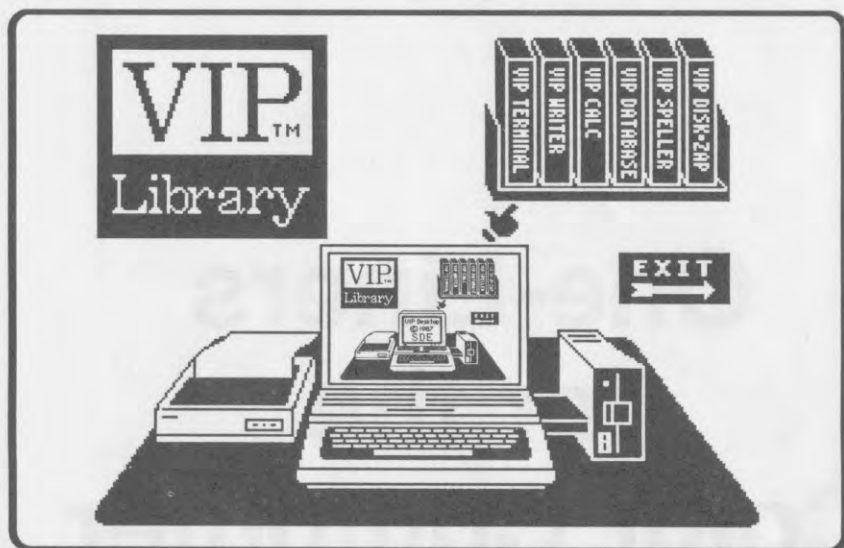


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One-Liners for the Color Computer

For eight years now, RAINBOW readers have awaited each issue with expectations of unique and novel ways to use their Color Computers. For many, one of the most exciting tasks each month has been entering and running the One-Liners appearing in each issue.

A One-Liner is a complete program written in only one line of BASIC code. It may be as simple as a utility to print a hardcopy of a disk directory or it might be a complex drawing program or an involved game. In any case, these programs are written entirely in BASIC and in many cases they will run on any CoCo.

In 1986, it was decided to change the rules for the ongoing One-Liner contest to allow two-line submissions. The subsequent two-liners have fared well because of the added flexibility. Of course, to go beyond this would defeat the purpose of the contest. Still, it is simply amazing what can be accomplished with just one or two lines of BASIC code. We think you will agree after surveying this gathering of mini-programs.

The One-Liner and Two-Liner contests have been and will continue to be an integral part of THE RAINBOW. Readers far and wide have written to say how much they enjoy this aspect of their monthly habit. And this compendium of previously unpublished entries is our way of saying thanks for your support. It is our Eighth Anniversary gift to you — our readers — who have made THE RAINBOW what it is today.

For their skill and also their devotion to the CoCo Community, authors with winning entries in this collection have been sent both *The Rainbow Book of Simulations* and its companion, *The Rainbow Simulations Tape*.

GRAPHICS

Yin-Yang By Jason King

This two-line program uses the CoCo 3's PALETTE command to create a multi-colored, flashing display of the Chinese Yin-Yang symbol.

The listing:

```
1 POKE65497,0:HSCREEN2:HCLS3:HCIR  
RCLE(160,92),50,1:HCIRCLE(135,92  
) ,25,1:HCIRCLE(185,92),25,1:HPAI  
NT(185,92),1:HPAINT(160,100),1:H  
CIRCLE(160,92),50,2:HCIRCLE(135,  
92),25,2  
2 HPAINT(135,92),2:HCIRCLE(185,9  
2),25,2:HPAINT(160,88),2:HCIRCLE  
(185,92),25,1:HCIRCLE(135,92),5,  
1:HPAINT(135,92),1:HCIRCLE(185,9  
2),5,2:HPAINT(185,92),2:FORX=1T0  
2STEP0:A=RND(3):B=RND(63):FORC=1  
T050:NEXTC:PALETTEA,(B-1):NEXTX
```

Pyramid By Walter D. Pullen

Pyramid draws and rotates a three-dimensional graphic pyramid, where the foreground and background colors are continually changing.

The listing:

```
63999 PCLEAR8:FORA=7T01E9 STEP5:  
PMODE3,1+4*(1ANDA):COLOR3ANDA:PC  
LSA+1AND3:FORB=0T03:X(B)=127+120  
*COS((B*90+A)/57.3):Y(B)=144+40*  
SIN((B*90+A)/57.3):NEXT:FORB=0T0  
3:LINE(127,8)-(X(B),Y(B)),PSET:L  
INE-(X(B+1AND3),Y(B+1AND3)),PSET  
:NEXT:SCREEN1,RND(2):NEXT
```

Smooth Moves By Ernest S. Croot

If you want to be pleasantly awed, type this two-line graphics animation program for the CoCo3. The colorful lines drawn at the beginning of the program are changed to black and white for animation.

