSSSSSS
PP PP	RR RR II MMMM MMM EE SS SS
PP PP	RR RR II MM MM MM EE SS
PP PP	RR RR II MM MMM MM EE SSS
PPPPPPPPPPP	RRRRRRRRRRR II MM MM EEEEEEE SSSSSSSSS
PPPPPPPPPPP	RRRRRRRRRRR II MM MM EEEEEEE SSSSSSSSS
PP	RR RR II MM MM EE SSS
PP	RR RR II MM MM EE SS
PP	RR RR II MM MM EE SS SS
PP	RR RR IIIIIIIIII MM MM EEEEEEEEEEE SSSSSSSSSSS
PP	RR RR IIIIIIIIII MM MM EEEEEEEEEEE SSSSSSSSS
SSSSSSSSSS	YY YY SSSSSSSSS LL 0000000000 UU UU TTTTTTTTTTTT
SSSSSSSSSSS	YY YY SSSSSSSSSS LL 0000000000 UU UU TTTTTTTTTTTT
SS SS	YY YY SS SS LL 00 00 UU UU TT
SS	YY YY SS LL 00 00 UU UU TT
SSS	YYYY SSS LL 00 00 UU UU TT
SSSSSSSSS	YY SSSSSSSS LL 00 00 UU UU TT
SSSSSSSSS	YY SSSSSSSS LL 00 00 UU UU TT
SSS	YY SSS LL 00 00 UU UU TT
SS	YY SS SS LL 00 00 UU UU TT
SS SS	YY SS SS LL 00 00 UU UU TT
SSSSSSSSSSS	YY SSSSSSSSSS LLLLLLLLLLLL 0000000000 UUUUUUUUUU TT
SSSSSSSSSS	YY SSSSSSSSS LLLLLLLLLLLL 0000000000 UUUUUUUUU TT
AAAAAAAAA 00000000	
AAAAAAAAAAAA 0000000000	
AA AA 00 00	
AA AA 00 00	
AA AA 00 00	
AAAAAAAAAAAA 00 00	
AAAAAAAAAAAA 00 00	
AA AA 00 00	
AA AA 00 00	
AA AA 00 00	
AA AA 00 00	
AA AA 0000000000	
AA AA 00000000	

VS. LOADER

```
OPTIONS USED - PRINT,NOMAP,NOLET,CALL,RES,NOTERM,SIZE=307200,NAME=**GO
```

TOTAL LENGTH	450
--------------	-----

ENTRY	ADDRESS	AC010
-------	---------	-------

2	3	5	7	11	13	17	19	23	29	31	37
53	59	61	67	71	73	79	83	89	97	101	103
127	131	137	139	149	151	157	163	167	173	179	181
199	211	223	227	229	233	239	241	251	257	263	269
283	293	307	311	313	317	331	337	347	349	353	359
383	389	397	401	409	419	421	431	433	439	443	449
467	479	487	491	499	503	509	521	523	541	547	557
577	587	593	599	601	607	613	617	619	631	641	643
661	673	677	683	691	701	709	719	727	733	739	743
769	773	787	797	809	811	821	823	827	829	839	853
877	881	883	887	907	911	919	929	937	941	947	953
983	991	997	1009	1013	1019	1021	1031	1033	1039	1049	1051
1087	1091	1093	1097	1103	1109	1117	1123	1129	1151	1153	1163
1193	1201	1213	1217	1223	1229	1231	1237	1249	1259	1277	1279
1297	1301	1303	1307	1319	1321	1327	1361	1367	1373	1381	1399
1429	1433	1439	1447	1451	1453	1459	1471	1481	1483	1487	1489
1523	1531	1543	1549	1553	1559	1567	1571	1579	1583	1597	1601
1619	1621	1627	1637	1657	1663	1667	1669	1693	1697	1699	1709
1741	1747	1753	1759	1777	1783	1787	1789	1801	1811	1823	1831
1871	1873	1877	1879	1889	1901	1907	1913	1931	1933	1949	1951
1993	1997	1999	2003	2011	2017	2027	2029	2039	2053	2063	2069
2089	2099	2111	2113	2129	2131	2137	2141	2143	2153	2161	2179
2221	2237	2239	2243	2251	2267	2269	2273	2281	2287	2293	2297
2339	2341	2347	2351	2357	2371	2377	2381	2383	2389	2393	2399
2437	2441	2447	2459	2467	2473	2477	2503	2521	2531	2539	2543
2579	2591	2593	2609	2617	2621	2633	2647	2657	2659	2663	2671
2689	2693	2699	2707	2711	2713	2719	2729	2731	2741	2749	2753
2791	2797	2801	2803	2819	2833	2837	2843	2851	2857	2861	2879
2909	2917	2927	2939	2953	2957	2963	2969	2971	2999	3001	3011
3041	3049	3061	3067	3079	3083	3089	3109	3119	3121	3137	3163
3187	3191	3203	3209	3217	3221	3229	3251	3253	3257	3259	3271
3313	3319	3323	3329	3331	3343	3347	3359	3361	3371	3373	3389
3433	3449	3457	3461	3463	3467	3469	3491	3499	3511	3517	3527
3541	3547	3557	3559	3571	3581	3583	3593	3607	3613	3617	3623
3659	3671	3673	3677	3691	3697	3701	3709	3719	3727	3733	3739
3779	3793	3797	3803	3821	3823	3833	3847	3851	3853	3863	3877
3911	3917	3919	3923	3929	3931	3943	3947	3967	3989	4001	4003
4021	4027	4049	4051	4057	4073	4079	4091	4093	4099	4111	4127
4153	4157	4159	4177	4201	4211	4217	4219	4229	4231	4241	4243
4271	4273	4283	4289	4297	4327	4337	4339	4349	4357	4363	4373
4421	4423	4441	4447	4451	4457	4463	4481	4483	4493	4507	4513
4547	4549	4561	4567	4583	4591	4597	4603	4621	4637	4639	4643
4663	4673	4679	4691	4703	4721	4723	4729	4733	4751	4759	4783
4799	4801	4813	4817	4831	4861	4871	4877	4889	4903	4909	4919
4943	4951	4957	4967	4969	4973	4987	4993	4999	5003	5009	5011
5051	5059	5077	5081	5087	5099	5101	5107	5113	5119	5147	5153
5189	5197	5209	5227	5231	5233	5237	5261	5273	5279	5281	5297
5333	5347	5351	5381	5387	5393	5399	5407	5413	5417	5419	5431
5449	5471	5477	5479	5483	5501	5503	5507	5519	5521	5527	5531
5573	5581	5591	5623	5639	5641	5647	5651	5653	5657	5659	5669
5701	5711	5717	5737	5741	5743	5749	5779	5783	5791	5801	5807
5839	5843	5849	5851	5857	5861	5867	5869	5879	5881	5897	5903
5953	5981	5987	6007	6011	6029	6037	6043	6047	6053	6067	6073
6101	6113	6121	6131	6133	6143	6151	6163	6173	6197	6199	6203
6229	6247	6257	6263	6269	6271	6277	6287	6299	6301	6311	6317
6343	6353	6359	6361	6367	6373	6379	6389	6397	6421	6427	6449
6481	6491	6521	6529	6547	6551	6553	6563	6569	6571	6577	6581
6637	6653	6659	6661	6673	6679	6689	6691	6701	6703	6709	6719
6763	6779	6781	6791	6793	6803	6823	6827	6829	6833	6841	6857
6883	6899	6907	6911	6917	6947	6949	6959	6961	6967	6971	6977
7001	7013	7019	7027	7039	7043	7057	7069	7079	7103	7109	7121
7159	7177	7187	7193	7207	7211	7213	7219	7229	7237	7243	7247
7307	7309	7321	7331	7333	7349	7351	7369	7393	7411	7417	7433

