**DISCLAIMER:**

This is an arrangement of snapshots form my notes when programming with the Casio Calculator.

# preface

Most programs are designed for the Casio fx-9750 G PLUS
be aware of any and all of the following:
User memory capacity: 28,000 bytes
Speed: 9600 bits/sec = 1.2 kbs
each character = 1 byte
each comand = 2 bytes
each List/Matrix cell = 10 bytes

first mem # is to program it and the other is how much more it will use to use the program

I asume all variables are already filled.

17 bytes to name new program.

I also exclude the carrage return, it is at the end of every line.

␣ means space if not understood.

* this program is found in here somewhere

fake company Skribble (scribble) is used [also sCribble]
autoplay is an AI program [shift] to activate
[alpha] to deactivate

an ' in a program are notes that will not be displayed or effect the program

ii

| | | note | approx. memory range |
|---|---|---|---|
| 1-4 | timers | based on bps | 50-200 |
| 4-8 | screen "Savers" | w/ speed control | 40-330 |
| 9-10 | PONG | basic/extended | 270-1080 |
| 11-12 | SUDOKU | matrix mem 4050 | 1050 |

## Math help

| | | | |
|---|---|---|---|
| 13 | Prime factor | | 175-210 |
| 14-15 | Simplifiers | | 190-440 |
| 16 | MIXing #'s | | 185 |

## Games

| | | | |
|---|---|---|---|
| 9-10 | PONG | | 270-1080 |
| 11-12 | SUDOKU | matrix mem 4050 | 1050 |
| 17 | pick a # | | 135 |
| 18 | deck of cards | List mem 1040 | 440 |
| 18-19 | catch game | | 430-660 |
| 20 | Speed game | | 570 |
| 20 | running man | | 465 |

## small random

| | | | |
|---|---|---|---|
| 22 | identify pixels / inverse pix | | 120 |
| 22 | reverse pixels | | 45 |
| 22 | roll playing dice damage | | 190 |
| 23 | controlled arrow flight | | 75 |
| 23 | π PI calculation | | mem<50 |
| 23 | get key identification | | mem<30 |
| 23 | blank menu screen | | 190 |
| 23. | pointer | | 135 |

## Typing

| | | | |
|---|---|---|---|
| 25 | ABC | | 1335 |
| 26 | typing | matrix mem 1470 | 335 |
| 26 | Read | | 100 |
| 27. | ASK | matrix mem 420 | 900 |
| 28 | ANSwer | | 135 |
| 26 | KEYPAD | | 60 |

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| | | | |
|---|---|---|---|
| 29 | Hangman | | 426 |
| 17 | You think of a num | | 300+ |
| 30 | (Complex Game) BUBBLES | approx mem | 4293 |
| 31 | 1 minute timer | | 110 |

# Timer Version 2.0

```
"HOW MANY MINUTES"?→C
ClrGraph
0→A
Lbl 1: Text 14,1,"SET FOR [redacted] MINUTES"
 Text 14,33,C
Text 1,15,"/360 OF A MINUTE"
 0→T
While T<359
T+1→T
Text 1,1,T
While End
Isz A
Cls
Text 7,1,A
Text 7,15,"MINUTES"
If A=C
Then Stop
 Cls
Else Goto 1
```

# Timer Version 3.1

```
ClrText
Locate 3,1,"SEC"
Locate 3,2,"MIN"
1→M
Lbl 1:1→S
Do
Locate 1,1,S
for 1→A To 260
Next
Isz S
LpWhile S<60
Isz M
Locate 1,2,M
Goto 1
```

# Version 4.2

```
ClrText
0→T
Locate 4,1,"SEC"
Locate 4,2,"MIN"
Lbl 2:Isz T
T÷5.4→S
S÷60→M
S>60⇒S-60 Int M→S
S<10⇒Locate 2,1,"□"
Locate 1,1,Int S
Locate 1,2,Int M
Goto 2
```

Skribble

## Timer Version 5.7

```
ClrText
0→S
Lbl 0
S+0"0"00.072549838330"→S
Locate 1,1,S
Goto 0
```

the display is in segadesimal

is obtained by $\frac{s}{p} = \frac{s'}{x}$

p = previous # s' is actual time x = the #

## Version 6.2

```
ClrText
"SET TIME"
"HOUR"?→H
"MIN"?→M
"SEC"?→S
S÷3600+M÷60+H→T
ClrText
for 0→S To T Step 0.000001844533
Locate 1,1,S
Next
```

Same method as above

## Version 7.0

```
ClrText
"SET TIME"
"HOUR"?→H
"MIN"?→M
"SEC"?→S
ClrText
S÷3600+M÷60+H→T
for T→S To -T Step -0.000001844533
Locate 1,1,S
Next
ClrText
```

mem 61

Timer Version 8.1

```
for 0->5 To 1 Step 0.0000018445533
Locate 1,1,5
Next
```

Version 8.2

```
for 0->5 To 1 Step 0.0000183815O
Locate 1,1,5
Next
```

# Screen Saver I (output blip)

## Version 1.4

```
Lbl 1
ClrText
Locate Int 16 Ran#+1, Int 7 Ran#+1, "CASIO"
For 1→A To 100
Next
Goto 1
```

## Version 2.2

```
Do
"SPEED"?→C
LpWhile C>0 Or C>10
C×50→C
Lbl 1
ClrText
Int 16 Ran#+1→A
Int 7 Ran#+1→B
Locate A,B,"CASIO"
For 1→D To C
Next
Goto 1
```

# Screen Saver II (Text blip)

Version 1.7

```
Lbl 1
ClrGraph
Text Int 58 Ran# +1, Int 82 Ran# +1, "SAMPLE TEXT"
For 1→A To 100
Next
Goto 1
```

Version 2.1

```
Do
"SPEED"?→C
Lpwhile C<0 Or C>10
C×50→C
Lbl 1
ClrGraph
Int 58 Ran# +1 →A
Int 82 Ran# +1 →B
Text A, B, "SAMPLE TEXT"
For 1→D To C
Next
Goto 1
```

# Screen Saver III (slide text)

Version 2.3

```
Do
"SPEED"?→C
Lbl 2
While C<0 or C>10
Lbl 1
ClrGraph
Int 54 RanH+1→R
For 1→A To 127 Step C
Text R,A,"[redacted]SAMPLE TEXT"
Next
Goto 1
```

# Screen Saver IV (bouncing word)

version 1.0

```
Int 17 Ran# +1 → A
Int 7 Ran# +1 → B
Int 2 Ran# → D
Int 2 Ran# → E
Lbl 1
A<2 ⇒ 1 → D
B<2 ⇒ 1 → E
A>16 ⇒ 0 → D
B>6 ⇒ 0 → E
D=0 ⇒ Dsz A
D=1 ⇒ Isz A
E=0 ⇒ Dsz B
E=1 ⇒ Isz B
ClrText
Locate A, B, "CASIO"
Goto 1
```

# Screen Saver V (like pipes)

## Verson 1.6

```
Int 21 Ran#+1 → X
Int 7 Ran#+1 → Y
Lbl 1
ClrText
for 1→A To 25
Locate X,Y,"0"
Int 4 Ran# → B
B=0 ⇒ Dsz Y
B=1 ⇒ Isz Y
B=2 ⇒ Dsz X
B=3 ⇒ Isz X
X>21 ⇒ 1→X
X<1 ⇒ 21→X
Y>7 ⇒ 1→Y
Y<1 ⇒ 7→Y
Next
Goto 1
```