The listing:

```
0 POKE65497,0:R=1:M=.314159265:H  
SCREEN2:HCLS0:PALETTE0,0:HLINE(2  
60,96)-(260,96),PSET:FORG=0TOM*2  
0STEPM/30:X=COS(G)*50:Y=SIN(G)*3  
0:Z=SIN(15*G)*COS(2*G)+2:X2=COS(  
G+M)*50:Y2=SIN(G+M)*30:Z2=SIN(15  
*(G+M))*COS(2*(G+M))+2  
1 HLINE(X*Z+160,Y*Z+96)-(X2*Z2+1  
60,Y2*Z2+96),PSET:HCOLORR,0:R=R+  
1:IFR=16THENR=1:NEXT:FORZ=1T02:Z  
=1:FORG=1T015:PALETTEG,63:PALETT  
EG,0:NEXTG,Z ELSENEXT:FORZ=1T02:  
Z=1:FORG=1T015:PALETTEG,63:PALET  
TEG,0:NEXTG,Z
```

Sweeping Graphic By Shiloh Jennings

Using the HLINE command and your trusty Color Computer 3, you can make a work of art.

The listing:

```
1 HSCREEN2:POKE&HFFD9,0:CMPC:HCLS  
14  
10 FORA=1T0319STEP3:HLINE(A,1)-(  
1,191),PSET:NEXTA:FORA=319T01STE  
P-3:HLINE(319,1)-(A,191),PSET:NE  
XTA:HCOLORRND(15),RND(15):GOTO10
```

HSCREEN Color Changer

By Joshua Kline

This one-liner is for the CoCo 3. It uses HSCREEN1 and some PALETTE commands to let you input the background color. This way there's no need to turn to the back of your manual to see the PALETTE colors.

The listing:

```
0 CLS:HSCREEN1:HPRINT(5,5),"Look
  at the background":HPRINT(5,6),
  "Enter the color":OPEN"0",#1,"CO
  LORS/FIL":FORX=0TO63:PALETTE 0,X
  :INPUT X$:A$="COLOR CODE "+STR$(
  X)+"-"+X$:WRITE#1,A$:NEXTX
1 CLOSE#1
```

Zero Gravity

By Carlos A. Garcia

This two-liner shows a three-dimensional triangle moving through space. It disappears and reappears, moving in different ways using trigonometric functions.

The listing:

```
1 PLAY"V31:L255":PMODE0,2:PCLS:S
  CREEN1,1:PMODE0,3:PCLS:FORT=1TO1
  00:PSET(RND(255),RND(191)):NEXT:
  PMODE0,1:S1=10*RND(7):S2=10*RND(
  7):FORW=1TO2:FORT=0TO360STEP8:R=
  360-T:0=T/57.2425:I=R/57.2425:X=
  SIN(0)*S1:Y=SIN(0)*S2:C=SIN(I)*S
  1:V=SIN(I)*S2
2 LINE(128+X,80+Y)-(100+C,110+V)
  ,PSET:LINE-(166+X,120+V),PSET:LI
  NE-(128+X,80+Y),PSET:PCOPY1TO2:P
  COPY3TO1:PLAY"A":NEXTT:NEXTW:GOT
  01
```

Random Graphics

By Joel F. Klein

Somehow this random graphics program displays the same intriguing pattern every time. The speed-up poke may be used.

The listing:

```
10 PMODE4,1:PCLS1:SCREEN1,1:DIMX
  (6),Y(6):A=120:B=240:C=191:X(1)=
  A:X(2)=A:X(3)=B:X(4)=B:X(5)=0:X(
  6)=0:Y(1)=0:Y(2)=0:Y(3)=C:Y(4)=C
  :Y(5)=C:Y(6)=C:H=RND(255):V=RND(
  191):FORJ=0TO9999:D=RND(6):X=X(D
  ):Y=Y(D):H=H+(X-H)/2:V=V+(Y-V)/2
  :PRESET(H,V):NEXT:RUN
```

Tunnel Vision

By Francois Dubuc

Here are some possibilities offered by PALETTE in order to create animation. First, the computer draws some squares to form a box, then alternates very fast between two colors to form a hypnotic effect. The result is the impression of moving forward through a tunnel.

The listing:

```
5 POKE&HFFD9,0:PALETTE0,0:FORI=1
  TO15:PALETTEI,48:NEXT:HSCREEN2:C
  =1:FORI=0TO96:HCOLORC:HLINE(160-
  I,96-I)-(160+I,96+I),PSET,B:C=C+
  1:IFC>15THENC=1:NEXTELSENEXT
10 FORF=1TO10:FORI=1TO15:PALETTE
  I,48:NEXTI:FORI=1TO15:PALETTEI,0
  :NEXTI:NEXTF:FORF=1TO10:FORI=1TO
  15:PALETTEI,48:PALETTEI,0:NEXTI:
  NEXTF:A$=INKEY$:IFA$=""THEN10 EL
  SE RGB:POKE&HFFD8,0
```

Lighting the July Skyline

By Cory Burgess

If you're having a 4th of July celebration, this two-line graphics presentation for the CoCo 3 can add to the spectacle.