7477

7481

7487

7489

7499

7507

7517

7523

7529

7537

7541

7547

7573	7577	7583	7589	7591	7603	7607	7621	7639	7643	7649	7669
7691	7699	7703	7717	7723	7727	7741	7753	7757	7759	7789	7793
7841	7853	7867	7873	7877	7879	7883	7901	7907	7919	7927	7933
7963	7993	8009	8011	8017	8039	8053	8059	8069	8081	8087	8089
8117	8123	8147	8161	8167	8171	8179	8191	8209	8219	8221	8231
8263	8269	8273	8287	8291	8293	8297	8311	8317	8329	8353	8363
8389	8419	8423	8429	8431	8443	8447	8461	8467	8501	8513	8521
8543	8563	8573	8581	8597	8599	8609	8623	8627	8629	8641	8647
8681	8689	8693	8699	8707	8713	8719	8731	8737	8741	8747	8753
8803	8807	8819	8821	8831	8837	8839	8849	8861	8863	8867	8887
8933	8941	8951	8963	8969	8971	8999	9001	9007	9011	9013	9029
9059	9067	9091	9103	9109	9127	9133	9137	9151	9157	9161	9173
9203	9209	9221	9227	9239	9241	9257	9277	9281	9283	9293	9311
9341	9343	9349	9371	9377	9391	9397	9403	9413	9419	9421	9431
9461	9463	9467	9473	9479	9491	9497	9511	9521	9533	9539	9547
9613	9619	9623	9629	9631	9643	9649	9661	9677	9679	9689	9697
9739	9743	9749	9767	9769	9781	9787	9791	9803	9811	9817	9829
9857	9859	9871	9883	9887	9901	9907	9923	9929	9931	9941	9949
10009	10037	10039	10061	10067	10069	10079	10091	10093	10099	10103	10111
10151	10159	10163	10169	10177	10181	10193	10211	10223	10243	10247	10253
10273	10289	10301	10303	10313	10321	10331	10333	10337	10343	10357	10369
10429	10433	10453	10457	10459	10463	10477	10487	10499	10501	10513	10529
10589	10597	10601	10607	10613	10627	10631	10639	10651	10657	10663	10667
10711	10723	10729	10733	10739	10753	10771	10781	10789	10799	10831	10837
10861	10867	10883	10889	10891	10903	10909	10937	10939	10949	10957	10973
11003	11027	11047	11057	11059	11069	11071	11083	11087	11093	11113	11117
11159	11161	11171	11173	11177	11197	11213	11239	11243	11251	11257	11261
11299	11311	11317	11321	11329	11351	11353	11369	11383	11393	11399	11411
11447	11467	11471	11483	11489	11491	11497	11503	11519	11527	11549	11551
11597	11617	11621	11633	11657	11677	11681	11689	11699	11701	11717	11719
11779	11783	11789	11801	11807	11813	11821	11827	11831	11833	11839	11863
11903	11909	11923	11927	11933	11939	11941	11953	11959	11969	11971	11981
12037	12041	12043	12049	12071	12073	12097	12101	12107	12109	12113	12119
12161	12163	12197	12203	12211	12227	12239	12241	12251	12253	12263	12269
12301	12323	12329	12343	12347	12373	12377	12379	12391	12401	12409	12413
12451	12457	12473	12479	12487	12491	12497	12503	12511	12517	12527	12539
12569	12577	12583	12589	12601	12611	12613	12619	12637	12641	12647	12653
12697	12703	12713	12721	12739	12743	12757	12763	12781	12791	12799	12809
12841	12853	12889	12893	12899	12907	12911	12917	12919	12923	12941	12953
12979	12983	13001	13003	13007	13009	13033	13037	13043	13049	13063	13093
13121	13127	13147	13151	13159	13163	13171	13177	13183	13187	13217	13219
13259	13267	13291	13297	13309	13313	13327	13331	13337	13339	13367	13381
13417	13421	13441	13451	13457	13463	13469	13477	13487	13499	13513	13523
13577	13591	13597	13613	13619	13627	13633	13649	13669	13679	13681	13687
13709	13711	13721	13723	13729	13751	13757	13759	13763	13781	13789	13799
13841	13859	13873	13877	13879	13883	13901	13903	13907	13913	13921	13931
13997	13999	14009	14011	14029	14033	14051	14057	14071	14081	14083	14087
14153	14159	14173	14177	14197	14207	14221	14243	14249	14251	14281	14293
14327	14341	14347	14369	14387	14389	14401	14407	14411	14419	14423	14431
14461	14479	14489	14503	14519	14533	14537	14543	14549	14551	14557	14561
14621	14627	14629	14633	14639	14653	14657	14669	14683	14699	14713	14717
14741	14747	14753	14759	14767	14771	14779	14783	14797	14813	14821	14827
14867	14869	14879	14887	14891	14897	14923	14929	14939	14947	14951	14957
15017	15031	15053	15061	15073	15077	15083	15091	15101	15107	15121	15131
15161	15173	15187	15193	15199	15217	15227	15233	15241	15259	15263	15269
15289	15299	15307	15313	15319	15329	15331	15349	15359	15361	15373	15377
15413	15427	15439	15443	15451	15461	15467	15473	15493	15497	15511	15527
15569	15581	15583	15601	15607	15619	15629	15641	15643	15647	15649	15661
15683	15727	15731	15733	15737	15739	15749	15761	15767	15773	15787	15791
15817	15823	15859	15877	15881	15887	15889	15901	15907	15913	15919	15923
15973	15991	16001	16007	16033	16057	16061	16063	16067	16069	16073	16087
16111	16127	16139	16141	16183	16187	16189	16193	16217	16223	16229	16231
16273	16301	16319	16333	16339	16349	16361	16363	16369	16381	16411	16417