## Verson 2.2

```
Do
"SPEED"?→C
Lp While C<0 or C>10
C>5→C
Lbl 1
Int 21 Ran#+1 → X
Int 7 Ran#+1 → Y
ClrText
for 1→A To C
Int 4 Ran#→D
D=0 ⇒ Isz Y
D=1 ⇒ Isz X
D=2 ⇒ Dsz X
```

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screen saver V version 2.2 continued

```
D=3⇒Dsz Y
X>21⇒1→X
X<1⇒21→X
Y>7⇒1→Y
Y<1⇒7→Y
Locate X,Y,"O"
Next
Goto 1
```

Version 3.1 (interactive)

```
Do
"Speed"?→C
Lp While C<0 or C>10
C×5→C
Lbl 1
Int 21 Ran#+1→X
Int 7 Ran#+1→Y
ClrText
For 1→A To C
GetKey→G
G=0⇒Int 4 Ran#→D
G>0⇒4→D
G=37 Or D=4⇒Isz Y
G=27 Or D=1⇒Isz X
G=38 Or D=2⇒Dsz X
G=28 Or D=3⇒Dsz Y
X>21⇒1→X
X<1⇒21→X
Y>7⇒1→Y
Y<1⇒7→Y
Locate X,Y,"O"
Next
Goto 1
```

# Screen Saver VI (3 bouncing balls)

```
Int 2 Ran# → A
Int 2 Ran# → B
Int 2 Ran# → C
Int 2 Ran# → D
Int 2 Ran# → E
Int 2 Ran# → F
Int 21 Ran# +1 → X
Int 7 Ran# +1 → Y
Int 21 Ran# +1 → V
Int 7 Ran# +1 → W
Int 21 Ran# +1 → T
Int 7 Ran# +1 → U
Do
X=1 ⇒ 1 → A
X=21 ⇒ 0 → A
Y=1 ⇒ 1 → B
Y=7 ⇒ 0 → B
V=1 ⇒ 1 → C
V=21 ⇒ 0 → C
W=1 ⇒ 1 → D
W=7 ⇒ 0 → D
T=1 ⇒ 1 → E
T=21 ⇒ 0 → E
U=1 ⇒ 1 → F
U=7 ⇒ 0 → F
A=0 ⇒ Dsz X
A=1 ⇒ Isz X
B=0 ⇒ Dsz Y
B=1 ⇒ Isz Y
C=0 ⇒ Dsz V
C=1 ⇒ Isz V
(Next side)
D=0 ⇒ Dsz W
D=1 ⇒ Isz W
E=0 ⇒ Dsz T
E=1 ⇒ Isz T
F=0 ⇒ Dsz U
F=1 ⇒ Isz U
Locate X, Y, "O"
Locate V, W, "O"
Locate T, U, "O"
Lpwhile 1
```

# Pong

## basic Version 3.1

```
9→A:7→B:8→C:0→E:0→S
Int 2Ran# →D
Do
D=0⇒Dsz A
D=1⇒Isz A
E=0⇒Dsz B
E=1⇒Isz B
For 1→N To 2
Getkey →G
G=27⇒Isz C
G=38⇒Dsz C
C>19⇒19→C
C<1⇒1→C
ClrText
Locate C,7,"=-="
Locate A,B,"o"
Next
A<2⇒1→D
B<2⇒1→E
A>20⇒0→D
B>6⇒0→E
B=7 And A≠C And A≠C+1 And A≠C+2⇒Break
B=7⇒Isz S
Lpwhile 1
ClrText
Locate 7,3,"GAME OVER"
Locate 7,5,"SCORE:"
Locate 13,5,S
Stop
```

sKribble Pong autoplay

## Extended Version 4.3

```
ClrText
Locate 6,4,"Version 4.3"
For 1→A To 250
Next
ClrText
Locate 7,2,"sCπbbIE"
Locate 8,3,"Presents"
Locate 10,5,"log"
Locate 9,5,"Mod"
Locate 9,5,"P"
Locate 11,5,"n"
Locate 1,7,"press [EXE] to start!"
ClrGraph
Text 1,1,"use left and right to keep the"
Text 7,1,"ball up. use the [OPTN] button"
Text 13,1,"To change the bar. use the"
Text 19,1,"[VARS] button to change the"
Text 25,1,"ball. [MENU] will pause the"
Text 31,1,"Game and [EXE] will resume."
Text 37,1,"[EXIT] will stop the game."
Text 43,1,"[SHIFT] will turn on Autoplay."
Text 49,1,"And [ALPHA] will turn it off."
Text 55,1,"I hope you have fun. [EXE]"
for 1→A To 100
Next
for 1→A To 2000
GetKey→G
G>0 And G≠31⇒Break
Next
9→A:7→B:8→C:1→E:0→I:0→S:1→r:1→θ
Int 2 Ran#→D
```

```
Do
D=0⇒Dsz A
D=1⇒Isz A
E=1⇒Dsz B
E=0⇒Isz B
For 1→N To 2
Getkey→G
G=48⇒Locate 1,7,"PAUSE  PRESS [EXE]"
G=78⇒1→I
G=77⇒0→I
I=1⇒A-1→C
G=68⇒Isz θ
G=58⇒Isz r
r=4⇒1→r
θ=6⇒1→θ
G=47⇒ClrText
G=47⇒Stop
G=27⇒Isz C
G=38⇒Dsz D
C>19⇒19→C
C<1⇒1→C
ClrText
θ=1⇒Locate C,7,"=-="
θ=2⇒Locate C,7,"---"
θ=3⇒Locate C,7,">-<"
θ=4⇒Locate C,7,"(-)"
θ=5⇒Locate C,7,"=V="
r=1⇒Locate A,B,"o"
r=2⇒Locate A,B,"θ"
r=3⇒Locate A,B,"O"
Next
A<2⇒1→D
B<2⇒0→E
A>20=0→D
B>6⇒1→E
B=7 And A≠C And A≠C+1
 And A≠C+2⇒Break
B=7⇒Isz S
Lp While 1
ClrText
Locate 7,3,"GAME OVER"
Locate 7,5,"SCORE:"
Locate 13,5,S
Stop
```

version 3.2

NEWSUDOK is for a new game
and SUDOKU is to play game

# NEWSUDOK

```
Do
ClrText
"HOW MANY NUMBERS"?→Z
Lp While Z<0 or Z>81 or Frac Z≠0
{9,9}→Dim Mat G
Mat G→Mat H
Mat G→Mat I
Mat G→Mat J
Mat G→Mat K
Locate 1,6,"Loading..."
Locate 1,7,"["
Locate 21,7,"]"
For 1→N To Z
Int (N÷Z×19)+1→P
P>1⇒Locate P,7,"="
Do
Int 9Ran#+1→A
Int 9Ran#+1→C
Int 9Ran#+1→D
3Int((C-1)÷3)+Int((D+2)÷3)→B
Lp While Mat H[A,C]=1 Or Mat I[A,D]=1 Or
    Mat J[A,B]=1 Or Mat K[C,D]≠0
A→Mat G[C,D]
1→Mat H[A,C]
1→Mat I[A,D]
1→Mat J[A,B]
1→Mat K[C,D]
Next
Prog"SUDOKU"
```