The listing:

```
1 POKE65497,0:HSCREEN2:HCLS8:HDR
AW"C7BM0,185R20U20R10D10R20U5R5D
10R10U10R10D5R20U25R10D5R5U10R10
D5R10D5R20D5R5U25R20D30R10D5R25U
10R10D15R20U10R10D5R25U10R20D5R5
U15R10D5R10":HPAINT(3,190),7,7:E
X$="03:T95;V30;4;6;5;2;7;V20;6;2
;7;3;8;1;V10;6;3;6;2;7;4;
2 C=0:X=RND(320):Y=RND(100):HCOL
OR3,8:HLINE(160,130)-(X,Y),PSET:
PLAY"T255;V31;03;12;11;10;9;8;7;
6;5;4;3;2;1":HLINE(160,130)-(X,Y
),PRESET:PLAYEX$:FORI=1T032STEP4
:C=C+1:HCIRCLE(X,Y),I,C:NEXT:FOR
A=32T01STEP-1:HCIRCLE(X,Y),A,8:N
EXTA:GOTO2
900 GOTO 900
```

Speed and Lights Fantastic

By Ken Ostrer

Sometimes it's hard to keep up with a program's speed. Lines and circles are drawn quickly to the CoCo 3 screen. Sit back and watch the lights fantastic.

The listing:

```
10 POKE65497,0:PALETTECMP:HSCREE
N2:HCLS4:HCOLOR5:FORM=0T0320STEP
5:HLINE(M,0)-(M+5,192),PSET:NEXT
:FORM=0T0192STEP5:HLINE(0,M)-(32
0,M+5),PSET:NEXT:FORM=0T0150:A=R
ND(320):B=RND(192):HCOLOR3:HLINE
-(A,B),PSET:HCIRCLE(A,B),5,2:HPA
INT(A,B),RND(15),2:NEXT
20 PALETTERND(15),RND(63):GOTO20
```

Screenful of Color

By Shiloh Jennings

Using the CoCo 3's HSCREEN2, HCIRCLE and RND commands, a screenful of colored half circles are overlapped until you press the BREAK key.

The listing:

```
10 HSCREEN2:HCLS14:POKE&HFFD9,0
20 FOR A=1T00STEP-.25:HCIRCLE(RN
D(319),RND(191)),10,RND(15),1,A,
A+.25:NEXTA:GOTO20
```

Tardis

By Steven Mac Donald

This two-liner is for *Doctor Who* fans. It draws his tardis from the TV show.

The listing:

```
0 PMODE4,1:SCREEN1,1:COLOR0,1:PC
LS:DRAW"BM51,40R60D10L60NU10R2D8
0R56U80BG4BL4D14L16U7R16L8ND7U7N
R8L8D7B18NU7D7L16U7R16L8ND7U7NR8
L8D7BL4U9R48D76BH4U50L16D50R16BF
4L24NU76L24BE4R16U50BG4L8D8R8U6B
L4L3BD2R3BR4U4BE4L16D50BG4U76BM6
1,39UR9UR5U5R10D5N19R5DR9D"
1 PAINT(0,0):POKE178,1:FORX=1T07
:READZ,Y:PAINT(Z,Y),.0:NEXT:DATA
80,39,80,42,80,51,75,75,80,53,92
,76,92,53:DRAW"BM56,42:C1:ND6R4D
2NL4BR2D4R4U4NL4BR2NU2D4BR2U3BU2
UBR2BD2NR2NR4D4R4BR2NR4U4R4D2NL4
BR8D2R4U4L4ND2U2R4D2BR2D4R4U4NL4
BR2F2NE2NG2F2":EXEC44539
```

MUSIC

65494,0:GOTO0ELSEC=ASC(N\$)-65:PL
AYN\$:GOTO0

The Trek Continues . . . By Chris Williams

Trekkies will enjoy this little graphic/musical rendition from a Stardate in the past.

The listing:

```
10 PMODE4,1:PCLS:SCREEN1,1:DRAW"  
BM120,56R88G12L52D12R25F4G12L68H  
4U8E4R4H12L52H4R76D4F12R16U12L12  
":CIRCLE(60,68),24,1,.33,1,.5:CI  
RCLE(60,64),24,1,.33,.5,1:CIRCLE  
(120,62),6,1,1,.25,.75:PAINT(124  
,60),1,1:PAINT(60,70),1,1:PAINT(  
60,62),1,1  
20 PLAY "L2;C:L2.;B-;L4;A:L8;G;F  
;E;L1;E-;P8;L8;F:L2;C:L2.;04;C;0  
3;L4;B-;L8;A;G;F:L2.;E;L4;F:L2.;  
D;L4;E;F;G;L8;A;A#;A;04;L2.;C;03  
;L4;A;04;L2.;D#;L4;D;L2;C;03;L2.  
;D;L4;A;F;A;B-;04;D;L2;F":EXEC 4  
4539:RUN
```

Tickle the CoCo Ivories By Jeremy Caplan

Run this one-liner and press any of the musical keys (A, B, C, D, E, F or G) to recreate your favorite music. Pressing I moves you to the upper octave and J takes you back to the lower octave. CoCo 3 users change POKE 65495,0 to POKE 65497,0 and change POKE 65494,0 to POKE 65496,0. Pressing H gets you the C note between octaves without changing.

The listing:

```
0 CLSC:N$=INKEY$:IFN$<"A"ORN$>"J  
"THEN0ELSEIFN$="H"THENC=8:PLAY"0  
4C03":GOTO0ELSEIFN$="I"THENPOKE6  
5495,0:GOTO0ELSEIFN$="J"THENPOKE
```

Erin Luck! By Shawn Conant

This old Irish jig should get you in the spirit, even if it isn't washday.