16447

16451

16453

16477

16481

16487

16493

16519

16529

16547

16553

16561

16607	16619	16631	16633	16649	16651	16657	16661	16673	16691	16693	16699
16747	16759	16763	16787	16811	16823	16829	16831	16843	16871	16879	16883
16921	16927	16931	16937	16943	16963	16979	16981	16987	16993	17011	17021
17041	17047	17053	17077	17093	17099	17107	17117	17123	17137	17159	17167
17203	17207	17209	17231	17239	17257	17291	17293	17299	17317	17321	17327
17359	17377	17383	17387	17389	17393	17401	17417	17419	17431	17443	17449
17483	17489	17491	17497	17509	17519	17539	17551	17569	17573	17579	17581
17623	17627	17657	17659	17669	17681	17683	17707	17713	17729	17737	17747
17789	17791	17807	17827	17837	17839	17851	17863	17881	17891	17903	17909
17929	17939	17957	17959	17971	17977	17981	17987	17989	18013	18041	18043
18061	18077	18089	18097	18119	18121	18127	18131	18133	18143	18149	18169
18211	18217	18223	18229	18233	18251	18253	18257	18269	18287	18289	18301
18329	18341	18353	18367	18371	18379	18397	18401	18413	18427	18433	18439
18461	18481	18493	18503	18517	18521	18523	18539	18541	18553	18583	18587
18661	18671	18679	18691	18701	18713	18719	18731	18743	18749	18757	18773
18803	18839	18859	18869	18899	18911	18913	18917	18919	18947	18959	18973
19013	19031	19037	19051	19069	19073	19079	19081	19087	19121	19139	19141
19183	19207	19211	19213	19219	19231	19237	19249	19259	19267	19273	19289
19333	19373	19379	19381	19387	19391	19403	19417	19421	19423	19427	19429
19457	19463	19469	19471	19477	19483	19489	19501	19507	19531	19541	19543
19577	19583	19597	19603	19609	19661	19681	19687	19697	19699	19709	19717
19753	19759	19763	19777	19793	19801	19813	19819	19841	19843	19853	19861
19913	19919	19927	19937	19949	19961	19963	19973	19979	19991	19993	19997
20029	20047	20051	20063	20071	20089	20101	20107	20113	20117	20123	20129
20161	20173	20177	20183	20201	20219	20231	20233	20249	20261	20269	20287
20333	20341	20347	20353	20357	20359	20369	20389	20393	20399	20407	20411
20477	20479	20483	20507	20509	20521	20533	20543	20549	20551	20563	20593
20639	20641	20663	20681	20693	20707	20717	20719	20731	20743	20747	20749
20773	20789	20807	20809	20849	20857	20873	20879	20887	20897	20899	20903
20947	20959	20963	20981	20983	21001	21011	21013	21017	21019	21023	21031
21089	21101	21107	21121	21139	21143	21149	21157	21163	21169	21179	21187
21221	21227	21247	21269	21277	21283	21313	21317	21319	21323	21341	21347
21391	21397	21401	21407	21419	21433	21467	21481	21487	21491	21493	21499
21523	21529	21557	21559	21563	21569	21577	21587	21589	21599	21601	21611
21649	21661	21673	21683	21701	21713	21727	21737	21739	21751	21757	21767
21803	21817	21821	21839	21841	21851	21859	21863	21871	21881	21893	21911
21961	21977	21991	21997	22003	22013	22027	22031	22037	22039	22051	22063
22091	22093	22109	22111	22123	22129	22133	22147	22153	22157	22159	22171
22247	22259	22271	22273	22277	22279	22283	22291	22303	22307	22343	22349
22391	22397	22409	22433	22441	22447	22453	22469	22481	22483	22501	22511
22549	22567	22571	22573	22613	22619	22621	22637	22639	22643	22651	22669
22699	22709	22717	22721	22727	22739	22741	22751	22769	22777	22783	22787
22853	22859	22861	22871	22877	22901	22907	22921	22937	22943	22961	22963
23011	23017	23021	23027	23029	23039	23041	23053	23057	23059	23063	23071
23117	23131	23143	23159	23167	23173	23189	23197	23201	23203	23209	23227
23291	23293	23297	23311	23321	23327	23333	23339	23357	23369	23371	23399
23459	23473	23497	23509	23531	23537	23539	23549	23557	23561	23563	23567
23603	23609	23623	23627	23629	23633	23663	23669	23671	23677	23687	23689
23747	23753	23761	23767	23773	23789	23801	23813	23819	23827	23831	23833
23879	23887	23893	23899	23909	23911	23917	23929	23957	23971	23977	23981
24019	24023	24029	24043	24049	24061	24071	24077	24083	24091	24097	24103
24121	24133	24137	24151	24169	24179	24181	24197	24203	24223	24229	24239
24317	24329	24337	24359	24371	24373	24379	24391	24407	24413	24419	24421
24473	24481	24499	24509	24517	24527	24533	24547	24551	24571	24593	24611
24671	24677	24683	24691	24697	24709	24733	24749	24763	24767	24781	24793
24841	24847	24851	24859	24877	24889	24907	24917	24919	24923	24943	24953
24979	24989	25013	25031	25033	25037	25057	25073	25087	25097	25111	25117
25153	25163	25169	25171	25183	25189	25219	25229	25237	25243	25247	25253
25307	25309	25321	25339	25343	25349	25357	25367	25373	25391	25409	25411
25453	25457	25463	25469	25471	25523	25537	25541	25561	25577	25579	25583
25609	25621	25633	25639	25643	25657	25667	25673	25679	25693	25703	25717
25759	25763	25771	25793	25799	25801	25819	25841	25847	25849	25867	25873
25919	25931	25933	25939	25943	25951	25969	25981	25997	25999	26003	26017

26053

26083

26099

26107

26111

26113

26119

26141

26153

26161

26171

26177

26209	26227	26237	26249	26251	26261	26263	26267	26293	26297	26309	26317
26357	26371	26387	26393	26399	26407	26417	26423	26431	26437	26449	26459
26501	26513	26539	26557	26561	26573	26591	26597	26627	26633	26641	26647
26687	26693	26699	26701	26711	26713	26717	26723	26729	26731	26737	26759
26813	26821	26833	26839	26849	26861	26863	26879	26881	26891	26893	26903
26951	26953	26959	26981	26987	26993	27011	27017	27031	27043	27059	27061
27091	27103	27107	27109	27127	27143	27179	27191	27197	27211	27239	27241
27277	27281	27283	27299	27329	27337	27361	27367	27397	27407	27409	27427
27457	27479	27481	27487	27509	27527	27529	27539	27541	27551	27581	27583
27647	27653	27673	27689	27691	27697	27701	27733	27737	27739	27743	27749
27773	27779	27791	27793	27799	27803	27809	27817	27823	27827	27847	27851
27917	27919	27941	27943	27947	27953	27961	27967	27983	27997	28001	28019
28057	28069	28081	28087	28097	28099	28109	28111	28123	28151	28163	28181
28219	28229	28277	28279	28283	28289	28297	28307	28309	28319	28349	28351
28409	28411	28429	28433	28439	28447	28463	28477	28493	28499	28513	28517
28549	28559	28571	28573	28579	28591	28597	28603	28607	28619	28621	28627
28657	28661	28663	28669	28687	28697	28703	28711	28723	28729	28751	28753
28793	28807	28813	28817	28837	28843	28859	28867	28871	28879	28901	28909
28949	28961	28979	29009	29017	29021	29023	29027	29033	29059	29063	29077
29131	29137	29147	29153	29167	29173	29179	29191	29201	29207	29209	29221
29269	29287	29297	29303	29311	29327	29333	29339	29347	29363	29383	29387
29411	29423	29429	29437	29443	29453	29473	29483	29501	29527	29531	29537
29581	29587	29599	29611	29629	29633	29641	29663	29669	29671	29683	29717
29759	29761	29789	29803	29819	29833	29837	29851	29863	29867	29873	29879
29927	29947	29959	29983	29989	30011	30013	30029	30047	30059	30071	30089
30109	30113	30119	30133	30137	30139	30161	30169	30181	30187	30197	30203
30253	30259	30269	30271	30293	30307	30313	30319	30323	30341	30347	30367
30427	30431	30449	30467	30469	30491	30493	30497	30509	30517	30529	30539
30577	30593	30631	30637	30643	30649	30661	30671	30677	30689	30697	30703
30757	30763	30773	30781	30803	30809	30817	30829	30839	30841	30851	30853
30881	30893	30911	30931	30937	30941	30949	30971	30977	30983	31013	31019
31063	31069	31079	31081	31091	31121	31123	31139	31147	31151	31153	31159
31189	31193	31219	31223	31231	31237	31247	31249	31253	31259	31267	31271
31321	31327	31333	31337	31357	31379	31387	31391	31393	31397	31469	31477
31513	31517	31531	31541	31543	31547	31567	31573	31583	31601	31607	31627
31663	31667	31687	31699	31721	31723	31727	31729	31741	31751	31769	31771
31847	31849	31859	31873	31883	31891	31907	31957	31963	31973	31981	31991
32029	32051	32057	32059	32063	32069	32077	32083	32089	32099	32117	32119
32173	32183	32189	32191	32203	32213	32233	32237	32251	32257	32261	32297
32321	32323	32327	32341	32353	32359	32363	32369	32371	32377	32381	32401
32429	32441	32443	32467	32479	32491	32497	32503	32507	32531	32533	32537
32573	32579	32587	32603	32609	32611	32621	32633	32647	32653	32687	32693
32719	32749	32771	32779	32783	32789	32797	32801	32803	32831	32833	32839
32909	32911	32917	32933	32939	32941	32957	32969	32971	32983	32987	32993
33029	33037	33049	33053	33071	33073	33083	33091	33107	33113	33119	33149
33181	33191	33199	33203	33211	33223	33247	33287	33289	33301	33311	33317
33347	33349	33353	33359	33377	33391	33403	33409	33413	33427	33457	33461
33493	33503	33521	33529	33533	33547	33563	33569	33577	33581	33587	33589
33617	33619	33623	33629	33637	33641	33647	33679	33703	33713	33721	33739
33767	33769	33773	33791	33797	33809	33811	33827	33829	33851	33857	33863
33911	33923	33931	33937	33941	33961	33967	33997	34019	34031	34033	34039
34127	34129	34141	34147	34157	34159	34171	34183	34211	34213	34217	34231
34267	34273	34283	34297	34301	34303	34313	34319	34327	34337	34351	34361
34403	34421	34429	34439	34457	34469	34471	34483	34487	34499	34501	34511
34543	34549	34583	34589	34591	34603	34607	34613	34631	34649	34651	34667
34693	34703	34721	34729	34739	34747	34757	34759	34763	34781	34807	34819
34849	34871	34877	34883	34897	34913	34919	34939	34949	34961	34963	34981
35053	35059	35069	35081	35083	35089	35099	35107	35111	35117	35129	35141
35171	35201	35221	35227	35251	35257	35267	35279	35281	35291	35311	35317
35353	35363	35381	35393	35401	35407	35419	35423	35437	35447	35449	35461
35521	35527	35531	35533	35537	35543	35569	35573	35591	35593	35597	35603
35729	35731	35747	35753	35759	35771	35797	35801	35803	35809	35831	35837
35869	35879	35897	35899	35911	35923	35933	35951	35963	35969	35977	35983