# SUDOKU

```
ClrGraph
ViewWindow 1,15,1,1,10,1
Text 1,90,"SUDOKU"
F-Line 4,10,4,1
F-Line 7,10,7,1
F-Line 10,10,10,1
F-Line 1,7,10,7
F-Line 1,4,10,4
Text 25,90,"WAIT..."
For 1→C To 9
For 1→D To 9
Int 7C-5→E
Int 9D-6→F
Mat G[C,D]→Q
Q≠0⇒Text E,F+2,Q
Next
Next
Text 24,90,"SELECT  "
Text 31,95,"WHERE"
Text 43,90,"0=ERASE"
Text 49,90,"10=QUIT"
Text 55,90,"11=BACK"
Text 12,90,"READY  "
5.5→G~H
Lbl 1
Plot G,H
X→G:Y→H
10-Int Y→C
Int X→D
D>9⇒Goto 1
Mat K[C,D]≠0⇒Goto 1
```

```
Do
Clr Text
"■"
Locate 1,1,"WRITE"
? → A
Lp While A<0 or A>11 or frac A≠0
A=10 ⇒ Goto 9
A=11 ⇒ Goto 1
3Int ((C-1)÷3)+Int((D+2)÷3) → B
Mat G[C,D] → M
A=0 ⇒ Goto 2
Mat H[A,C]=1 or Mat I[A,D] or Mat J[A,B]=1 ⇒ Goto 1
1 → Mat H[A,C]
1 → Mat I[A,D]
1 → Mat J[A,B]
Lbl 2
If M≠0
Then 0 → Mat H[M,C]
0 → Mat I[M,D]
0 → Mat J[M,B]
If End
A → Mat G[C,D]
Int 7C-5 → E
Int 9D-4 → F
A≠0 ⇒ Text E,F,A
A=0 ⇒ Text E,F,"■"
Goto 1
Lbl 9
[[0]] → Mat G
Mat G → Mat H
Mat G → Mat I
Mat G → Mat J
Mat G → Mat K
Clr Text
```

Version 2.0 (list form)

prime factors (list form)

```
ClrText
10→Dim List 1
1→D
"PRIME FACTOR"?→A
Goto 2
Lbl 1: 2→List 1[D]: Isz D
A÷2→A: A=1⇒Goto 9: 3→B
Lbl 2: Frac(A÷2)=0⇒Goto 1: 3→B
Lbl 3: √A+1→C
Lbl 4: B≥C⇒Goto 8: Frac(A÷B)=0⇒Goto 6
Lbl 5: B+2→B: Goto 4
Lbl 6: A÷B×B-A=0⇒Goto 7: Goto 5
Lbl 7: B→List 1[D]: Isz D
A÷B→A: Goto 3
Lbl 8: A→List 1[D]
Lbl 9: List 1
```

Version 1.0 (non list)

```
ClrText
"PRIME FACTOR"?→A
Goto 2
Lbl 1: 2◢
A÷2→A: A=1⇒Goto 9: 3→B
Lbl 2: Frac(A÷2)=0⇒Goto 1: 3→B
Lbl 3: √A+1→C
Lbl 4: B≥C⇒Goto 8: Frac(A÷B)=0⇒Goto 6
Lbl 5: B+2→B: Goto 4
Lbl 6: A÷B×B-A=0⇒Goto 7: Goto 5
Lbl 7: B◢
A÷B→A: Goto 3
Lbl 8: A◢
Lbl 9: "Done"
```

# Radical simplify
version 4.5

```
ClrText
"■"
Locate 1,1,"√N■■Int N="
?→N
Abs N→O
Int(O÷2)→F
Locate 1,7,"WAIT..."
For 1→A To F
O÷A²→C
Frac C=0⇒C→D
Frac C=0⇒A→E
Next
ClrText
"■"
E>1⇒Locate 1,1,E
D>1⇒Locate 3,1,"√"
D>1⇒Locate 4,1,D
N<0⇒Locate 7,1,"i"
Locate 1,5,"Ans"
Locate 1,6,√N
```

Skribble

# Rationalizer version 1.9

```
1→A~D
ClrText
"EQUATION"?→Y
Abs Y→Z
Locate 1,7,"WAIT..."
Z²→F
For 100→E To 1 Step -1
E²→L
Frac (F×L)→J
Frac √L→K
J≠0 And K≠0⇒√L→C
J≠0 And K≠0⇒F×L→B
B→G
Next
G→N
If Frac √G≠0
Then Int √(N÷2)→F
For F→H To 1 Step -1
H²→P
N÷P→I
Frac I=0⇒I→B
Frac I=0⇒H→D
Frac I=0⇒Break
Next
IfEnd
D√B÷C→X
Clr Text
"[illegible]":"[illegible]":"[illegible]":"[illegible]":"[illegible]":"[illegible]"
Frac √B≠0 And D>1⇒Locate 9,1,D
Frac √B≠0⇒Locate 11,1,"√"
Frac √B≠0⇒Locate 12,1,B
Frac √B=0⇒Locate 11,1,√B
C>1⇒Locate 9,2,"-----"
C>1⇒Locate 11,3,C
X=1 And Y≠1⇒Locate 11,1,"[illegible]"
X=1 And Y≠1⇒Locate 8,2,"NotAble"
Locate 1,5,"Calc="
Locate 6,5,X
Locate 1,6,"Ans="
(√Y)²
```

# RATIONAL Version 1.10

```
1→A:0
ClrText
"EQUATION"?→Y
Abs Y→Z
Locate 1,7,"Wait..."
Z²→F
For 100→E To 1 Step -1
E²→L
Frac (F×L)→J
Frac √L→K
Not J And Not K⇒√L→C
Not J And Not K⇒F×L→B
B→G
Next
G→N
If Frac √G≠0
Then Int √(N÷2)→F
For F→H To 1 Step -1
H²→P
N÷P→I
Frac I=0⇒I→B
Frac I=0⇒H→D
Frac F=0⇒Break
Next
IfEnd
D√B÷C→X
ClrText
"0":"0":"0":"0":"0":"0"
If X≠1 And Y≠1
Then Frac √B≠0 And D>1⇒Locate 4,1,D
Frac √B≠0⇒Locate 6,1,"√"
Frac √B≠0⇒Locate 7,1,B
Frac √B=0⇒Locate 6,1,√B
C>1⇒Locate 4,2,"-----"
C>1⇒Locate 6,3,C
Else Locate 3,2,"Not Able"
IfEnd
Locate 1,5,"Calc="
Locate 6,5,X
Locate 1,6,"Ans="
(√Y)²
```

```
2→F          MIXing          version 1.3
Clr Text
"HOW MANY"?→N
Locate 1,7,"["
Locate 21,7,"]"
N→Dim List 2
Seq(X,X,1,N,1)→List 1
For 1→B To N
Lbl 1
IntNRan#+1→A
List 1[A]→C
C=0⇒Goto 1
C→List 2[B]
0→List 1[A]
Int ((B÷N)×19)+1→P
For F→F To P
P>1⇒Locate F,7,"="
Next
Next
List 2
```

Page(s)

| | | | |
|---|---|---|---|
| 29 | Hangman | | 426 |
| 17 | You think of a num | | 300+ |
| 30 | (Complex Game) BUBBLES | approx mem | 4293 |
| 31 | 1 minute timer | | 110 |

```
Prog "AAA"
Think of a number
between 1 and 100
inclusive, and I
will try to guess it.
think of a number
now press exe when done
0 ⇒ A : 101 → B
Lbl 1
ClrText
Int 100 Ranд#+1 → C
C>A And C<B ⇒ Goto 2 : Goto 1
Lbl 2
"[redacted]":"[redacted]":"[redacted]"
Locate 1,1,C
Locate 1,3," Higher, lower, yes"
? ↦ D
D=Lower ⇒ C → B
D=higher ⇒ C → A
D= yes ⇒ "I win!"
D= Lower or D= higher ⇒ Goto 1
```

