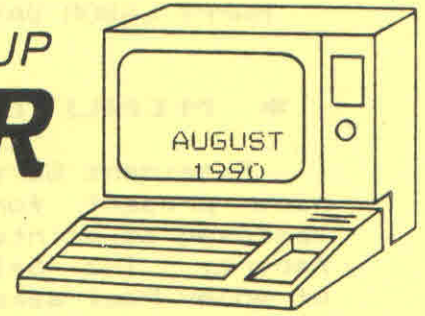


CEDAR VALLEY 99'ER USER GROUP

NEWSLETTER



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****NEWSLETTER TOPICS****

1. Future Meeting Dates
2. Next Meeting Notes
3. Minutes from the July Meeting
4. Cedar Rapids Area BBS List
5. More About Clocks:
6. Trivia
7. Ham Fest Time!
8. Tips from the Tigercub #60

****FUTURE MEETING DATES****

Please mark the following dates on your calendar for future meetings: AUGUST 14, SEPTEMBER 11, OCTOBER 9

*****NEXT MEETING*****

The regular monthly meeting will be TUESDAY, AUGUST 14, at West Music, Cedar Rapids, with open discussion starting at 6:30 PM. Come join the unrehearsed confusion and informative lectures in things computer! Find out why your name will soon be found in this NEWSLETTER!!

*** MINUTES FROM THE JULY MEETING ***

President Gary Bishop called the July meeting to order. There were nine present for the UG meeting. The minutes of the last meeting were approved as printed in the NEWSLETTER. There was no formal treasurer's report. The balance in the account was positive. While on the subject of money Paul asked for more stamps for the NEWSLETTER mailing. A temporary solution was to transfer the cash collected at the meeting to Paul for stamps and to write him a check at a later date.

BBS REPORT: Gary reported that he had signed on the Oakland BBS. Eunice also called him. They are very glad to hear from any of us. The BBS phone number is (207) 465-9065. The DARKSIDE BBS has also been called by several members. Remember they have a "only two down loads" without uploading anything rule. After some discussion on this provision, Bob was asked to check with the sysop about changing this requirement.

OLD BUSINESS: 1. The news from Sr. Pat is that she has moved into a new room in the area of the hall that has been remodeled. It is a larger room and on the first floor. Her latest project is to make one of her systems mobile by installing every thing on a cart. 2. The CVARC ham convention will be held August 18-19. It will again be held in the Teamsters Hall on C St. SW. The UG will have a table free of charge except for a \$2 electricity fee. Also note that everyone including the exhibitors must pay admission to the convention. It was moved, seconded and passed that the UG pay the \$2 fee. 3. The Chicago Times are moving among the members. There is a lot of good reading in them. It was moved, seconded and passed that the UG pay to Gary the \$5 he sent for the back issues.

NEW BUSINESS: 1. We are now out of disks for sale by the UG treasurer. After discussion it was decided to table any new order at this time. If you see that you have need of more disks, let an officer know so that it can be brought up at the next UG meeting for discussion.

DISCUSSION: 1. The UG receives over 25 newsletters from other UG. Jim has them filed and available for any member to read. They currently circulate thru the officers and members within Collins. Suggestions for including more of the members were offered. It was suggested that a list of the newsletters currently available be published periodically in the NEWSLETTER. Gary will tell Jim to publish the list subject to space availability. 2. What is a nyble? Answer: Half of a byte. Then what is half a nyble called? It could only be a lyck. Remember folks, you read it here first. Coined by our own John Johnson. 3. What really prompted the above was a Q&A about Gary's clock article in the last NEWSLETTER. Demo next month? Or at least at the end of his article. 4. How can we help the NEWSLETTER editor out? Several suggestions were forth coming. Some examples were: questions or comments -similar to letter to the editor; program review; computer trivia; someone assigned to edit a page of the month. Gary certainly knows how to "stir up the troops".

Question: Bob still is having trouble getting started to configure FUNNELWEB. **Solution:** Starting at 8 pm next month he will sit at the UG system and configure. It should be a big help for all.

The meeting was adjourned.

DEMO: Yes we had one. I guess I was so fascinated that I forgot to write it down. If you were at the last meeting you know what you saw. If you were not there you missed another good one.