36011

36013

36017

36037

36061

36067

36073

36083

36097

36107

36109

36131

36187	36191	36209	36217	36229	36241	36251	36263	36269	36277	36293	36299
36341	36343	36353	36373	36383	36389	36433	36451	36457	36467	36469	36473
36523	36527	36529	36541	36551	36559	36563	36571	36583	36587	36599	36607
36653	36671	36677	36683	36691	36697	36709	36713	36721	36739	36749	36761
36787	36791	36793	36809	36821	36833	36847	36857	36871	36877	36887	36899
36923	36929	36931	36943	36947	36973	36979	36997	37003	37013	37019	37021
37061	37087	37097	37117	37123	37139	37159	37171	37181	37189	37199	37201
37253	37273	37277	37307	37309	37313	37321	37337	37339	37357	37361	37363
37409	37423	37441	37447	37463	37483	37489	37493	37501	37507	37511	37517
37549	37561	37567	37571	37573	37579	37589	37591	37607	37619	37633	37643
37691	37693	37699	37717	37747	37781	37783	37799	37811	37813	37831	37847
37879	37889	37897	37907	37951	37957	37963	37967	37987	37991	37993	37997
38053	38069	38083	38113	38119	38149	38153	38167	38177	38183	38189	38197
38237	38239	38261	38273	38281	38287	38299	38303	38317	38321	38327	38329
38377	38393	38431	38447	38449	38453	38459	38461	38501	38543	38557	38561
38603	38609	38611	38629	38639	38651	38653	38669	38671	38677	38693	38699
38723	38729	38737	38747	38749	38767	38783	38791	38803	38821	38833	38839
38873	38891	38903	38917	38921	38923	38933	38953	38959	38971	38977	38993
39043	39047	39079	39089	39097	39103	39107	39113	39119	39133	39139	39157
39191	39199	39209	39217	39227	39229	39233	39239	39241	39251	39293	39301
39341	39343	39359	39367	39371	39373	39383	39397	39409	39419	39439	39443
39503	39509	39511	39521	39541	39551	39563	39569	39581	39607	39619	39623
39671	39679	39703	39709	39719	39727	39733	39749	39761	39769	39779	39791
39829	39839	39841	39847	39857	39863	39869	39877	39883	39887	39901	39929
39979	39983	39989	40009	40013	40031	40037	40039	40063	40087	40093	40099
40129	40151	40153	40163	40169	40177	40189	40193	40213	40231	40237	40241
40289	40343	40351	40357	40361	40387	40423	40427	40429	40433	40459	40471
40499	40507	40519	40529	40531	40543	40559	40577	40583	40591	40597	40609
40693	40697	40699	40709	40739	40751	40759	40763	40771	40787	40801	40813
40841	40847	40849	40853	40867	40879	40883	40897	40903	40927	40933	40939
40993	41011	41017	41023	41039	41047	41051	41057	41077	41081	41113	41117
41149	41161	41177	41179	41183	41189	41201	41203	41213	41221	41227	41231
41263	41269	41281	41299	41333	41341	41351	41357	41381	41387	41389	41399
41453	41467	41479	41491	41507	41513	41519	41521	41539	41543	41549	41579
41609	41611	41617	41621	41627	41641	41647	41651	41659	41669	41681	41687
41759	41761	41771	41777	41801	41809	41813	41843	41849	41851	41863	41879
41903	41911	41927	41941	41947	41953	41957	41959	41969	41981	41983	41999
42023	42043	42061	42071	42073	42083	42089	42101	42131	42139	42157	42169
42193	42197	42209	42221	42223	42227	42239	42257	42281	42283	42293	42299
42337	42349	42359	42373	42379	42391	42397	42403	42407	42409	42433	42437
42461	42463	42467	42473	42487	42491	42499	42509	42533	42557	42569	42571
42641	42643	42649	42667	42677	42683	42689	42697	42701	42703	42709	42719
42751	42767	42773	42787	42793	42797	42821	42829	42839	42841	42853	42859
42923	42929	42937	42943	42953	42961	42967	42979	42989	43003	43013	43019
43063	43067	43093	43103	43117	43133	43151	43159	43177	43189	43201	43207
43271	43283	43291	43313	43319	43321	43331	43391	43397	43399	43403	43411
43457	43481	43487	43499	43517	43541	43543	43573	43577	43579	43591	43597
43627	43633	43649	43651	43661	43669	43691	43711	43717	43721	43753	43759
43787	43789	43793	43801	43853	43867	43889	43891	43913	43933	43943	43951
43973	43987	43991	43997	44017	44021	44027	44029	44041	44053	44059	44071
44111	44119	44123	44129	44131	44159	44171	44179	44189	44201	44203	44207
44263	44267	44269	44273	44279	44281	44293	44351	44357	44371	44381	44383
44453	44483	44491	44497	44501	44507	44519	44531	44533	44537	44543	44549
44617	44621	44623	44633	44641	44647	44651	44657	44683	44687	44699	44701
44753	44771	44773	44777	44789	44797	44809	44819	44839	44843	44851	44867
44909	44917	44927	44939	44953	44959	44963	44971	44983	44987	45007	45013
45083	45119	45121	45127	45131	45137	45139	45161	45179	45181	45191	45197
45263	45281	45289	45293	45307	45317	45319	45329	45337	45341	45343	45361
45413	45427	45433	45439	45481	45491	45497	45503	45523	45533	45541	45553
45589	45599	45613	45631	45641	45659	45667	45673	45677	45691	45697	45707
45763	45767	45779	45817	45821	45823	45827	45833	45841	45853	45863	45869
45949	45953	45959	45971	45979	45989	46021	46027	46049	46051	46061	46073
46103	46133	46141	46147	46153	46171	46181	46183	46187	46199	46219	46229