# Pick a number (first game made) version 4.0

```
ClrText
0→A
"[illegible]"
"[illegible]"
Locate 1,1,"I'M THINKING OF A"
Locate 1,2,"NUMBER 1-100"
Int 100 Ran#+1→N
Lbl 1:?→U
Isz A
U>N⇒"LESS"
U<N⇒"MORE"
U≠N⇒Goto 1
U=N⇒"CORRECT"
U=N⇒"TRIES":A
```

# Deck of cards version 4.1

```
Lbl 0
ClrText
Locate 2,1,"PLAY"
Locate 2,2,"SHUFFLE"
1→r:Prog"MENU"*
r>2⇒Locate 8,7,"Menu ERROR"
r=1⇒Goto 2
r=2⇒Goto 1
Lbl 1:ClrL
52→N:C
ClrText
Locate 1,7,"SHUFFLING"
Prog"MIX"*
Locate 1,7," TRANSFERING"
for 1→Z To 52
List 2[Z]→Y
Y>0⇒Y+.4→X
Y>13⇒(Y-13)+.3→X
Y>26⇒Y-26+.2→X
Y>39⇒Y-39+.1→X
X→List 2[Z]
Next
List 2→List 1
Goto 0
Lbl 2
for 1→U To 52
ClrText
"■"
Int List 1[U]→V
Locate 1,1,V
V=1⇒Locate 1,1,"A"
V=11⇒Locate 1,1,"J"
V=12⇒Locate 1,1,"Q"
V=13⇒Locate 1,1,"K"
frac List 1[U]→W
W=.1⇒Locate 3,1,"D"
W=.2⇒Locate 3,1,"C"
W=.3⇒Locate 3,1,"H"
W=.4⇒Locate 3,1,"S"
U▲
Next
Goto 0
```

# Catch game
## Version 3.1

```
0→S:4→D:21→C
ClrText
Lbl 1
Int 7Ran#+1→R
For 1→A To C-4
Locate A,R,"■=--→"
GetKey→G
G=28⇒Dsz D
G=28 And D>0⇒Locate C,D+1,"■"
G=37⇒Isz D
G=37 And D<8⇒Locate C,D-1,"■"
D≥8⇒7→D
D≤0⇒1→D :Locate C,D,"O"
Next
If D=R
Then Isz S
21-(Int(S÷3))→C
Goto 1
Else ClrText
Locate 7,3,"GAME OVER"
Locate 7,5,"SCORE:"
Locate 13,5,S
Stop
```

Skribble autoplay

Catch (porn version) version 4.1

```
ClrText
Locate 7,2,"sCπib61E°"
Locate 8,3,"Presents"
Locate 8,5,"PIn"
Locate 10,5,"ayı"
Locate 12,5,"er"
"":"":"":"":"":""
Locate 1,1,"your on the right."
Locate 1,2,"catch the stuff"
Locate 1,3,"flying at you. use"
Locate 1,4,"up and down to move."
Locate 1,5,"use [OPTN] to change"
Locate 1,6,"The icons:)"
0→S:4→D:20→C:0→I:0→r
Lbl I
ClrText
Int 7Ran#+1→R
For 1→A To C-2
r=0⇒Locate A,R,"-<"
r=1⇒Locate A,R,"8-"
Getkey→G
G=68⇒Isz r
r>1⇒0→r
G=78⇒1→I
I=1 And R>D⇒37→G
I=1 And R<D⇒28→G
G=77⇒0→I
G=28⇒Dsz D
G=28 And D>0⇒Locate C,D+1,""
G=37⇒Isz D
G=37 And D<8⇒Locate C,D-1,""
```

```
D≥8⇒7→D
D≤0⇒1→D
r=0⇒Locate C,D,"-8"
r=1⇒Locate C,D,"}-"
Next
If D=R
Then Isz S
20-(Int(S÷3))→C
Goto1
Else ClrText
Locate 7,3,"GAME OVER"
Locate 7,5,"SCORE:"
Locate 13,5,S
Stop
```

running man version 1.3

```
1→A:4→B:21→X:4→Y:-1→S:0→G
ClrText
Lbl 0
Int 21 Ran#+1→E
Int 7 Ran#+1→F
Lbl I:Isz S
A>21⇒21→A
X>21⇒1→X
X<1⇒21→X
Y>7⇒1→Y
Y<1⇒7→Y
ClrText
Locate E,F,"0"
Locate A,B,"B"
Locate X,Y,"A"
Getkey→G
G=28⇒Dsz Y
G=27⇒Isz X
G=38⇒Dsz X
G=37⇒Isz Y
A>X⇒Isz A
A<X⇒Dsz A
B<Y⇒Isz B
B>Y⇒Dsz B
A=X And B=Y⇒Goto 2
X=E And Y=F⇒Goto 0:Goto I
Lbl 2
ClrText
Locate 7,3,"GAME OVER"
Locate 7,5,"SCORE:"
Locate 13,5,S
Stop
```

# Speed Game Version 1.5

```
ClrText
"▯":"▯":"▯":"▯":"▯"
Locate 1,1,"you must push the"
Locate 1,2,"indicated button"
Locate 1,3,"using the directional"
Locate 1,4,"arrows before time"
Locate 1,5,"runs out."▲
ClrText
100→D
Lbl 1 : Dsz D
D<100 And D>70 ⇒Locate 7,1,"EASY"
D<70 And D>40 ⇒Locate 7,1,"MID"
D<40 And D>10 ⇒Locate 7,1,"HARD"
D<10 And D>0 ⇒Locate 7,1,"5. HARD"
D<0 ⇒ Locate 7,1,"HELL"
Locate 4,4,"+"
Int 4 Ran#→R
Locate 4,7,"WATCH"
R=1⇒Locate 4,3,"^"      (karot)
R=2⇒Locate 5,4,">"      (greater than)
R=3⇒Locate 4,5,"V"      (letter V)
R=0⇒Locate 3,4,"<"      (less than)
For 1→C To D
Next
ClrText
Locate 4,7,"READY"
15→A
Lbl 2 : Dsz A
A=9⇒Locate 20,7,"▯"
Get Key→G
A=0⇒Goto 3
G=28⇒1→B
G=27⇒2→B
G=37⇒3→B
G=38⇒0→B
G=0⇒Goto 2
B=R⇒Goto 1
Lbl 3 : ClrText
Locate 7,3,"GAme over"
Locate 7,5,"SCORE:"
Locate 13,5,100-D
Stop
```

identify pixels (picture 1) version 2.1

```
ClrGraph
RclPict 1
for 1→B to 63
For 1→A To 127
PxlTest B,A
Ans→C
If C=1
Then ClrText
Locate 9,5,B
Locate 12,5,A
Locate 11,5,"J"
Next
Next
Stop
```

reverse pixels version 2.0

```
ClrGraph
RclPict 1
for 1→B To 63
for 1→A To 127
Plot Chg A,B
Next
Next
Stop
```

# Roll playing dice damage version 1.2

```
0→A:0→T
"Number of Sides"?→S
"Number of dice"?→D
"ADDitives"?→M
"Percent damage"?→P
Lbl 1:Int SRan# +1→N
N+A→A:Isz T
If T=D
Then "TOTal damage"
(P÷100)→Z
(M+A)Z→Q
Q+M+A
Stop
Else Goto 1
```

((M+A)(P÷100))+M+A→Z

# Controlled Arrow Flight version 2.3

```
Int 7Ran#+1→R
for 1→A To 28
Clr Text
Locate A,R,"=---→"
Getkey→G
G=28⇒Isz R
G=37⇒Dsz R
Next
```