The listing:

```
10 FORX=1T02:CLS:PRINT@236,"YEE-  
HAW!" :PLAY"L8T403DC02BGGDGGGB03  
DC02B03C02AADA03C02A03CEDC02BGG  
DGGGB03DC03B03C02B03C02A03DC02B  
GGL4G":NEXT  
20 FORX=1T02:PLAY"03L8T4GABGP255  
GDGP255GBGBP255BAGAF+P255+DF+P25  
5F+P255F+DF+AGF+EGP255GDGP255GCG  
P255G02B03GP255GDC02BA03DC02BGP2  
55GL4G":NEXT:GOTO10
```

Your Number's Up! By Jimmy Cox

If you've ever tried to add melodies to your programming creations, you know what a chore it can be. This little two-line routine lets you press keys to play the notes while the screen gives you octave and note value information. It'll make shorter work of those long PLAY statements.

The listing:

```
1 CLEAR400:DIMM$(127):CLS:INPUT"  
NOTE LENGTH":L:FORO=1T05:FORN=67  
T071:READA$:M$(ASC(A$))="0"+STR$(  
O)+"":L"+STR$(L)+"": "+CHR$(N):NEX  
T:FORN=65T066:READA$:M$(ASC(A$))  
="0"+STR$(O)+"":L"+STR$(L)+"": "+CH  
R$(N):NEXT:NEXT:CLS2  
2 I$=INKEY$:IFI$=" "THEN2ELSE A=A  
SC(I$):IFA=13THENRUNELSEPRINT@23  
3,"PLAY":CHR$(34);M$(A);CHR$(34)  
;:PLAY M$(A):PRINT@A,CHR$(159);:  
GOTO2:DATA 1,2,3,4,5,6,7,8,9,Q,W  
,E,R,T,Y,U,I,O,P,A,S,D,F,G,H,J,K  
,L,Z,X,C,V,B,N,M
```


UTILITIES

Setting Your Sights on a Star By Lee Walker

Just follow the prompts of this one-liner to set the left and right margins on a Star NX-1000 printer.

The listing:

```
10 CLS:PRINT"LEFT MARGIN = ?":IN
PUTA:PRINT"RIGHT MARGIN = ?":INP
UTB:PRINT#-2,CHR$(27)CHR$(88)CHR
$(A)CHR$(B):CLS:PRINT"PRINTING W
ILL START IN COLUMN"A"AND END IN
COLUMN "B:PRINT:PRINT"RUN AGAIN
IF INCORRECT."
```

Don't Guess — Time It By Ernie Thompson

Written for the CoCo 3, this true-time utility counts up in seconds. It is accurate to within three seconds in one hour of true time, or an error factor of about 4/25ths of one percent. Enter in seconds the time count desired. A low tone sounds when finished. For any time limit.

The listing:

```
1 CLS:INPUT"ENTER NUMBER OF SECO
NDS TO COUNT";M:CLS3:PRINT@68,"I
AM COUNTING IN SECONDS";:FORX=1
TO (M):FORT=1T0496:NEXT:PRINT@1
42,USING"#####";X;:SOUND240,1:NE
XTX:SOUND100,5:PRINT@225,"DONE C
OUNTING-SPACE FOR RESET";:EXEC44
539:GOTO1
```

What a Breeze By Mark King

Need easier printer configurations for the DMP-105 or compatible printers? This two-liner saves the time spent digging through the printer manual.

The listing:

```
0 CLS0:PRINT"1 - UNDERLINE OFF":
PRINT"2 - UNDERLINE ON":PRINT"3
- ELONGATION ON":PRINT"4 - ELONG
ATION OFF":PRINT"5 - STANDARD":P
RINT"6 - ELITE":PRINT"7 - CONDEN
SED":PRINT"8 - BOLD ON":PRINT"9
- BOLD OFF":PRINT"10 - quit"
1 A(1)=14:A(2)=15:A(3)=19:A(4)=2
3:A(5)=20:A(6)=31:A(7)=32:PRINT@
352,STRING$(32,128);:PRINT@352,"
YOUR CHOICE";:INPUTC:IFC<3THENPR
INT#-2,CHR$(A(C));:GOTO1ELSEIFC<
10THENPRINT#-2,CHR$(27);CHR$(A(C
-2));:GOTO1
```

Now You Can Print Big Text By Mark King

Bigtext is used to print strings in elongated bold typeface using a DMP-105 printer. This is useful for headlines on newsletters, etc.

The listing:

```
0 PRINT"PUT PRINTER ON LINE":PRI
NT#-2,CHR$(27);CHR$(14);:PRINT"Y
OUR STRING?":LINEINPUT A$:IFA$="
DONE"ORA$="done"THENSTOPELSEINPU
T"SKIP LINES";S:PRINT#-2,A$;CHR$
(27);CHR$(16);CHR$(0);CHR$(0);A$
;:FORX=1TOS:PRINT#-2,"":NEXTX:GO
T00
```


Save It First, Please By Roger Morgan

Ever type in a long listing and run it before thinking to save it first, only to find out it clears memory or relocates to a different memory address? Install this one-liner at the start of a program and it automatically saves to cassette or disk, or LISTS your program depending on the right joystick position.