46273

46279

46301

46307

46309

46327

46337

46349

46351

46381

46399

46411

46451	46457	46471	46477	46489	46499	46507	46511	46523	46549	46559	46567
46601	46619	46633	46639	46643	46649	46663	46679	46681	46687	46691	46703
46751	46757	46769	46771	46807	46811	46817	46819	46829	46831	46853	46861
46901	46919	46933	46957	46993	46997	47017	47041	47051	47057	47059	47087
47123	47129	47137	47143	47147	47149	47161	47189	47207	47221	47237	47251
47293	47297	47303	47309	47317	47339	47351	47353	47363	47381	47387	47389
47431	47441	47459	47491	47497	47501	47507	47513	47521	47527	47533	47543
47591	47599	47609	47623	47629	47639	47653	47657	47659	47681	47699	47701
47737	47741	47743	47777	47779	47791	47797	47807	47809	47819	47837	47843
47903	47911	47917	47933	47939	47947	47951	47963	47969	47977	47981	48017
48073	48079	48091	48109	48119	48121	48131	48157	48163	48179	48187	48193
48247	48259	48271	48281	48299	48311	48313	48337	48341	48353	48371	48383
48413	48437	48449	48463	48473	48479	48481	48487	48491	48497	48523	48527
48563	48571	48589	48593	48611	48619	48623	48647	48649	48661	48673	48677
48751	48757	48761	48767	48779	48781	48787	48799	48809	48817	48821	48823
48869	48871	48883	48889	48907	48947	48953	48973	48989	48991	49003	49009
49037	49043	49057	49069	49081	49103	49109	49117	49121	49123	49139	49157
49193	49199	49201	49207	49211	49223	49253	49261	49277	49279	49297	49307
49363	49367	49369	49391	49393	49409	49411	49417	49429	49433	49451	49459
49499	49523	49529	49531	49537	49547	49549	49559	49597	49603	49613	49627
49667	49669	49681	49697	49711	49727	49739	49741	49747	49757	49783	49787
49811	49823	49831	49843	49853	49871	49877	49891	49919	49921	49927	49937
49991	49993	49999	50021	50023	50033	50047	50051	50053	50069	50077	50087
50119	50123	50129	50131	50147	50153	50159	50177	50207	50221	50227	50231
50287	50291	50311	50321	50329	50333	50341	50359	50363	50377	50383	50387
50441	50459	50461	50497	50503	50513	50527	50539	50543	50549	50551	50581
50599	50627	50647	50651	50671	50683	50707	50723	50741	50753	50767	50773
50833	50839	50849	50857	50867	50873	50891	50893	50909	50923	50929	50951
50989	50993	51001	51031	51043	51047	51059	51061	51071	51109	51131	51133
51169	51193	51197	51199	51203	51217	51229	51239	51241	51257	51263	51283
51341	51343	51347	51349	51361	51383	51407	51413	51419	51421	51427	51431
51461	51473	51479	51481	51487	51503	51511	51517	51521	51539	51551	51563
51599	51607	51613	51631	51637	51647	51659	51673	51679	51683	51691	51713
51767	51769	51787	51797	51803	51817	51827	51829	51839	51853	51859	51869
51907	51913	51929	51941	51949	51971	51973	51977	51991	52009	52021	52027
52069	52081	52103	52121	52127	52147	52153	52163	52177	52181	52183	52189
52249	52253	52259	52267	52289	52291	52301	52313	52321	52361	52363	52369
52433	52453	52457	52489	52501	52511	52517	52529	52541	52543	52553	52561
52583	52609	52627	52631	52639	52667	52673	52691	52697	52709	52711	52721
52757	52769	52783	52807	52813	52817	52837	52859	52861	52879	52883	52889
52937	52951	52957	52963	52967	52973	52981	52999	53003	53017	53047	53051
53089	53093	53101	53113	53117	53129	53147	53149	53161	53171	53173	53189
53233	53239	53267	53269	53279	53281	53299	53309	53323	53327	53353	53359
53407	53411	53419	53437	53441	53453	53479	53503	53507	53527	53549	53551
53597	53609	53611	53617	53623	53629	53633	53639	53653	53657	53681	53693
53731	53759	53773	53777	53783	53791	53813	53819	53831	53849	53857	53861
53897	53899	53917	53923	53927	53939	53951	53959	53987	53993	54001	54011
54059	54083	54091	54101	54121	54133	54139	54151	54163	54167	54181	54193
54277	54287	54293	54311	54319	54323	54331	54347	54361	54367	54371	54377
54413	54419	54421	54437	54443	54449	54469	54493	54497	54499	54503	54517
54547	54559	54563	54577	54581	54583	54601	54617	54623	54629	54631	54647
54709	54713	54721	54727	54751	54767	54773	54779	54787	54799	54829	54833
54881	54907	54917	54919	54941	54949	54959	54973	54979	54983	55001	55009
55057	55061	55073	55079	55103	55109	55117	55127	55147	55163	55171	55201
55219	55229	55243	55249	55259	55291	55313	55331	55333	55337	55339	55343
55399	55411	55439	55441	55457	55469	55487	55501	55511	55529	55541	55547
55609	55619	55621	55631	55633	55639	55661	55663	55667	55673	55681	55691
55721	55733	55763	55787	55793	55799	55807	55813	55817	55819	55823	55829
55871	55889	55897	55901	55903	55921	55927	55931	55933	55949	55967	55987
56039	56041	56053	56081	56087	56093	56099	56101	56113	56123	56131	56149
56197	56207	56209	56237	56239	56249	56263	56267	56269	56299	56311	56333
56383	56393	56401	56417	56431	56437	56443	56453	56467	56473	56477	56479
56509	56519	56527	56531	56533	56543	56569	56591	56597	56599	56611	56629