PI (π) calculations

$4\sum(((-1)^{(x-1)})\div(2x-1),X,1,\infty,1)$ $\quad 4\left(\sum_{x=1}^{\infty}\frac{(-1)^{x-1}}{2x-1}\right)$

or

$\infty \times \sin 180 \, , \infty$

or

```
1→A:3→B
Lbl 1:A-1÷B+1÷(B+2)→A
B+4→B
Locate 1,1,A×4
Goto1
```

$\frac{\pi}{4} = 1 - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \frac{1}{9} \ldots$

$\frac{(-1)^{x-1}}{2x-1}$

Getkey identification

```
"READY 1, 2, 3"
Getkey→G
Locate 1,1,G
```

## Blank MENU Screen Version 4.1

```
1→Q
Do
GetKey→G
G=28⇒Dsz r
G=37⇒Isz r
G=31⇒Break
r>7⇒7→r
r<1⇒1→r
G=28 And r<7⇒Locate 0,r+1,"■"
G=37 And r>1⇒Locate 0,r-1,"■"
Locate 0,r,"→"
LpWhile G≠31
Return
```

## Pointer Version 1.1

```
1→A~B
ClrText
Lbl 1
Locate A,B,"→"
A→C:B→D
Getkey→G
G=28⇒Dsz B
G=37⇒Isz B
B>7⇒7→B
B<1⇒1→B
G=27⇒Isz A
G=38⇒Dsz A
A>21⇒21→A
A<1⇒1→A
G≠Q⇒Locate C,D,"■"
Goto 1
```

# blank menu Version 5.1

```
1→Y
For 1→A To 100
Next
Lbl 1
Locate 1,Y,"→"
Getkey→G
G=28⇒Dsz Y
G=37⇒Isz Y
G=31⇒Return
Y<1⇒1→Y
Y>7⇒7→Y
G=28⇒Locate 1,Y+1," "
G=37⇒Locate 1,Y-1," "
Goto 1
```

# ABC version 2.1

H=1 ⇒ Goto 1
G=25 ⇒ Locate A,B,"L"
G=26 ⇒ Locate A,B,"f"
G=28 ⇒ Locate A,B,5
G=29 ⇒ Locate A,B,"/"
G=32 ⇒ Locate A,B,"Y"
G=33 ⇒ Locate A,B,"T"
G=35 ⇒ Locate A,B,"K"
G=36 ⇒ Locate A,B,"E"
G=37 ⇒ Locate A,B,Q
G=39 ⇒ Locate A,B,"'"
G=42 ⇒ Locate A,B,"X"
G=43 ⇒ Locate A,B,"S"
G=45 ⇒ Locate A,B,"J"
G=46 ⇒ Locate A,B,"D"
G=47 ⇒ Locate A,B,9
G=48 ⇒ Locate A,B,4
G=49 ⇒ Locate A,B,","
G=52 ⇒ Locate A,B,"W"
G=53 ⇒ Locate A,B,"R"
G=54 ⇒ Locate A,B,"O"
G=55 ⇒ Locate A,B,"I"
G=56 ⇒ Locate A,B,"C"
G=57 ⇒ Locate A,B,8
G=58 ⇒ Locate A,B,3
G=59 ⇒ Locate A,B,"!"
G=61 ⇒ Locate A,B,"[illegible]"
G=62 ⇒ Locate A,B,"V"
G=63 ⇒ Locate A,B,"Q"
G=64 ⇒ Locate A,B,"N"
G=65 ⇒ Locate A,B,"H"
G=66 ⇒ Locate A,B,"B"

G=67 ⇒ Locate A,B,7
G=68 ⇒ Locate A,B,2
G=69 ⇒ Locate A,B,"?"
G=71 ⇒ Locate A,B,"Z"
G=72 ⇒ Locate A,B,"U"
G=73 ⇒ Locate A,B,"P"
G=74 ⇒ Locate A,B,"M"
G=75 ⇒ Locate A,B,"G"
G=76 ⇒ Locate A,B,"A"
G=77 ⇒ Locate A,B,6
G=78 ⇒ Locate A,B,1
G=79 ⇒ Locate A,B,"."
H=0 ⇒ Goto 9
Lbl 1
G=125 ⇒ Locate A,B,"Im"
G=126 ⇒ Locate A,B,"f"
G=129 ⇒ Locate A,B,"I[illegible]"
G=132 ⇒ Locate A,B,"y1"
G=133 ⇒ Locate A,B,"t"
G=135 ⇒ Locate A,B,"K"
G=136 ⇒ Locate A,B,"e"
G=142 ⇒ Locate A,B,"x,"
G=143 ⇒ Locate A,B,"S"
G=145 ⇒ Locate A,B,"J"
G=146 ⇒ Locate A,B,"d"
G=152 ⇒ Locate A,B,"W"
G=153 ⇒ Locate A,B,"r"
G=154 ⇒ Locate A,B,"θ"
G=155 ⇒ Locate A,B,"i"
G=156 ⇒ Locate A,B,"c"
G=161 ⇒ Locate A,B,"[illegible]"
G=162 ⇒ Locate A,B,"V"

G=163⇒Locate A,B,"Q"
G=164⇒Locate A,B,"n"
G=165⇒Locate A,B,"H"
G=166⇒Locate A,B,"b"
G=171⇒Locate A,B,"z"
G=172⇒Locate A,B,"μ"
G=173⇒Locate A,B,"ρ"
G=174⇒Locate A,B,"m"
G=175⇒Locate A,B,"G"
G=176⇒Locate A,B,"a"
G=129⇒Isz A
G=137⇒Isz B
G=137⇒Q→A
Lbl 9
Return

need programs ABC and READ to use

Typing

version 2.9

```
0→H
1→A~B
{21,7}→Dim Mat T
ClrText
Lbl 1
B>7⇒Stop
H=0⇒Locate A,B,"⇒"
H=1⇒Locate A,B,"→"
GetKey→G
Not G⇒Goto 1
G=31⇒Return
If G=27
Then Fill(0,Mat T)
1→A~B
ClrText
Goto 1
IfEnd
G=41⇒1→H
G=51⇒0→H
G=41 Or G=51⇒Goto 1
H=1⇒G+100→G
G=144⇒44→G
G=44⇒Dsz A
A>21⇒Dsz B
A>21⇒1→A
G=44 And A<1⇒Locate 1,B,"■"
A<1⇒Dsz B
A<1⇒21→A
A<1 And B<1⇒1→A~B
G=44⇒0→Mat T[A,B]
G=44⇒Goto 1
G→Mat T[A,B]
```

```
prog "ABC"
Isz A
A>21⇒Isz B
A>21⇒1→A
Goto 1
```

# Read version 1.0

```
2→H
ClrText
For 1→B To 7
For 1→A To 21
Mat T[A,B]→G
Not G⇒Goto 1
Prog "ABC"*
Next
Next
Stop
Lbl 1
Locate 21,7,"■"
Return
```

