 TEXAS INSTRUMENTS				
6174				
(method 1)				(method 2)
Number				Number

=====

6 1 7 4

Kaprekar constant

=====

Enter a 4-digit number including at least one  
differs from the others then

either [ A ] (method 1)

either [ E ] (method 2)

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M E T H O D 1

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The program

sort the 4 digits in descending order to get  
a first number abcd,

sort the 4 digits in ascending order to get a  
second dcba number,

subtracts the second number from the first,  
use the result as a fresh start

... etc ...

up to 6174!

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M E T H O D 2

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The program

sort the 4 digits in descending order to get  
a first number abcd,

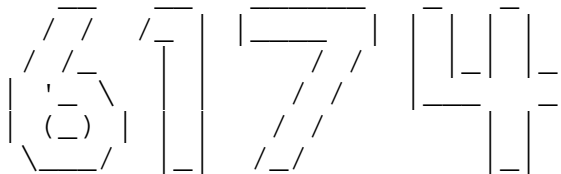
calculate the next number =  $999(a-d) + 90(b-c)$

use this result as a fresh start

... etc ...

up to 6174!

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//##### NUMBER - METHOD 1 #####
LBL A
CMS
STO 09
LBL A'
C'

// ===== 1ST NUMBER =====
( RCL 01 * 1 0 0 0 ) + ( RCL 02 * 1 0 0 ) + ( RCL 03 * 1 0 ) + RCL
04 =
STO 07

// ===== 2ND NUMBER =====
( RCL 04 * 1 0 0 0 ) + ( RCL 03 * 1 0 0 ) + ( RCL 02 * 1 0 ) + RCL
01 =
STO 08 ADV OP 26
RCL 06 PRT
2 0 0 0 0 0 0 0 OP 04
RCL 08 OP 06
6 4 0 0 0 0 0 0 OP 04
RCL 07 OP 06
OP 00
RCL 08 - RCL 07 =
OP 06
X/T 6 1 7 4 X/T STO 09
INV EQ A'
CMS
R/S

// ##### NUMBER - METHOD 2 #####
LBL E
CMS
STO 09
LBL E'
C'

// ===== 1ST NUMBER =====
RCL 04 - RCL 01 =
STO 07

// ===== 2ND NUMBER =====
RCL 03 - RCL 02 =
STO 08 ADV OP 26
RCL 06 PRT
9 9 9 * RCL 07 + 9 0 * RCL 08 = OP 00 OP 06
X/T 6 1 7 4 X/T STO 09
INV EQ E'
CMS
R/S

// ##### COMMON AREA #####
LBL C'
4 INV LOG INV PRD 09

// ===== DISTRIBUTION =====
4 STO 00
LBL SQR
RCL 09 INV INT * 1 0 =
STO 09 INT ST* 00

```



DSZ 00 SQR

// ===== SORTING =====

4 STO 00

LBL COS

RC\* 00 X/T 4 STO 05

LBL SIN

RC\* 05

GE TAN EX\* 00 ST\* 05 RC\* 00 X/T

LBL TAN

DSZ 05 SIN

DSZ 00 COS

RTN



L A B E L S		
001	11	A
006	16	A'
130	15	E
135	10	E'
190	18	C'
201	34	SQR
222	39	COS
230	38	SIN
243	30	TAN

Adr	Branch.
A'	125 67 EQ
C'	007 18 C'
C'	136 18 C'
COS	247 97 DSZ
E'	185 67 EQ
SIN	244 97 DSZ
SQR	215 97 DSZ
TAN	233 77 GE

Reg.	Instr.
00	198 42 STO
	213 72 ST*
	219 42 STO
	223 73 RC*
	235 63 EX*
01	239 73 RC*
	009 43 RCL
	067 43 RCL
02	140 43 RCL
	019 43 RCL
	060 43 RCL
03	148 43 RCL
	028 43 RCL
	051 43 RCL
04	145 43 RCL
	035 43 RCL
	041 43 RCL
05	137 43 RCL
	227 42 STO
	231 73 RC*
06	237 72 ST*
	075 43 RCL
	156 43 RCL
07	038 42 STO
	102 43 RCL
	111 43 RCL
	143 42 STO
	163 43 RCL
08	070 42 STO
	088 43 RCL
	108 43 RCL
	151 42 STO
	169 43 RCL
09	003 42 STO
	122 42 STO
	132 42 STO
	182 42 STO
	195 49 PRD
	202 43 RCL
	210 42 STO