56671

56681

56687

56701

56711

56713

56731

56737

56747

56767

56773

56779

56813	56821	56827	56843	56857	56873	56891	56893	56897	56909	56911	56921
56951	56957	56963	56983	56989	56993	56999	57037	57041	57047	57059	57073
57107	57119	57131	57139	57143	57149	57163	57173	57179	57191	57193	57203
57251	57259	57269	57271	57283	57287	57301	57329	57331	57347	57349	57367
57397	57413	57427	57457	57467	57487	57493	57503	57527	57529	57557	57559
57601	57637	57641	57649	57653	57667	57679	57689	57697	57709	57713	57719
57751	57773	57781	57787	57791	57793	57803	57809	57829	57839	57847	57853
57901	57917	57923	57943	57947	57973	57977	57991	58013	58027	58031	58043
58067	58073	58099	58109	58111	58129	58147	58151	58153	58169	58171	58189
58211	58217	58229	58231	58237	58243	58271	58309	58313	58321	58337	58363
58391	58393	58403	58411	58417	58427	58439	58441	58451	58453	58477	58481
58549	58567	58573	58579	58601	58603	58613	58631	58657	58661	58679	58687
58727	58733	58741	58757	58763	58771	58787	58789	58831	58889	58897	58901
58921	58937	58943	58963	58967	58979	58991	58997	59009	59011	59021	59023
59063	59069	59077	59083	59093	59107	59113	59119	59123	59141	59149	59159
59207	59209	59219	59221	59233	59239	59243	59263	59273	59281	59333	59341
59369	59377	59387	59393	59399	59407	59417	59419	59441	59443	59447	59453
59497	59509	59513	59539	59557	59561	59567	59581	59611	59617	59621	59627
59663	59669	59671	59693	59699	59707	59723	59729	59743	59747	59753	59771
59809	59833	59863	59879	59887	59921	59929	59951	59957	59971	59981	59999
60037	60041	60077	60083	60089	60091	60101	60103	60107	60127	60133	60139
60169	60209	60217	60223	60251	60257	60259	60271	60289	60293	60317	60331
60373	60383	60397	60413	60427	60443	60449	60457	60493	60497	60509	60521
60601	60607	60611	60617	60623	60631	60637	60647	60649	60659	60661	60679
60727	60733	60737	60757	60761	60763	60773	60779	60793	60811	60821	60859
60899	60901	60913	60917	60919	60923	60937	60943	60953	60961	61001	61007
61051	61057	61091	61099	61121	61129	61141	61151	61153	61169	61211	61223
61283	61291	61297	61331	61333	61339	61343	61357	61363	61379	61381	61403
61463	61469	61471	61483	61487	61493	61507	61511	61519	61543	61547	61553
61603	61609	61613	61627	61631	61637	61643	61651	61657	61667	61673	61681
61723	61729	61751	61757	61781	61813	61819	61837	61843	61861	61871	61879
61949	61961	61967	61979	61981	61987	61991	62003	62011	62017	62039	62047
62081	62099	62119	62129	62131	62137	62141	62143	62171	62189	62191	62201
62233	62273	62297	62299	62303	62311	62323	62327	62347	62351	62383	62401
62467	62473	62477	62483	62497	62501	62507	62533	62539	62549	62563	62581
62617	62627	62633	62639	62653	62659	62683	62687	62701	62723	62731	62743
62791	62801	62819	62827	62851	62861	62869	62873	62897	62903	62921	62927
62971	62981	62983	62987	62989	63029	63031	63059	63067	63073	63079	63097
63131	63149	63179	63197	63199	63211	63241	63247	63277	63281	63299	63311
63337	63347	63353	63361	63367	63377	63389	63391	63397	63409	63419	63421
63467	63473	63487	63493	63499	63521	63527	63533	63541	63559	63577	63587
63607	63611	63617	63629	63647	63649	63659	63667	63671	63689	63691	63697
63727	63737	63743	63761	63773	63781	63793	63799	63803	63809	63823	63839
63863	63901	63907	63913	63929	63949	63977	63997	64007	64013	64019	64033
64081	64091	64109	64123	64151	64153	64157	64171	64187	64189	64217	64223
64279	64283	64301	64303	64319	64327	64333	64373	64381	64399	64403	64433
64483	64489	64499	64513	64553	64567	64577	64579	64591	64601	64609	64613
64661	64663	64667	64679	64693	64709	64717	64747	64763	64781	64783	64793
64853	64871	64877	64879	64891	64901	64919	64921	64927	64937	64951	64969
65027	65029	65033	65053	65063	65071	65089	65099	65101	65111	65119	65123
65167	65171	65173	65179	65183	65203	65213	65239	65257	65267	65269	65287
65327	65353	65357	65371	65381	65393	65407	65413	65419	65423	65437	65447
65519	65521	65537	65539	65543	65551	65557	65563	65579	65581	65587	65599
65633	65647	65651	65657	65677	65687	65699	65701	65707	65713	65717	65719
65777	65789	65809	65827	65831	65837	65839	65843	65851	65867	65881	65899
65951	65957	65963	65981	65983	65993	66029	66037	66041	66047	66067	66071
66107	66109	66137	66161	66169	66173	66179	66191	66221	66239	66271	66293
66347	66359	66361	66373	66377	66383	66403	66413	66431	66449	66457	66463
66509	66523	66529	66533	66541	66553	66569	66571	66587	66593	66601	66617
66683	66697	66701	66713	66721	66733	66739	66749	66751	66763	66791	66797
66851	66853	66863	66877	66883	66889	66919	66923	66931	66943	66947	66949
67003	67021	67033	67043	67049	67057	67061	67073	67079	67103	67121	67129
67157	67169	67181	67187	67189	67211	67213	67217	67219	67231	67247	67261