# KEYPAD version 1.0 .memGeO

```
Lbl 1
GetKey→G
Not G⇒0→Z
Not G⇒Goto 1
G>0 And Z≠0⇒Goto 1
G>0⇒1→Z
Return
```

need programs ABC and ANSwer to use

# Ask (like Ask Judd.com) version 1.3

```
ClrText
"[redacted]":"[redacted]":"[redacted]":"[redacted]":"[redacted]":"[redacted]"
0 → C
0 → H
{21,23} → Dim Mat Q
For 1 → B To 2
For 1 → A To 21
Lbl 1
Getkey → G
Not G ⇒ Goto 1
G=41 ⇒ Isz D
G=41 And D=2 ⇒ Dsz A
G>0 ⇒ Isz C
G>0 And G≠41 And D=1 ⇒ G → Mat Q[A,B]
If D=1
Then C=1 ⇒ Locate A,B,"P"
C=2 ⇒ Locate A,B,"L"
C=3 ⇒ Locate A,B,"E"
C=4 ⇒ Locate A,B,"A"
C=5 ⇒ Locate A,B,"S"
C=6 ⇒ Locate A,B,"E"
C=7 ⇒ Locate A,B,"[redacted]"
C=8 ⇒ Locate A,B,"H"
C=9 ⇒ Locate A,B,"E"
C=10 ⇒ Locate A,B,"L"
C=11 ⇒ Locate A,B,"P"
C=12 ⇒ Locate A,B,"[redacted]"
C=13 ⇒ Locate A,B,"M"
C=14 ⇒ Locate A,B,"E"
C=15 ⇒ Locate A,B,"[redacted]"
C=16 ⇒ Locate A,B,"A"
C=17 ⇒ Locate A,B,"N"
C=18 ⇒ Locate A,B,"S"
C=19 ⇒ Locate A,B,"W"
C=20 ⇒ Locate A,B,"E"
C=21 ⇒ Locate A,B,"R"
C=22 ⇒ Locate A,B,"M"
C=23 ⇒ Locate A,B,"Y"
C=24 ⇒ Locate A,B,"[redacted]"
C=25 ⇒ Locate A,B,"F"
C=26 ⇒ Locate A,B,"R"
C=27 ⇒ Locate A,B,"I"
C=28 ⇒ Locate A,B,"É"
C=29 ⇒ Locate A,B,"N"
C=30 ⇒ Locate A,B,"D"
C=31 ⇒ Locate A,B,"S"
C=32 ⇒ Locate A,B,"[redacted]"
C=33 ⇒ Locate A,B,"Q"
```

```
C=34⇒Locate A,B,"U"
C=35⇒Locate A,B,"E"
C=36⇒Locate A,B,"S"
C=37⇒Locate A,B,"T"
C=38⇒Locate A,B,"I"
C=39⇒Locate A,B,"O"
C=40⇒Locate A,B,"N"
C=41⇒Locate A,B,"."
Else prog"ABC"
IfEnd
G=79⇒Goto 3
Next
Next
Lbl 3
For 1→F To 100
Next
For 3→B To 5
For 1→A To 21
Lbl 2
Getkey→G
Not G⇒Goto 2
G=69⇒Locate A,B,"?"
G=69⇒prog"ANS"*
Prog"ABC"*
Next
Next
```

ANSwer version 1.1

```
Mat Q[2,1]→Q
Not Q⇒"No Reply"
Not Q⇒Stop
For 1→C To 2
For 1→A To 21
Mat Q[A,C]→G
Not G And A≠1 And B≠1⇒Goto 1
C+5→B
Prog"ABC"★
Next
Next
Lbl 1
Locate 1,6,"▯"
Stop
```

# ABC version 3.2

```
G→N
N=0⇒Return
N>70⇒Goto 5
N>60⇒Goto 4
N>50⇒Goto 3
N>40⇒Goto 2
N>30⇒Goto 1
Lbl 0
G=25⇒Locate A,B,"L"
G=26⇒Locate A,B,"F"
G=28⇒Locate A,B,5
G=29⇒Locate A,B,"/"
Goto 9:Lbl 1
G=32⇒Locate A,B,"Y"
G=33⇒Locate A,B,"T"
G=35⇒Locate A,B,"K"
G=36⇒Locate A,B,"E"
G=37⇒Locate A,B,0
G=39⇒Locate A,B,"'"
Goto 9:Lbl 2
G=42⇒Locate A,B,"X"
G=43⇒Locate A,B,"S"
G=45⇒Locate A,B,"J"
G=46⇒Locate A,B,"D"
G=47⇒Locate A,B,9
G=48⇒Locate A,B,4
G=49⇒Locate A,B,","
Goto 9:Lbl 3
G=52⇒Locate A,B,"W"
G=53⇒Locate A,B,"R"
G=54⇒Locate A,B,"O"
G=55⇒Locate A,B,"I"
G=57⇒Locate A,B,8
G=58⇒Locate A,B,3
G=59⇒Locate A,B,"!"
Goto 9:Lbl 4
G=61⇒Locate A,B,"■"
G=62⇒Locate A,B,"V"
G=63⇒Locate A,B,"C"
G=64⇒Locate A,B,"N"
G=65⇒Locate A,B,"H"
G=66⇒Locate A,B,"B"
G=67⇒Locate A,B,7
G=68⇒Locate A,B,2
G=69⇒Locate A,B,"?"
Goto 9:Lbl 5
G=71⇒Locate A,B,"Z"
G=72⇒Locate A,B,"U"
G=73⇒Locate A,B,"P"
G=74⇒Locate A,B,"M"
G=75⇒Locate A,B,"G"
G=76⇒Locate A,B,"A"
G=77⇒Locate A,B,6
G=78⇒Locate A,B,1
G=79⇒Locate A,B,"."
Lbl 9:Return
```

need ABC and READ

men 322

# Type version 3.2

```
ClrText
0→H
1→A~B
{21,73→Dim Mat A
Lbl 1:Isz H
H>20⇒0→H
B>7⇒Stop
H<10⇒Locate A,B,"⇒■"
H>10⇒Locate A,B,"→■"
Getkey→G
Not G⇒Goto 1
Locate A,B,"■"
G=31⇒Return
If G=27
Then Fill(0,Mat A)
1→A~B
ClrText
Goto 1
Else If G=38
Then Isz B
0→A
If End
G=44⇒Dsz A
A>21⇒Isz B
A>21⇒1→A
G=44 And A<1⇒Locate 1,B,"■"
A<1⇒Dsz B
A<1⇒21→A
G=44⇒0→Mat A[A,B]
G=44⇒Goto 1
G→Mat A[A,B]
G→N
```

```
prog "ABC"
Isz A
A>21⇒Isz B
A>21⇒1→A
Goto 1
```

need ABC, READ, and TYPE

29

mem 364

# Hangman version 1.3

```
7→J
prog "Type"
for 1→B To 3
for 1→A To 21
Mat A[A,B]→G
Not G⇒Goto 3
Frac(G÷10)=.9⇒Next
G≠Col or G≠0⇒Locate A,B,"-"
G=Col⇒Locate A,B,"■"
Next
Next
Lbl 3
Locate 5,6,J
Locate 7,6," Tries left"
Locate 3,7," choose a letter!"
Lbl 1
Getkey→H
H=0⇒Goto 1
Locate 3,7,"■(x16)"
0→I
for 1→B To 3
for 1→A To 21
Not G⇒Goto 4
If G=H
Then H→G:1→I
Prog "ABC"
IfEnd
Next
Next
Lbl 4
I=0⇒Dsz J:J→J
If J=0
Then Locate 5,6,J
Locate 6,4,"Game
over"
for 1→L To 500
Next
Prog "READ"
IfEnd
Goto 3
```

need READ, TYPE, and ABC

Hangman version 1.4

```
0→W:7→V
Prog "TYPE"
For 1→B To 3
For 1→A To 21
Mat A[A,B]→G
Not G⇒Goto 3
Frac(G÷10)=.9⇒Next
G≠61 or G≠0⇒Locate A,B,"-"
G≠61 And G≠0 And Frac(G÷10)≠.9⇒Isz W
G=61⇒Locate A,B,"■"
Next
Next
Lbl 3:Locate 5,6,V
Locate 7,6,"Tries left"
Locate 3,7,"Choose a letter"
Lbl 1
Getkey→H
Not H⇒Goto 1
Locate 3,7,"■x17"
0→I
For 1→B To 3
For 1→A To 21
Mat A[A,B]→G
Not G⇒Goto 4
If G=H
Then H→G:1→I
Prog "ABC"
Dsz W
IfEnd
Next
Next
Lbl 4
Not I⇒Dsz V:V→V
If V=0
Then Locate 5,6,V
Locate 6,4,"Game Over"
For 1→L To 250
Next
Prog "READ"
Else W=0⇒Locate 7,4,"you win"
W=0=Stop
IfEnd
Goto 3
```

Kina like an ask Judd thing.