Submitted by Bill Paeth, Secretary

Cedar Rapids Area BBS List

The following is a list of all the BBS's I am aware of. Most of my info has come from lists I downloaded from the Gemini and Coliseum BBS's. The comments are my own. The only BBS in town that has TI files is the DARK SIDE BBS. So please give them your patronage. I have not worked many of these BBS's for a while so it is possible that some may be down.

Name	Number	Hours	Comments
CASTLE	393 4455	4am-2:30am	QuickBBS. Adventure game style. 2400 Baud.
CEDAR VALLEY DATANET	393 4499	24hrs	IBM,Coco,all. Has headlines on computers. Good info on BBS's and modems in bulletins sect. ANSI board. 2400
COE COLLEGE	399 8021	?	IBM, Apple. I think non-students can use some sections. 2400
COLISEUM	377 1724	24 hrs	Atari, All. They have a good BBS list. I like this board. 2400
COMMDOHAWK	377 4095	24 hrs	Comm, All. ANSI board. For Commodore64 and 128 computers. 2400
DARK SIDE!!!	396 7911	24 hrs	Atari, All. TI FILES HERE. Several good message sections. 19200
DRAGONS LAIR	362 7441	5am-3am	QuickBBS. Adventure style. 2400
EMPTY NEST	373 0287	6pm-6am	24 hrs weekends. Apple. Casino, stock exchange (games), counseling, SEX quiz. GOOD! 2400
FORUM	373 2975	24hrs	IBM, All. Can't tell you anything. You need to register. I think this means money. 19200
GEMINI	366 1985	24hrs	IBM, Coco. Sci Fi. 2400
GRANT WOOD AREA	399 6469	24hrs	IBM, Coco. Some sections open to non student. You get 1 hr each session. 2400
HAWKEYE RBBS	363 3314	24 hrs	MS-Dos, IBM. Reg. 14400
KCC	398 5545	24hrs	IBm students. I must have missed this one. Zip. 1200
MAD HOUSE (CHATEAU)	393 8365	24hrs	All. OK but they ask for references when you sign on. - ?? 2400
MOUSE COLLEGE	365 4775	24hrs	Apple, Mac. Too many rules and long messages for me. 2400
MYSTERY	364 3935	24hrs	QuickBBS. Closed board now. Used to be open. 2400
OPEN CLUSTER	377 0134	24hrs	IBM, All. Run on a 386 chip. IBM. Need reg. 9600
RACING GREYHOUND	362 7420	5pm-?	Mostly about a magazine for greyhound racers. For real. Dog racing. Yes. ? Baud 300?
SCHLOSS OLDENBURG	365 6225	?	Apple. IUAA ABBS. \$5 validate by mail only. UFO's. Sports. NOTE 300 BAUD ONLY.!!!
WILD SIDE	363 9059	24hrs	Amiga. Another zip in my info box. 2400
NO NAME	365 5815	?	ANSI. Game BBS. 8N1. Movie reviews. Wrestling comments. 2400
CLUB 64	373 2975	?	For Commodore 64. 1200?

EOF....John Johnson..CR

MORE ABOUT CLOCKS:

Well, I must correct a few mistakes from my previous article: In the program listings, the & symbol was printed twice. This is the usual formatter byting me. Don't actually type in two &'s in a row, it just won't work. For string concatenation, I only need one & to do the job.

On to more of the good stuff: I have not seen a uniform treatment of how to store and manage time information. At least, not for the TI. When using time and dates in a program, or elsewhere, there is one basic question that must be answered: Is the time/date to be used by the computer, or read by a human, or both? Once this is decided, the applicable format for the time/date can be selected.

I will give you an example. I use John Birdwell's Disk Utilities exclusively. (Yes, I donated. Have you?) When you format a disk with his utilities, he asks you for a date. This is an optional response, and can be left blank, if desired. John allows 8 spaces for the date. In reality, you can put anything you want in this field that does not exceed 8 characters. Whatever you supply will be written to the disk in the storage area John has set aside for the date. The computer does not use this field, it is solely for a human's use in keeping his or her disks organized. The two typical responses for this field would be: 10/20/90 or 10-20-90, or something similar.