67307

67339

67343

67349

67369

67391

67399

67409

67411

67421

67427

67429

67477	67481	67489	67493	67499	67511	67523	67531	67537	67547	67559	67567
67601	67607	67619	67631	67651	67679	67699	67709	67723	67733	67741	67751
67777	67783	67789	67801	67807	67819	67829	67843	67853	67867	67883	67891
67933	67939	67943	67957	67961	67967	67979	67987	67993	68023	68041	68053
68099	68111	68113	68141	68147	68161	68171	68207	68209	68213	68219	68227
68281	68311	68329	68351	68371	68389	68399	68437	68443	68447	68449	68473
68491	68501	68507	68521	68531	68539	68543	68567	68581	68597	68611	68633
68683	68687	68699	68711	68713	68729	68737	68743	68749	68767	68771	68777
68821	68863	68879	68881	68891	68897	68899	68903	68909	68917	68927	68947
69011	69019	69029	69031	69061	69067	69073	69109	69119	69127	69143	69149
69193	69197	69203	69221	69233	69239	69247	69257	69259	69263	69313	69317
69379	69383	69389	69401	69403	69427	69431	69439	69457	69463	69467	69473
69497	69499	69539	69557	69593	69623	69653	69661	69677	69691	69697	69709
69763	69767	69779	69809	69821	69827	69829	69833	69847	69857	69859	69877
69931	69941	69959	69991	69997	70001	70003	70009	70019	70039	70051	70061
70111	70117	70121	70123	70139	70141	70157	70163	70177	70181	70183	70199
70229	70237	70241	70249	70271	70289	70297	70309	70313	70321	70327	70351
70393	70423	70429	70439	70451	70457	70459	70481	70487	70489	70501	70507
70571	70573	70583	70589	70607	70619	70621	70627	70639	70657	70663	70667
70729	70753	70769	70783	70793	70823	70841	70843	70849	70853	70867	70877
70913	70919	70921	70937	70949	70951	70957	70969	70979	70981	70991	70997
71039	71059	71069	71081	71089	71119	71129	71143	71147	71153	71161	71167
71233	71237	71249	71257	71261	71263	71287	71293	71317	71327	71329	71333
71353	71359	71363	71387	71389	71399	71411	71413	71419	71429	71437	71443
71479	71483	71503	71527	71537	71549	71551	71563	71569	71593	71597	71633
71693	71699	71707	71711	71713	71719	71741	71761	71777	71789	71807	71809
71849	71861	71867	71879	71881	71887	71899	71909	71917	71933	71941	71947
71987	71993	71999	72019	72031	72043	72047	72053	72073	72077	72089	72091
72139	72161	72167	72169	72173	72211	72221	72223	72227	72229	72251	72253
72287	72307	72313	72337	72341	72353	72367	72379	72383	72421	72431	72461
72493	72497	72503	72533	72547	72551	72559	72577	72613	72617	72623	72643
72671	72673	72679	72689	72701	72707	72719	72727	72733	72739	72763	72767
72859	72869	72871	72883	72889	72893	72901	72907	72911	72923	72931	72937
72973	72977	72997	73009	73013	73019	73037	73039	73043	73061	73063	73079
73133	73141	73181	73189	73237	73243	73259	73277	73291	73303	73309	73327
73363	73369	73379	73387	73417	73421	73433	73453	73459	73471	73477	73483
73547	73553	73561	73571	73583	73589	73597	73607	73609	73613	73637	73643
73681	73693	73699	73709	73721	73727	73751	73757	73771	73783	73819	73823
73867	73877	73883	73897	73907	73939	73943	73951	73961	73973	73999	74017
74051	74071	74077	74093	74099	74101	74131	74143	74149	74159	74161	74167
74201	74203	74209	74219	74231	74257	74279	74287	74293	74297	74311	74317
74363	74377	74381	74383	74411	74413	74419	74441	74449	74453	74471	74489
74527	74531	74551	74561	74567	74573	74587	74597	74609	74611	74623	74653
74713	74717	74719	74729	74731	74747	74759	74761	74771	74779	74797	74821
74857	74861	74869	74873	74887	74891	74897	74903	74923	74929	74933	74941
75017	75029	75037	75041	75079	75083	75109	75133	75149	75161	75167	75169
75211	75217	75223	75227	75239	75253	75269	75277	75289	75307	75323	75329
75367	75377	75389	75391	75401	75403	75407	75431	75437	75479	75503	75511
75539	75541	75553	75557	75571	75577	75583	75611	75617	75619	75629	75641
75683	75689	75703	75707	75709	75721	75731	75743	75767	75773	75781	75787
75833	75853	75869	75883	75913	75931	75937	75941	75967	75979	75983	75989
76003	76031	76039	76079	76081	76091	76099	76103	76123	76129	76147	76157
76213	76231	76243	76249	76253	76259	76261	76283	76289	76303	76333	76343
76387	76403	76421	76423	76441	76463	76471	76481	76487	76493	76507	76511
76543	76561	76579	76597	76603	76607	76631	76649	76651	76667	76673	76679
76753	76757	76771	76777	76781	76801	76819	76829	76831	76837	76847	76871
76913	76919	76943	76949	76961	76963	76991	77003	77017	77023	77029	77041
77093	77101	77137	77141	77153	77167	77171	77191	77201	77213	77237	77239
77263	77267	77269	77279	77291	77317	77323	77339	77347	77351	77359	77369
77419	77431	77447	77471	77477	77479	77489	77491	77509	77513	77521	77527
77557	77563	77569	77573	77587	77591	77611	77617	77621	77641	77647	77659
77699	77711	77713	77719	77723	77731	77743	77747	77761	77773	77783	77797
77849	77863	77867	77893	77899	77929	77933	77951	77969	77977	77983	77999

78041

78049

78059

78079

78101

78121

78137

78139

78157

78163

78167

78173

78203	78229	78233	78241	78259	78277	78283	78301	78307	78311	78317	78341
78427	78437	78439	78467	78479	78487	78497	78509	78511	78517	78539	78541
78577	78583	78593	78607	78623	78643	78649	78653	78691	78697	78707	78713
78781	78787	78791	78797	78803	78809	78823	78839	78853	78857	78877	78887
78919	78929	78941	78977	78979	78989	79031	79039	79043	79063	79087	79103
79147	79151	79153	79159	79181	79187	79193	79201	79229	79231	79241	79259
79301	79309	79319	79333	79337	79349	79357	79367	79379	79393	79397	79399
79433	79451	79481	79493	79531	79537	79549	79559	79561	79579	79589	79601
79627	79631	79633	79657	79669	79687	79691	79693	79697	79699	79757	79769
79813	79817	79823	79829	79841	79843	79847	79861	79867	79873	79889	79901
79943	79967	79973	79979	79987	79997	79999	80021	80039	80051	80071	80077
80147	80149	80153	80167	80173	80177	80191	80207	80209	80221	80231	80233
80273	80279	80287	80309	80317	80329	80341	80347	80363	80369	80387	80407
80471	80473	80489	80491	80513	80527	80537	80557	80567	80599	80603	80611
80651	80657	80669	80671	80677	80681	80683	80687	80701	80713	80737	80747
80779	80783	80789	80803	80809	80819	80831	80833	80849	80863	80897	80909
80929	80933	80953	80963	80989	81001	81013	81017	81019	81023	81031	81041
81071	81077	81083	81097	81101	81119	81131	81157	81163	81173	81181	81197
81233	81239	81281	81283	81293	81299	81307	81331	81343	81349	81353	81359
81409	81421	81439	81457	81463	81509	81517	81527	81533	81547	81551	81553
81611	81619	81629	81637	81647	81649	81667	81671	81677	81689	81701	81703
81749	81761	81769	81773	81799	81817	81839	81847	81853	81869	81883	81899
81931	81937	81943	81953	81967	81971	81973	82003	82007	82009	82013	82021
82051	82067	82073	82129	82139	82141	82153	82163	82171	82183	82189	82193
82223	82231	82237	82241	82261	82267	82279	82301	82307	82339	82349	82351
82393	82421	82457	82463	82469	82471	82483	82487	82493	82499	82507	82529
82561	82567	82571	82591	82601	82609	82613	82619	82633	82651	82657	82699
82729	82757	82759	82763	82781	82787	82793	82799	82811	82813	82837	82847
82903	82913	82939	82963	82981	82997	83003	83009	83023	83047	83059	83063
83093	83101	83117	83137	83177	83203	83207	83219	83221	83227	83231	83233
83269	83273	83299	83311	83339	83341	83357	83383	83389	83399	83401	83407
83437	83443	83449	83459	83471	83477	83497	83537	83557	83561	83563	83579
83617	83621	83639	83641	83653	83663	83689	83701	83717	83719	83737	83761
83813	83833	83843	83857	83869	83873	83891	83903	83911	83921	83933	83939
84011	84017	84047	84053	84059	84061	84067	84089	84121	84127	84131	84137
84181	84191	84199	84211	84221	84223	84229	84239	84247	84263	84299	84307
84347	84349	84377	84389	84391	84401	84407	84421	84431	84437	84443	84449
84481	84499	84503	84509	84521	84523	84533	84551	84559	84589	84629	84631
84673	84691	84697	84701	84713	84719	84731	84737	84751	84761	84787	84793
84857	84859	84869	84871	84913	84919	84947	84961	84967	84977	84979	84991
85037	85049	85061	85081	85087	85091	85093	85103	85109	85121	85133	85147
85201	85213	85223	85229	85237	85243	85247	85259	85297	85303	85313	85331
85369	85381	85411	85427	85429	85439	85447	85451	85453	85469	85487	85513
85549	85571	85577	85597	85601	85607	85619	85621	85627	85639	85643	85661
85703	85711	85717	85733	85751	85781	85793	85817	85819	85829	85831	85837
85889	85903	85909	85931	85933	85991	85999	86011	86017	86027	86029	86069
86113	86117	86131	86137	86143	86161	86171	86179	86183	86197	86201	86209
86257	86263	86269	86287	86291	86293	86297	86311	86323	86341	86351	86353
86381	86389	86399	86413	86423	86441	86453	86461	86467	86477	86491	86501
86539	86561	86573	86579	86587	86599	86627	86629	86677	86689	86693	86711
86753	86767	86771	86783	86813	86837	86843	86851	86857	86861	86869	86923
86951	86959	86969	86981	86993	87011	87013	87037	87041	87049	87071	87083
87121	87133	87149	87151	87179	87181	87187	87211	87221	87223	87251	87253
87293	87299	87313	87317	87323	87337	87359	87383	87403	87407	87421	87427
87481	87491	87509	87511	87517	87523	87539	87541	87547	87553	87557	87559
87613	87623	87629	87631	87641	87643	87649	87671	87679	87683	87691	87697
87739	87743	87751	87767	87793	87797	87803	87811	87833	87853	87869	87877
87917	87931	87943	87959	87961	87973	87977	87991	88001	88003	88007	88019
88093	88117	88129	88169	88177	88211	88223	88237	88241	88259	88261	88289
88337	88339	88379	88397	88411	88423	88427	88463	88469	88471	88493	88499
88589	88591	88607	88609	88643	88651	88657	88661	88663	88667	88681	88721
88771	88789	88793	88799	88801	88807	88811	88813	88817	88819	88843	88853
88883	88897	88903	88919	88937	88951	88969	88993	88997	89003	89009	89017