The listing:

```
0 CLS:C$=CHR$(191)+CHR$(191):PRINT"CASSETTE":PRINT@14,"DISK":PRINT@25,"PRINTER":PRINT@160,"FILENAME":INPUTF$:A=JOYSTK(0):IFA<5 THENPRINT@35,C$:CSAVEF$:ENDELSEIFA>58 THENPRINT@59,C$:LLIST:ENDELSEIFA>25 AND A<30 THENPRINT@47,C$:SAVEF$:END
```

Is It Time for a Break Yet? By Greg Boyko

There are times when it would be beneficial to enable or disable the BREAK key. With this two-line program, Line 0 disables the BREAK key and Line 1 enables it again. Put a REM statement before the line you do not wish to execute.

The listing:

```
0 ZT$=" 8E,00,F8,33,CC,10,A6,C0,A7,80,8C,00,FE,23,F7,CC,0E,F8,FD,01,9A,39,32,62,1C,AF,7E,AD,A5":V=VARPTR(ZT$):POKE51,PEEK(V+2):POKE52,PEEK(V+3):FORV=732T0760:READZT$:POKEV,VAL("&H"+ZT$):NEXT:EXEC732:POKE157,&HB4:POKE158,&H4A'DISABLES BREAK KEY
1 ZT$=" 86,7E,8E,82,B9,B7,01,9A,BF,01,9B,39":V=VARPTR(ZT$):POKE51,PEEK(V+2):POKE52,PEEK(V+3):FORV=732T0743:READZT$:POKEV,VAL("&H
```

```
" +ZT$):NEXT:EXEC732:POKE157,&HB4:POKE158,&H4A 'ENABLES BREAK KEY
```

Use a Protected Window By Ken Ostrer

With a CoCo 3 and this two-line program, you can form your own protected window by way of a few simple pokes. The 40- and 80-column screens begin at 8192 (2000) and end at 15360 (\$3C00). By using locations 63575 (\$F857) and 63576 (\$F858), you can "fool" the CoCo into thinking the top of the screen is anywhere you want it to be.

If you wish to make the CLS commands and the pressing of the CLEAR key compatible with your window, use locations 63117 (\$F68D), 63118 (\$F68E), 63189 (\$F6D5), and 63190 (\$F6D6) also. Pressing the Reset button turns off your window.

The listing:

```
10 POKE63575,&H22:POKE63576,&H30:WIDTH40:PALETTE0,0:CLS1:ATTR3,2:CLS:PRINT"THIS PROGRAM DEMONSTRATES THE WINDOW CAPABILITIES IN THE 40 AND 80 COLUMN MODES. USE LOCATIONS 63575 ($F857) AND 63576 ($F858) TO BUILD YOUR WINDOW."
20 FORX=1T0250:A=RND(39)-1:B=RND(16)+7:LOCATEA,B:PRINTCHR$(RND(23)+32):NEXTX:LOCATE39,23:LOCATE6,5:PRINT"TIME TO TAKE OUT THE TRASH!":LOCATE39,23:FORM=0T020:P RINT:FORQ=0T040:NEXTQ,M:LOCATE6,5:PRINTSTRING$(50,32)::GOTO20
```

GAMES

Cutting Corners By Michael Ely

You control a line spiralling into the center of the screen. Each time you press the space bar the line takes another turn, forming a spiral that grows tighter and tighter. Try to take as many turns as possible without running into your own path. But beware. . . it's addictive!

The listing:

```
10 C=RND(8):CLS0:FORX=0T063:SET(X,0,C):NEXT:FORY=1T031:SET(63,Y,C):NEXT:FORX=62T00STEP-1:SET(X,31,C):NEXT:FORY=30T02STEP-1:SET(0,Y,C):NEXT:XX=1:X=0:Y=2:PLAY"02V15L50":A$=INKEY$
20 IFINKEY$=""THENX=X+XX:Y=Y+YY:IFPOINT(X,Y)<>0THENPLAY"01V20L4A":PRINT@235,TT" TURNS ";:FORT=1T01000:NEXT:RUNELSESET(X,Y,C):GOT020ELSEPLAY"A":TT=TT+1:IFXX<>0THENYY=XX:XX=0:GOTO20ELSEXX=YY*-1:YY=0:GOTO20
```

Air Assault By Dan Tandberg, M.D.

Knock down all of the buildings to land safely and win the game. Use the space bar to drop the bombs. Watch out for the skyscrapers.