Due to the influence of computers upon our society, there is a growing international movement to standardize the order of the date. The accepted standard is for the most significant date item first (year), then the next most significant item (month), and then the least significant item, or day. Such a structure follows the usual number schemes for conversion from one base to the next. Most number bases have a fixed number upon which it is based, such as base-10 for our normal counting number system, and base-2 for binary or computer stuff. Well, there is no single number for the base-date number system. There are some simple rules to describe the operation of the base-date number system. An example of the base-date numbers are 90-10-20, 90/10/20, or simply 901020. The latter can be confusing if it is not clear that a date is being used.

The main difference between human and computer usage of time and date is how the information is stored. For human consumption, the date and time can be in any convenient format, and use strings of variable and ad hoc lengths. For computer usage, the date and time should be numeric, and listed from increasing to decreasing units of time. Oh sure, the computer can be programmed to handle date and time as a string, but it takes considerable programming effort. Such effort could be better spent on more fruitful pursuits.

When I format disks, I use all eight characters allowed as follows: 90102014. Now, this will conflict with a proposed scheme I will write about later on. But for now, the interpretation of this date is: year=90; month=10, date or day of month=20, time=14. Here, I use a 24 hour clock, so this means 2 PM.

By just looking at my date format, I can easily tell what day and time the disk was formatted. So what? I admit that for disk formatting purposes, this is not a big deal. The computer could be programmed to

read this information, however. A sorting algorithm could be easily implemented to organize disks by date and time, in chronological order. Even this would have marginal usefulness. But by extension, records in a database file could conceivably be date and time stamped in the same manner. Such records could then easily be manipulated by date and time.

The amount of time between two dates can be easily determined with a simple subtraction for the computer format version. For the human version, it is still possible, but with great difficulty. In my next article, I will describe the unified approach to dates and times, and give several examples and code fragments to assist you in implementing these ideas.

Gary Bishop

* TRIVIA *

Trivia -- From our last meeting, we discussed what a "word" and a byte was when referring to computers. A nybble was explained as half a byte, and we coined a new term: a lyck is a half a nybble. The definition of a bit will then be used to define a lyck: Two bits make a lyck, two lycks make a nybble, two nybbles make a byte, etc. Very useful computer knowledge.

Now for the hard question: What is the name of the person whose voice was used as the model for the ships' computer in Parsec?

Answer: On page 40 of 99'er Home Computer Magazine, Feb. 1983 is an interview with Aubree Anderson, then a Junior in Geology at Texas Tech. She recorded many phrases and words to be used as the model for your Parsec sidekick computer!

* HAM FEST TIME! *

Well, once again it is time to sign up people to staff our table at the upcoming Cedar Valley Ham Fest. It will be held at the same place, the Teamsters Hall, 5000 J Street, SW on August 18 and 19. Times are 8 to 5 PM on Saturday, 8 to 3 PM on Sunday. I will have a personal table of junk next to our club table, so if necessary, I can watch the table if no one else can do it. I will pass around a sign-up clipboard at the next meeting. By the way, admission is \$4 for adults, under 12 are free. Please help with this high visibility project.

Gary

1 June 1990

My stock of Tigercub Software catalogs is depleted and it would not pay me to reprint it. Therefore I have released all copyrighted Tigercub programs, except the Nuts & Bolts Disks, for free distribution providing that no price or copying fee is charged. All of my Tigercub programs have been added to my TI-PD library and are cataloged, by category, in Supplement #8.

My three Nuts & Bolts disks, each containing 100 or more subprograms, have been reduced to \$5.00. If I run out of printed documentation, it will be supplied on disk.

My TI-PD library now consists of 400 disks of fairware (by author's permission only) and public domain, all arranged by category and as full as possible, provided with loaders by full program name rather than filename, Basic programs converted to XBasic, etc. The price is just \$1.50 per disk(!), post paid if at least eight are ordered. TI-PD catalog #2 with Supplement #8, listing all titles and authors, is currently available for \$1 which is deductible from the first purchase.

Here are a couple of improvements to the CHARFIX subprogram published in Tips #58.

```
29000 SUB CHARFIX(HX$()):: D
ISPLAY AT(12,1)ERASE ALL BEE
P:"Transliterate punctuation
?" :: ACCEPT AT(12,28)SIZE(1
)VALIDATE("YN"):Q$ :: IF Q$
="N" THEN 29004
29007 CALL CHARVIEW(HX$())
29009 SUB CHARVIEW(HX$())
```

And call the routine by

CALL CHARFIX(HX\$()). These changes will avoid unwanted transliteration, and will make it possible to use CHARFIX for ASCII 24-31 and 144-159, if BXB has been merged in, as described in Tips #55.