The negative (-) is to activate ANS

F1 is the period "."
F2 is the question "?"

# Ask

```
Clrtext
1→B
∅→C↦D
{21,1}→Dim Mat Q
For 1→F To 100
Next
For 1→A To 21
Lbl 1
Getkey→G
G=∅⇒Goto 1
G=41⇒Isz D
G=41 And D=2⇒Dsz A
G=∅⇒Isz C
G>∅ And G≠41 And D=1⇒
    G→Mat Q[A,B]
If D=1
Then C=1⇒Locate A,B,"P"
     C=2⇒Locate A,B,"L"
     C=3⇒Locate A,B,"E"
     C=4⇒Locate A,B,"A"
     C=5⇒Locate A,B,"S"
     C=6⇒Locate A,B,"E"
     C=7⇒Locate A,B,"?"
     C=8⇒Locate A,B,"A"
     C=9⇒Locate A,B,"N"
     C=10⇒Locate A,B,"S"
     C=11⇒Locate A,B,"W"
     C=12⇒Locate A,B,"E"
     C=13⇒Locate A,B,"R"
     C=14⇒Locate A,B,"B"
     C=15⇒Locate A,B,"T"
     C=16⇒Locate A,B,"H"
     C=17⇒Locate A,B,"I"
     C=18⇒Locate A,B,"S"
     C=19⇒Locate A,B,"."
Else prog"ABC"
IfEnd
G=79⇒Break
Next
For 1→F To 100
Next
For 2→B To 7
For 1→A To 21
Lbl 2
Getkey→G
G=∅⇒Goto 2
G=69⇒Locate A,B,"?"
G=69⇒Prog"ANS"
Prog"ABC"
Next
Next
```

# ANS

```
1→B
Mat Q[2,1]→Q
Clrtext
Q=∅⇒"NO REPLY"
Q=∅⇒Stop
For 2→A To 21 Step 2
Mat Q[A,B]→G
G=∅⇒Goto 1
Dsz A
Prog"ABC"
Next
Next
Lbl 1
Locate 21,7,"■"
Stop
```

```
"√N  N="?→N
Abs N→O
Int (O÷3)→F
For 1→A To F
O÷A²→C
Frac C=0⇒C→D
Frac C=0⇒A→E
Next
ClrText
E>1⇒Locate 1,1,E
D>1⇒Locate 3,1,"√"
D>1⇒Locate 4,1,D
N<0⇒Locate 6,1,"i"
√N
```

√N

# RATIONAL

To be revised

```
ClrText
"√N"?→N:Abs N→H:N>1E3⇒Stop:Int(H÷4)→F
For 1→A to F (H=4)
Frac(H÷A²)→I⇒:I=0⇒A²→B
Next A:(H=4)
H÷B→C,,√
B>1⇒Locate 1,3,√B,,
C>0⇒Locate 4,3,"√"
C>9⇒Locate 5,3,C
N<0⇒Locate 3,3,"i"
Locate 1,4,"Ans"
Locate 3,5,√N
for √
"Repeating #s"?→A
A→C:0→B
Do
C÷10→C
Isz B
Lp while Int C>0
10^B→B
(A-B)÷(1-(1÷B))→E
Locate 1,3,E
```

for repeating decimals

# Typing Programs

mem 6664 Program ABC

```
G=76⇒Locate A,B,"A"
G=66⇒Locate A,B,"B"
G=56⇒Locate A,B,"C"
G=46⇒Locate A,B,"D"
G=36⇒Locate A,B,"E"
G=26⇒Locate A,B,"F"
G=75⇒Locate A,B,"G"
G=65⇒Locate A,B,"H"
G=55⇒Locate A,B,"I"
G=45⇒Locate A,B,"J"
G=35⇒Locate A,B,"K"
G=25⇒Locate A,B,"L"
G=74⇒Locate A,B,"M"
G=64⇒Locate A,B,"N"
G=54⇒Locate A,B,"O"
G=73⇒Locate A,B,"P"
G=63⇒Locate A,B,"Q"
G=53⇒Locate A,B,"R"
G=43⇒Locate A,B,"S"
G=33⇒Locate A,B,"T"
G=72⇒Locate A,B,"U"
G=62⇒Locate A,B,"V"
G=52⇒Locate A,B,"W"
G=42⇒Locate A,B,"X"
G=32⇒Locate A,B,"Y"
G=71⇒Locate A,B,"Z"
G=61⇒Locate A,B," "
G=78⇒Locate A,B,"1"
G=68⇒Locate A,B,"2"
G=58⇒Locate A,B,"3"
G=48⇒Locate A,B,"4"
G=28⇒Locate A,B,"5"
G=77⇒Locate A,B,"6"
G=67⇒Locate A,B,"7"
G=57⇒Locate A,B,"8"
G=47⇒Locate A,B,"9"
G=37⇒Locate A,B,"0"
G=79⇒Locate A,B,"."
G=69⇒Locate A,B,"?"
G=59⇒Locate A,B,"!"
G=41⇒Locate A,B,"/"
G=39⇒Locate A,B,"("
G=29⇒Locate A,B,")"
Return
```

total mem 2409

* After Locate A,B,"→"
add A)1⇒Locate A-1,B,"."
to encode the text
and delete prog"ABC"

Program TYPE mem 186

```
For 1→Z To 100
Next
ClrText
{21,7}→Dim Mat T
For 1→B To 7
For 1→A To 21
Lbl 1
Getkey→G
* Locate A,B,"→"
G=38 And A-2)0⇒A-2→A
G=38⇒61→G
G=31⇒prog"READ"
G=0⇒Goto 1 : prog"ABC"
G→Mat T[A,B]
G=38⇒Goto 1
Next
Next
prog"READ"
```

Program READ mem 89

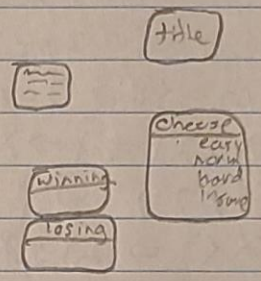
```
ClrText
for 1→B to 7
For 1→A to 21
Mat T[A,B]→G
G=0⇒Goto 1
prog"ABC"
Next
Next
Stop
Lbl 1
Locate 21,7,"■"
Stop
```

Mat T mem 1470

still "back-space" error

```
0→Z
S-T→S
Goto 1
Lbl 2
Cls
* S=K⇒RclPict4
* S<0⇒RclPict5
M=0⇒Text 30,52,"EASY"
M=1⇒Text 30,52,"Normal"
M=2⇒Text 30,52,"Hard"
M=3⇒Text 30,52,"Insane"
Stop
```