The listing:

```
1 CLS:D=4:H=7:Z=46:G=96:B=110:B$="" +CHR$(132)+CHR$(140):FORC=1568+D T01599-D:FORR=0TORND(H):POKEC-32*R,Z-50*(X>H):NEXTR,C:FORI=1024T01532:IFPEEK(I+2)<>G THENPRINT"BOOM!";:PLAY"V31BAFEADCCFGDA":FORT=0T02*I:NEXT:RUNELSEIFF=0T
```

```
HENK$=INKEY$:F=K$<>"":P=I
2 FORT=0T0-18*(F=0):NEXTT:PLAY"99V801C":IFF<0THENPOKEP,G:P=P+32:F=(P<1536):V=8-23*(PEEK(P)=Z):PLAY"V=V;C":POKEP,B:PRINT@I-1024,B$;:NEXTI ELSEPRINT@I-1024,B$;:NEXTI:PLAY"403G04CEGP4EL1G":PRINT@267,"YOU WIN!":FORT=0T01:NEXT:RUN:'city bomber
```

Super Mind By Ray Dutton

The object of this two-line game is to guess a randomly-selected four-digit number in the least number of tries. The computer tells you how many digits were a perfect match (Column 1) and how many digits were correct but out of position (Column 2). After fourteen unsuccessful guesses the correct answer is displayed.

The listing:

```
0 SOUND1,30:CLS:PRINT"SUPER MIND"
X;P$;Y:IFB=4ORP$=""THENB=0:N$=RIGHT$(STR$(RND(8999)+1000),4):P=0:IFP$=""<"THENP$="">":X=X+K:GOTO0:ELSEP$=""<":Y=Y+K:GOTO0:ELSEFORK=1T014:GOSUB1:IFB=4THEN0ELSEP=P+32:PRINT@P+10,B,W:NEXTK:PRINTN$;:B=4:K=K-1:GOTO0
1 INPUTA$:X$=N$:B=0:W=0:FORI=1T04:FORJ=1T04:IFMID$(X$,J,1)=MID$(A$,J,1)THENMID$(X$,J,1)="*":MID$(A$,J,1)="#" :B=B+1:NEXTJ,I:RETURN:ELSEIFMID$(X$,J,1)=MID$(A$,I,1)THENMID$(X$,J,1)="*":MID$(A$,I,1)="#" :W=W+1:NEXTJ,I:RETURN:ELSENEXTJ,I:RETURN
```

\$100 Words By Paul Clough

The object is to discover as many words as possible equalling exactly \$100 (A=\$1, B=\$2, etc.). Type in a word then press

ENTER to find its value. Hint: elephants=\$100.

The listing:

```
100 PRINT@132," ":INPUT"ENTER WORD: ";A$:SL=0:FOR I=1TOLN(A$):LV=ASC(MID$(A$,I,1))-64:SL=SL+LV:NEXT:CLS(RND(8)):PRINT@200," ":A$;"=":PRINTUSING"$#$### " ;SL:IF SL=100 THEN:GOSUB110:EXEC44539:CLS(3):GOTO100ELSE100
110 CLS(RND(8)):FORC=1TO8:C$(C)=STRING$(4,(C*16+127)):NEXT:PRINT@200,A$;"=":PRINTUSING"$#$### " ;SL:FORL=1TO15:SOUNDRND(L*15),RND(2):PRINT@L*32-2,C$((L+1)/2):NEXT:FORL=1 TO 30:SOUNDRND(L*8),RND(2):PRINT@L,C$((L)/4):PRINT@L+477,C$((L)/4):NEXT:RETURN
```

The Shortest Adventure By Ed Niklas

The delivery boy has just brought you a package and you wish to give him a tip. You know you have a silver dollar in your coin box. You rush to get it only to realize that you forgot how to open the box.

At the DO WHAT? prompt, press L for Look or G for Get. When the ?? prompt appears, type the first letter of the object you wish to use.

The listing:

```
3 DATAKEY,0,COIN,0,LOCK,0,PHOTO,1,BOX,1:CLS:PRINT"I SEE":FORX=1TO5:IFC=0THENREADN$(X),N(X):NEXT:C=1:GOTO3:ELSEIFN(X)=1THENPRINTN$(X):NEXTSENEXT
4 INPUT"DO WHAT";V$,N$:IFV$="L"ANDN$="P"THENN(1)=1:GOTO3ELSEIFV$="L"ANDN$="B"THENN(3)=1:GOTO3ELSEIFV$="G"ANDN$="K"THENN(1)=2:F=1:GOTO3ELSEIFV$="G"ANDN$="L"ANDN(1)=2THENN(2)=1:GOTO3ELSEIFV$="G"ANDN$="C"ANDN(2)=1THENCLS:PRINT"***** YOU WIN *****"ELSE3
```

You Against the Wall By Stan Smith

In this one-player paddle ball game, use the arrow keys for side-to-side movement of the paddle. How long can you keep the ball in play?

The listing:

```
0 PMODE0,1:PCLS:SCREEN1,1:P=98:D=5:A=D:B=186:N=247:FORL=0TO1STEP0:D=-D:L=185-L:S=S+1:FORY=L+D TO 185-L STEPD:0=P:P=P+5*(P>8ANDPEEK(343)=N)-5*(PEEK(344)=N ANDP<N):LINE(0-8,B)-(0+8,B),PRESET:LINE(P-8,B)-(P+8,B),PSET
1 A=A+A*(2*(X+A<0ORX+A>255)):PRESET(X,C):X=X+A:PSET(X,Y):C=Y:POKE343,0:POKE344,0:NEXT:IFD<0THENEXTELSEIFPOINT(X,B)THENA=-A*(X-P=0)+X-P:NEXTELSECLS:PRINT"SCORE : "S
```

Tiger, Tiger By Shawn Gildroy

In this game, you are in a fierce jungle fighting for your life. All you have to do to escape is pick a cave. The computer generates new numbers randomly so the same number may be picked again.