The Spring 1990 issue of the TI:MES newsletter from England contained an interesting challenge - write a program in any language to find the lowest power of 7 which contains six sevens in succession, i.e. "777777".

The computer cannot solve this by any normal means, because it soon goes into scientific notation in which large numbers are rounded off into long strings of zeros. So, I taught it to multiply the old-fashioned way -

```
100 A$=STR$(7):: Y=1
110 Y=Y+1 :: FOR J=LEN(A$)TO
1 STEP -1 :: E=(VAL(SEG$(A$,
J,1))*7+X)/10
120 X=INT(E):: F=(E-X)*10 ::
X$=STR$(F)&X$ :: NEXT J
130 IF X>0 THEN X$=STR$(X)&X
$
140 IF POS(X$,"777777",1)<>0
THEN 160
150 A$=X$ :: X$="" :: X=0 ::
GOTO 110
160 PRINT "7^";STR$(Y);"=";X
$
170 PRINT #2:"7^";STR$(Y);"="
";X$
```

The answer? 7^175=780112079122081581024046412791118077777188182006932636111839698571603885844026671779915606471699893312656644407347632248554716494939953912586437943

My TI-99/4A computed that in 24 minutes. Would someone like to try it on the 9640?

Anyway, I thought I would use the same method to solve precise multiplication of numbers too large to be computed directly. This routine

will multiply two numbers of up to 28 digits each, and will handle decimals and negative numbers. For even larger numbers, change the ACCEPTs to INPUTs and if necessary change the DIM. The only limitation seems to be that the result cannot contain more than 256 digits and even that could be programmed around.

```
100 DIM C$(100)
110 DISPLAY AT(12,1)ERASE AL
L:"FIRST NUMBER?" :: ACCEPT
AT(14,1)VALIDATE(NUMERIC)BEE
P:A$
120 IF SEG$(A$,1,1)="-" THEN
A$=SEG$(A$,2,255):: M=1
130 A=LEN(A$):: D1=POS(A$,".
",1):: IF D1>0 THEN A$=SEG$(
A$,1,D1-1)&SEG$(A$,D1+1,255)
:: D1=A-D1
140 DISPLAY AT(16,1)ERASE AL
L:"SECOND NUMBER?" :: ACCEPT
AT(18,1)VALIDATE(NUMERIC)BEE
P:B$
150 IF SEG$(B$,1,1)="-" THEN
B$=SEG$(B$,2,255):: M=M+1
160 Y=LEN(B$):: D2=POS(B$,".
",1):: IF D2<>0 THEN B$=SEG$(
B$,1,D2-1)&SEG$(B$,D2+1,255)
:: D2=Y-D2 :: D1=D1+D2 :: Y
=Y-1
170 FOR J=Y TO 1 STEP -1 ::
W=M+1 :: B=VAL(SEG$(B$,J,1))
:: FOR K=LEN(A$)TO 1 STEP -1
:: A=VAL(SEG$(A$,K,1))
180 D=(A*B+X)/10
190 E=INT(D):: F=(D-E)*10 ::
C$(J)=STR$(F)&C$(J):: X=E
: NEXT K
200 IF X>0 THEN C$(J)=STR$(X
)&C$(J)
210 C$(J)=C$(J)&RPT$("0",W-1
)
220 X=0 :: NEXT J
230 L=LEN(C$(1)):: FOR J=1 T
O Y :: L2=LEN(C$(J)):: IF L2
<L THEN C$(J)=RPT$("0",L-L2)
&C$(J)
240 NEXT J
250 FOR J=LEN(C$(1))TO 1 STE
P -1 :: FOR K=1 TO Y :: G=6+
VAL(SEG$(C$(K),J,1)):: NEXT
K
260 G=(G+H)/10 :: L=INT(G)::
G=(G-L)*10 :: D$=STR$(G)&D$
:: H=L :: G=0 :: NEXT J
```

```
270 IF H>0 THEN D$=STR$(H)&D
$
280 IF D1>0 THEN D$=SEG$(D$,
1,LEN(D$)-D1)&". "&SEG$(D$,LE
N(D$)-D1+1,255)
290 IF M=1 THEN D$="-"&D$
300 PRINT D$
```