Picture 1 is a Title screen
Picture 2 is the rules or story
Picture 3 is a menu
Picture 4 is a winnin screen
Picture 5 is a losing screen




mem

| | |
|---|---|
| Program | 659 |
| matrix | 1470 |
| Picture | 20480 |
| Alpha | 140 |
| Total | 22749 |

```
m=1⇒6→T
m=2⇒5→T
m=3⇒3→T
25→K:1→X:4→Y:Q-1→Z:10+T→S
Cls
ClrText
Lbl 1
Locate X,Y,"A"
Isz Z
X→A:Y→B
Getkey→G
G=27⇒Isz X
G=28⇒Dsz Y
G=37⇒Isz Y
G=38⇒Dsz X
X>21⇒1→X
Y>7⇒1→Y
X<1⇒21→X
Y<1⇒7→Y
G≠0⇒Locate A,B,"■"
Mat A[X,Y]=1⇒Isz S
Mat A[X,Y]=1⇒0→Mat A[X,Y]
Locate 1,1,S
S≥0 And S<10⇒Locate 2,1,"■"
S<0 Or S≥K⇒Goto 2
Z≠Q⇒Goto 1
For 1→C To 10
Int 21 Ran#+1→D
Int 7 Ran#+1→E
Locate D,E,"0"
1→Mat A[D,E]
Next
```

# high gropics
# BUBBLES
version 10.32

```
Coord off
Grid off
Axes off
Label off
BG-None
Cls
{21,73}→Dim Mat A
* RclPict 1▲
Cls
* RclPict 2▲
Cls
* RclPict 3▲
28→A
Lbl 3
Text A,52,"-->"
Get Key→G
G=0⇒Goto 3
G=31⇒Goto 4
G=28⇒A-6→A
G=37⇒A+6→A
G=28⇒Text A+6,52,"   "
G=37⇒Text A-6,52,"   "
A<28⇒28→A
A>46⇒46→A
Goto 3
Lbl 4
(A-28)÷6→M
M=0⇒50→Q
M=1⇒30→Q
M=2⇒15→Q
M=3⇒5→Q
M=0⇒7→T
```

# 1 minute timer



standard graph setting for programming
View window -1.63, 1.63, 1, -1, 1, 1
0 -> B
Lbl 1
for 1 -> A To 180
B=0 ⇒ F-Line 0,0, cos A, sin A
B=1 ⇒ F-Line 0,0, -cos A, -sin A
Next
B=1 ⇒ Stop
1 -> B
Goto 1

# credits

mem 365

```
Clr text
"■"(+5)
Locate 3,3,"Concept Design and"
Locate 3,4,"master Programmer"
Locate 3,5,"= = = (all but 2)
For 21→A To 6 Step -1
Locate A,6,"Woody Chiado■"
Next
For 1→A to 300
Next
"■"(-7)
Locate 8,3,"Software"
Locate 8,4,"= = = = = = = = ="
For 21→A To 1 Step -1
Locate A,5,"Casio° fx-9750G PLUS"
Locate A,6,"■■■■ Power Graphic"
Next
For 1→A To 300
Next
"■"(-7)
Locate 8,4,"The End"
Stop
```

```
S-T→S
Return
        win          mem each 347          lose
Clr Text
Locate 9,4,"Stop"
for 1→A To 100
next
"■":"■" (x4)
Locate 7,4,"Game Over"
for 1→A To 100
next
"■": (x7)
m=2⇒ Locate 1,1,"Custom
m=3⇒ Locate 1,1,"Easy"
m=4⇒ Locate 1,1,"Normal"
m=5⇒ Locate 1,1,"Hard
m=6⇒ Locate 1,1,"Insane"
H=1⇒ Locate 15,1,"Cheater"
Locate 19,2,K
Locate 7,3,"You win!"
Locate 1,5,"Try a harder level"
Locate 1,6 "Thanks for playing"
Locate 1,7,"Try without cheats"
Stop
```

you lose you should try an easier level... cheats didn't help

```
                Custom          mem ?
Clr Text
"Bubble timing"?→Q
"Score to win"?→K
"Score lost"?→T
Prog"Char"
L→M
Return
```

```
Locate 1,1,"Choose a difficulty."
Locate 2,2,"Custom"
Locate 2,3,"Easy"
Locate 2,4,"Normal"
Locate 2,5,"Hard"
Locate 2,6,"Insane"
Locate 2,7,"Credits"
3→M
Prog "menu"
M→L
M=1⇒Goto 1
M=2⇒Prog "Custom"
M=3⇒50→Q
M=4⇒30→Q
M=5⇒15→Q
M=6⇒5→Q
M=7⇒Prog "Credits"
M=3⇒7→T
M=4⇒6→T
M=5⇒5→T
M=6⇒3→T
M≠2⇒25→K
Return
```

BALLS

mem 50

```
Int 10 Rand#+6→R
For 1→C To R
Int 21 Ran#+1→D
Int 7 Ran#+1→E
Locate D,E,"°"        (degree)
1→Mat A[D,E]
Next
0→Z
```

```
If End
G=58⇒ Prog "CHAR"
Return
```

CHAR mem 147

```
Lbl 1
Clr Text
Locate 1,1," Choose your character."
Locate 2,2,"A"
Locate 2,3,"*"
Locate 2,4,"X"
Locate 2,5,"O"
Locate 2,6,"C"
Locate 2,7,"<"
2→M                    (menu variable)
Prog "menu"
M=1⇒ Goto 1
M→O
O-1→Z
Clr Text
Return
```

PEOPLE mem 111

```
O=2⇒O→O
O=0⇒Locate X,4,"A"
O=3⇒Locate X,4,"*"
O=4⇒Locate X,4,"X"
O=5⇒Locate X,4,"O"
O=6⇒Locate X,4,"C"
O=7⇒Locate X,4,"<"
Return
```

CHOOSE mem 108

```
Lbl 1
Clr Text
```

mem 384

# CHEATS

1→H
G=78 ⇒ 0→Z
G=77 ⇒ Q-1→Z
G=79 ⇒ S+3→S
G=68 ⇒ Int 21 Rand # +1→X
G=69 ⇒ Int 7 Rand # +1→Y
If G=68
Then fill(1, mat A)
For 1→V To 7
Locate 1,V," 000000 ... full line
Next
Else If G=67
Then fill(0, mat A)
for 1→V To 7
Locate 1,V," ▯▯ ... full line
next
Else If G=59
Then Lbl 1
ClrText
"▯"
Locate 1,1," Time between bubbles"
"K<K<100"?→Q
Error Q<1 or Q>100 or frac Q≠0 = Goto 1
ClrText
Else If G=57
Then Lbl 2
ClrText
"▯"
Locate 1,1," Points to win"
"K<K<100"?→K
error K<1 or K>100 or frac K≠0 = Goto 2
ClrText

approx total mem
4293

mem 351

30

- write utility BUBBLES version 2.3
- Clear and optimize all setings useing another program
{21,7} → Dim Mat A
- Brief the Rules in another program

```
Prog "CHOOSE"
Clr Text
1→X:4→Y:Q-1→Z:T→S
Lbl 1
Prog "PEOPLE"
Isz Z
X→A:Y→B
Getkey→G
G=27⇒Isz X
G=28⇒Dsz Y
G=37⇒Isz Y
G=38⇒Dsz X
G≠0 And G≠27 And G≠28 And G≠37
  And G≠38⇒Prog "CHEATS"
X>21⇒1→X
X<1⇒7→Y
Y>7⇒1→Y
X<1⇒21→X
G≠0⇒Locate A,B,"■"
Mat A[X,Y]=1⇒Isz S
Mat A[X,Y]=1⇒0→Mat A[X,Y]
Locate 1,1,S
S≥0 And S<10⇒Locate 2,1,"■"
S>-10 And S≤-1⇒Locate 3,1,"■"
S≥K⇒Prog "WIN"
S≤-K⇒Prog "Lose"
Z=Q⇒Prog "Balls"
Goto 1
```