The listing:

```
10 CLS3:PRINT"YOU ARE IN A FIERCE JUNGLE. GOODLUCK!!!!":INPUT"PICK A CAVE<1,2,OR3>";A:S=RND(3):IFA=S THEN20ELSEPRINT"THE MEAN TIGER KILLED YOU!":PLAY"11003GG":RUN
20 CLS:PRINT"YOU FOUND THE GOOD TIGER AND GOT THE TREASURE":PMODE3,1:SCREEN1,1:PCLS:DRAW"BM100,48510E5F5R10E5F5R3D20G10L15H10U20R3BD8BR1E3R5F3BL3U3L3D3R3BR10E3R3F3BL3U3L2D3R2L2BL12BD3D3F3R2E3U3D3G3L1D10R3E8G8L6H8":PAINT(100,40),0,8:FORZ=1TO2*900:NEXTZ
```

EDUCATION

Counting Your Piggy Bank By Ken Ostrer

Here's a neat bit of code that displays several different quantities of various coins and then asks you to determine how many total cents are listed. Besides being an obvious learning value to kids, it's great fun to count money, even if it is imaginary.

The listing:

```
10 CLS:PRINT@10,"COINS...":FORX=
1TO6:READC$(X),C(X):NEXT:DATAPEN
NY(S),1,NICKEL(S),5,DIME(S),10,Q
UARTER(S),25,HALF DOLLAR(S),50,S
ILVER DOLLAR(S),100:PRINT"YOU SE
E: ":FORX=1TORND(4)+2:Z=RND(10):
Z1=RND(6):PRINTMID$(STR$(X),2)
..... "Z;C$(Z1)
20 TL=TL+C(Z1)*Z:NEXT:PRINT:INPU
T"IN CENTS, HOW MUCH
MONEY IS HERE";T:PRINT:PRINT"$
"TL/100:IFT=TL THENPRINT"RIGHT 0
N!":PRINT"OH, IF IT WAS ONLY REA
L!":FORM=0TO1500:NEXT:RUNELSEPRI
NT"SORRY, THE TOTAL IS"TL"CENTS.
":FORM=0TO1500:NEXT:RUN
```

Grade Point Averages By Jason Howes

Just follow the prompts of this one-liner to find a grade point average. State how many grades you are entering, then type each grade one at a time.

The listing:

```
0 CLS:A=0:B=0:C=0:D=0:INPUT"HOW
MANY GRADES DO YOU HAVE";A:FORX=
1TOA:INPUT"PLEASE INPUT THEM";B:
C=C+B:NEXTX:D=C/A:PRINT"YOUR AVE
```

```
RAGE IS ";D:PRINT:INPUT"DO YOU H
AVE ANY MORE GRADES TO AVERAGE"
;A$:IFA$="Y"THEN0 ELSE END
```

A Simple Test Maker By Jessy Wayne Fykes

Have you ever wanted to put a questions-and answers-type test on paper for quizzing purposes? This two-liner allows for entry of up to 1760 questions. After typing in the questions have the student take the test. Questions and answers must fit into the space before the solid block.

The listing:

```
1 PALETTE13,63:CLSRND(8):IFX=0TH
ENCLEAR5000:INPUT"number of ques
tion"s":Q:DIMA$(Q):DIMB$(Q):X=X+
1:GOTO1:ELSE:PRINT"question #"X:
PRINT@281," ":PRINT@31," ":LIN
EINPUTA$(X):SOUNDX*2,1:X=X+1:IFX
>Q THENX=1:GOTO2ELSE1
2 CLSRND(8):PRINT"question #"X:P
RINTA$(X):PRINT"answer":LINEINPU
TB$(X):SOUNDX*2,1:X=X+1:IFX>Q TH
EN CLSRND(8):PRINT" check printe
r and hit any key !":EXEC44539:
FORX=1 TO Q:PRINT#-2,A$(X):PRINT
#-2,B$(X):NEXT:ELSE2
```

No Fair, You Looked! By James Ross

Practice your typing skills and see how good you are. Type the letters as they appear on the screen until you make a mistake. The program shows how many keys you typed and starts again for another try.

The listing:

```
0 L$=CHR$(RND(26)+64):PRINTL$;
1 I$=INKEY$:IFI$=""THEN1 ELSEIFI
$=L$THENS=S+1:GOTO0:ELSE PRINTS:
S=0:GOTO0
```

HOME HELP

That Time of Year By Christopher Gunn

This two-liner uses Zeller's congruence method to determine the day of the week for any date after the year 1900. Find out what day you were born on.

