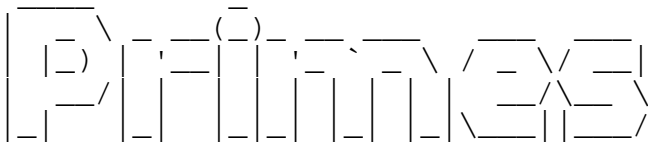


# Primes

Number				Decompose

=====

You want to :  
-----  
know if a number is prime ?                    enter :   number   A  
-----  
Decompose a number into prime factors  
   enter :   number   E  
=====



=====

```

// ##### FIND IF PRIME NUMBER #####
LBL A STO 01 X/T SBR X2 SBR SQR SBR LNX 01 GE E'
03 GE C
RCL 01 / 02 = INV INT X/T 00 EQ D
03 STO 02 RCL 01 SQR STO 03
LBL B RCL 01 / RCL 02 = INV INT X/T 00 EQ D
02 SUM 02 RCL 02 X/T RCL 03 GE B

// ##### ANSWER YES #####
LBL C 01 04 OP 69 OP 00 00 00 00 00 04 05 01 07 03 06 OP 04 PGM 06 RCL 01 A
OP 05 RCL 01 OP 55 R/S

// ##### ANSWER NO #####
LBL D 01 04 OP 69 OP 00 00 00 00 00 03 01 03 02 00 00 OP 04 PGM 06 RCL 01 A
OP 05 RCL 01 OP 55 R/S

// ##### ERROR #####
LBL E' 00 R/S
LBL C' SUM 02 RCL 01 / RCL 02 = INV INT EQ A'
RTN
LBL B' CP 6 C' 4 C' 2 C' 4 C' 2 C' 4 C' 6 C' 2 C' RCL 02 X/T RCL 03 GE B'
RCL 01 PRT SBR 1/X RCL 05 R/S
LBL A' RCL 01 / RCL 02 PRT = STO 01 SQR STO 03 0 GTO C'

// ##### DECOMPOSE IN PRIMES FACTORS #####
LBL E X/T SBR X2 SBR YX SBR LOG X/T CP STO 01 STO 05 PRT SBR 1/X OP 00 00 00
00 00 00 00 02 01 01 03 OP 03 01 05 03 07 03 02 03 05 03 06 OP 04 OP 05 RCL
01 SQR STO 03 1 STO 02 1 C' 1 C' 2 C' 1 STO 02 GTO B'

// ##### DISPLAY PRIMES #####
LBL X2 SBR 1/X 00 00 00 00 00 00 00 00 00 03 03 OP 01 03 05 02 04 03 00 01 07 03
06 OP 02 00 00 00 00 03 03 03 05 02 04 OP 03 03 00 01 07 03 06 00 00 00 00 OP
04 OP 55 PAU PAU RTN

// ##### DISPLAY NUMBERS #####
LBL SQR 00 00 00 00 03 01 04 01 03 00 OP 03 01 04 01 07 03 05 03 06 00 00 OP
04 OP 55 PAU PAU RTN

// ##### DISPLAY FACTORS #####
LBL YX 00 00 00 00 02 01 01 03 01 05 OP 03 03 07 03 02 03 05 03 06 00 00 OP
04 OP 55 PAU PAU RTN

// ##### PRINT PRIMES NUMBERS #####
LBL LNX 00 00 00 00 00 00 00 00 00 00 00 OP 01 00 00 03 03 03 05 02 04 03 00 OP
02 01 07 03 06 00 00 03 01 04 01 OP 03 03 00 01 04 01 07 03 05 03 06 OP 04 OP
05

// ##### DASHED LINE #####
LBL 1/X 00 00 00 00 00 00 00 00 00 00 00 OP 01 00 00 02 00 02 00 02 00 02 00 OP
04 OP 02 02 00 02 00 02 00 02 00 02 00 OP 03 02 00 02 00 02 00 02 00 02 00 OP
04 OP 05 RTN

// ##### PRINT PRIMES FACTORS #####
LBL LOG 00 00 00 00 00 00 00 00 00 00 00 OP 01 00 00 03 03 03 05 02 04 03 00 OP
02 01 07 03 06 00 00 02 01 01 03 OP 03 01 05 03 07 03 02 03 05 03 06 OP 04 OP
05 GTO 1/X

```

L A B E L S
001 11 A
037 12 B
061 13 C
093 14 D
125 10 E'
129 18 C'
144 17 B'
178 16 A'
195 15 E
260 33 X2
317 34 SQR
348 45 YX
379 23 LNX
431 35 1/X
486 28 LOG

Adr	Branch.
1/X	172 71 SBR
1/X	210 71 SBR
1/X	261 71 SBR
1/X	537 61 GTO
A	084 11 A
A	116 11 A
A'	140 67 EQ
B	058 77 GE
B'	167 77 GE
B'	257 61 GTO
C	015 77 GE
C'	147 18 C'
C'	149 18 C'
C'	151 18 C'
C'	153 18 C'
C'	155 18 C'
C'	157 18 C'
C'	159 18 C'
C'	161 18 C'
C'	192 61 GTO
C'	249 18 C'
C'	251 18 C'
C'	253 18 C'
D	026 67 EQ
D	048 67 EQ
E'	012 77 GE
LNX	009 71 SBR
LOG	201 71 SBR
SQR	007 71 SBR
X2	005 71 SBR
X2	197 71 SBR
YX	199 71 SBR

Reg.	Instr.
01	002 42 STO
	017 43 RCL
	031 43 RCL
	038 43 RCL
	082 43 RCL
	087 43 RCL
	114 43 RCL
	119 43 RCL
	132 43 RCL
	169 43 RCL
	179 43 RCL
	186 42 STO
	205 42 STO
	240 43 RCL
02	029 42 STO
	041 43 RCL
	051 44 SUM
	053 43 RCL
	130 44 SUM
	135 43 RCL
	162 43 RCL
	182 43 RCL
	246 42 STO
	255 42 STO
03	034 42 STO
	056 43 RCL
	165 43 RCL
	189 42 STO
	243 42 STO
05	174 43 RCL
	207 42 STO