89057

89069

89071

89083

89087

89101

89107

89113

89119

89123

89137

89153

89213	89227	89231	89237	89261	89269	89273	89293	89303	89317	89329	89363
89393	89399	89413	89417	89431	89443	89449	89459	89477	89491	89501	89513
89533	89561	89563	89567	89591	89597	89599	89603	89611	89627	89633	89653
89671	89681	89689	89753	89759	89767	89779	89783	89797	89809	89819	89821
89867	89891	89897	89899	89909	89917	89923	89939	89959	89963	89977	89983
90011	90017	90019	90023	90031	90053	90059	90067	90071	90073	90089	90107
90163	90173	90187	90191	90197	90199	90203	90217	90227	90239	90247	90263
90313	90353	90359	90371	90373	90379	90397	90401	90403	90407	90437	90439
90499	90511	90523	90527	90529	90533	90547	90583	90599	90617	90619	90631
90677	90679	90697	90703	90709	90731	90749	90787	90793	90803	90821	90823
90863	90887	90901	90907	90911	90917	90931	90947	90971	90977	90989	90997
91079	91081	91097	91099	91121	91127	91129	91139	91141	91151	91153	91159
91199	91229	91237	91243	91249	91253	91283	91291	91297	91303	91309	91331
91381	91387	91393	91397	91411	91423	91433	91453	91457	91459	91463	91493
91541	91571	91573	91577	91583	91591	91621	91631	91639	91673	91691	91703
91757	91771	91781	91801	91807	91811	91813	91823	91837	91841	91867	91873
91943	91951	91957	91961	91967	91969	91997	92003	92009	92033	92041	92051
92111	92119	92143	92153	92173	92177	92179	92189	92203	92219	92221	92227
92251	92269	92297	92311	92317	92333	92347	92353	92357	92363	92369	92377
92399	92401	92413	92419	92431	92459	92461	92467	92479	92489	92503	92507
92569	92581	92593	92623	92627	92639	92641	92647	92657	92669	92671	92681
92707	92717	92723	92737	92753	92761	92767	92779	92789	92791	92801	92809
92857	92861	92863	92867	92893	92899	92921	92927	92941	92951	92957	92959
93047	93053	93059	93077	93083	93089	93097	93103	93113	93131	93133	93139
93187	93199	93229	93239	93241	93251	93253	93257	93263	93281	93283	93287
93329	93337	93371	93377	93383	93407	93419	93427	93463	93479	93481	93487
93503	93523	93529	93553	93557	93559	93563	93581	93601	93607	93629	93637
93719	93739	93761	93763	93787	93809	93811	93827	93851	93871	93887	93889
93913	93923	93937	93941	93949	93967	93971	93979	93983	93997	94007	94009
94063	94079	94099	94109	94111	94117	94121	94151	94153	94169	94201	94207
94261	94273	94291	94307	94309	94321	94327	94331	94343	94349	94351	94379
94427	94433	94439	94441	94447	94463	94477	94483	94513	94529	94531	94541
94561	94573	94583	94597	94603	94613	94621	94649	94651	94687	94693	94709
94771	94777	94781	94789	94793	94811	94819	94823	94837	94841	94847	94849
94907	94933	94949	94951	94961	94993	94999	95003	95009	95021	95027	95063
95089	95093	95101	95107	95111	95131	95143	95153	95177	95189	95191	95203
95233	95239	95257	95261	95267	95273	95279	95287	95311	95317	95327	95339
95401	95413	95419	95429	95441	95443	95461	95467	95471	95479	95483	95507
95549	95561	95569	95581	95597	95603	95617	95621	95629	95633	95651	95701
95723	95731	95737	95747	95773	95783	95789	95791	95801	95803	95813	95819
95881	95891	95911	95917	95923	95929	95947	95957	95959	95971	95987	95989
96043	96053	96059	96079	96097	96137	96149	96157	96167	96179	96181	96199
96233	96259	96263	96269	96281	96289	96293	96323	96329	96331	96337	96353
96431	96443	96451	96457	96461	96469	96479	96487	96493	96497	96517	96527
96587	96589	96601	96643	96661	96667	96671	96697	96703	96731	96737	96739
96769	96779	96787	96797	96799	96821	96823	96827	96847	96851	96857	96893
96953	96959	96973	96979	96989	96997	97001	97003	97007	97021	97039	97073
97127	97151	97157	97159	97169	97171	97177	97187	97213	97231	97241	97259
97327	97367	97369	97373	97379	97381	97387	97397	97423	97429	97441	97453
97501	97511	97523	97547	97549	97553	97561	97571	97577	97579	97583	97607
97651	97673	97687	97711	97729	97771	97777	97787	97789	97813	97829	97841
97859	97861	97871	97879	97883	97919	97927	97931	97943	97961	97967	97973
98017	98041	98047	98057	98081	98101	98123	98129	98143	98179	98207	98213
98257	98269	98297	98299	98317	98321	98323	98327	98347	98369	98377	98387
98419	98429	98443	98453	98459	98467	98473	98479	98491	98507	98519	98533
98573	98597	98621	98627	98639	98641	98663	98669	98689	98711	98713	98717
98773	98779	98801	98807	98809	98837	98849	98867	98869	98873	98887	98893
98911	98927	98929	98939	98947	98953	98963	98981	98993	98999	99013	99017
99079	99083	99089	99103	99109	99119	99131	99133	99137	99139	99149	99173
99233	99241	99251	99257	99259	99277	99289	99317	99347	99349	99367	99371
99401	99409	99431	99439	99469	99487	99497	99523	99527	99529	99551	99559
99581	99607	99611	99623	99643	99661	99667	99679	99689	99707	99709	99713
99761	99767	99787	99793	99809	99817	99823	99829	99833	99839	99859	99871

99907

99923

99929

99961

99971

99989

99991

9592 primes up to 99999 found