The listing:

```
1 INPUT"MONTH,DAY,YEAR";M,D,Y:IF
M>12 OR M<0 OR D>31 OR D<0 OR Y<
1900THEN1 ELSEIFM<2THEN F=365*Y+
D+3*(M-1)+INT((Y-1)/4)-INT(.75*IN
T(((Y-1)/100)+1)) ELSE F=365*Y+
D+31*(M-1)-INT(.4*M+2.3)+INT(Y/4
)-INT(.75*(INT(Y/100)+1))
2 A=(INT(F)+INT(-F/7)*7)*-1+1:I
F A=1 THENPRINT"SATURDAY"ELSEIF
A=2 THENPRINT"FRIDAY" ELSEIF A=3
THENPRINT"THURSDAY" ELSEIF A=4
THENPRINT"WEDNESDAY" ELSEIF A=5
THENPRINT"TUESDAY" ELSEIF A=6 TH
ENPRINT"MONDAY" ELSE IF A=7 THEN
PRINT"SUNDAY"
```

Fill in the Blanks By John A. Copeland

Lack of a word processor got you down? Wanna hack out a quick note without booting the old WP? These two little jewels should fill the bill.

Listing 1 is intended for a 32-column screen (CoCo 1 or 2) and Listing 2 works with an 80-column screen (CoCo 3).

Enter the appropriate program for your system, save it and run it. (If using Listing 1 on a CoCo 3, make sure to get into the 80-column mode first.) The bottom of the screen tells you what line and page you are on. The colon controls right justification

— if you overwrite it on a line, that line will be justified left and right. The caret (^) marks the end of the line. To center a line, press the up-arrow key just before pressing ENTER for that line. That's all there is to it.

Listing 1:

```
1 IFE=65THENE=-1:P=P+1:GOTO1ELSE
C=0:E=E+1:C$="" ":PRINT#-2,
C$:A$:LOCATE0,21:PRINTC$:A$:PRIN
TTAB(65)":":PRINTTAB(72)"^":PRIN
TC$:"L#":E+1;" P#":P+1::LOCATE0,
21:LINEINPUTA$:A=LEN(A$):IFA=0OR
A>65THEN1ELSEIFRIGHT$(A$,1)<>"^^
ANDA<58THEN1
2 IFRIGHT$(A$,1)="^"THENA=A-1:A$
=LEFT$(A$,A):B=INT((66-A)/2):B$=
STRING$(B," ")A$=B$+A$:GOTO1ELS
EB$=MID$(A$,A,1):IFB$="" "THENA$=
LEFT$(A$,A)+" "+RIGHT$(A$,C):A=A
-1:C=C+2:IFLEN(A$)=66ORA=1THEN1E
LSE2 ELSEA=A-1:C=C+1:GOTO2
```

Listing 2:

```
1 IFE=65THENE=-1:P=P+1:GOTO1ELSE
C=0:E=E+1:PRINT#-2," "+A$
:PRINT@384,STRING$(64,32):PRINT@
384,A$:PRINT@480,TAB(25)":":PRIN
T@511,"^":PRINT"L#":E+1;" P#":P
+1::PRINT@384,:LINEINPUTA$:A=LE
N(A$):IFA=0ORA>63THEN1ELSEIFRIGH
T$(A$,1)<>"^^ANDA<57THEN1
2 IFRIGHT$(A$,1)="^"THENA=A-1:A$
=LEFT$(A$,A):B=INT((64-A)/2):B$=
STRING$(B,32):A$=B$+A$:A=A+B:GOT
O1ELSEB$=MID$(A$,A,1):IFB$="" "TH
ENA$=LEFT$(A$,A)+" "+RIGHT$(A$,C
):A=A-1:C=C+2:IFLEN(A$)=64ORA=1T
HENA=A+C:GOTO1ELSE2 ELSEA=A-1:C=
C+1:GOTO2
```

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
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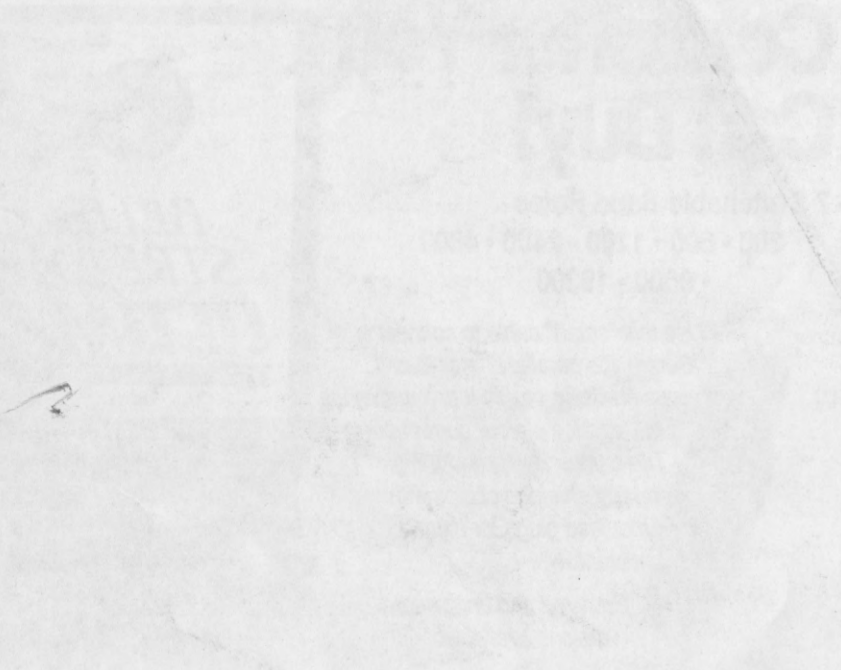
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