And this one will add up an almost unlimited number of integers of almost any length - I haven't figured out how to get it to line up decimals.

```
100 CALL CLEAR :: DIM C$(100
)
110 DISPLAY AT(12,1):"Input
from D:" (Disk or":" (K)
eyboard?" :: ACCEPT AT(12,12
)VALIDATE("DK")SIZE(-1):D$ :
: IF D$="K" THEN 140
120 DISPLAY AT(12,1)ERASE AL
L:"Filename? DSK" :: ACCEPT
AT(12,14):F$ :: OPEN #1:"DSK
"&F$,INPUT
130 X=X+1 :: LINPUT #1:C$(X)
:: M=MAX(M,LEN(C$(X))): IF E
OF(1)<>1 THEN 130 ELSE CLOSE
#1 :: GOTO 160
140 DISPLAY AT(12,1):"Press
ENTER when finished":":"
150 X=X+1 :: INPUT C$(X):: M
=MAX(M,LEN(C$(X))): IF C$(X
)<>" THEN 150 ELSE X=X-1
160 FOR J=1 TO X :: IF LEN(C
$(J))<M THEN C$(J)=RPT$("0",
M-LEN(C$(J))&C$(J)
170 NEXT J :: FOR J=M TO 1 S
TEP -1 :: FOR K=1 TO X :: G=
6+VAL(SEG$(C$(K),J,1)):: NEX
T K
180 G=(G+H)/10 :: L=INT(G)::
G=(G-L)*10 :: D$=STR$(G)&D$
:: H=L :: G=0 :: NEXT J
190 IF H>0 THEN D$=STR$(H)&D
$
200 PRINT D$
```

It is easy to invert characters on the screen simply by making the foreground "on" pixels a lighter color than the background "off" pixels - but when you make a screen dump, you will find that the "on" pixels will print and the "off" pixels will not.

Key this in, SAVE it by SAVE DSK1.INVERSE, MERGE and then merge it into any program by MERGE DSK1.INVERSE, call it at any point by CALL INVERSE(A,B), (A and B are the first and last ASCII to be inverted), and you will have all "on" pixels turned off and vice versa.

```
31111 SUB INVERSE(A,B):: FOR
  CH=A TO B :: CALL CHARPAT(C
  H,CH$)
31112 FOR J=1 TO 16 :: CH2$=
  CH2$&SEG$("FEDCBA9876543210"
  ,POS("0123456789ABCDEF",SEG$
  (CH$,J,1),1),1):: NEXT J ::
  CALL CHAR(CH,CH2$):: CH2$=""
  :: NEXT CH
31113 SUBEND
```

Here is a truly remarkable discovery by Bill Hudson of the Central Ohio Ninety Miners. This 2-line program will allow you to RUN a variable name such as - A\$="DSK1.PROGRAM"

You can write lines before these, after these, and even RES the program. You can also use MOVE from GK UTILITY. You can do anything to the program you want as long as you don't change the content of line 1000. The line number does not even have to be 1000 BUT IT MUST BE THE FIRST LINE THAT YOU KEY IN!! You can merge a program into this but can't merge this into a program. Line 900 can also be a different line number but program execution must go to that line first.

```
900 FOR Z=1 TO LEN(A$):: CAL
  L LOAD(-41+Z,ASC(SEG$(A$,Z,1
  )),0):: NEXT Z :: CALL LOAD(
  -41,LEN(A$)): CALL LOAD(-44
  ,4+LEN(A$))
1000 RUN "DSKx.1234567890"
```

It's been a long time since we had a screen display to watch just for the fun of it, so here is a tinygram -

```
100 CALL CLEAR :: FOR SET=1
  TO 14 :: CALL COLOR(SET,SET+
  1,SET+2):: NEXT SET :: CALL
  SCREEN(2):: CALL VCHAR(1,1,3
  1,768)
110 FOR CH=32 TO 136 STEP 8
  :: CALL CHAR(CH,"FF00000000
  000FF"):: NEXT CH
120 X=INT(RND*6+1)*2-1 :: Y=
  INT(14*RND+1)*8+32 :: FOR R=
  12-X TO 12-INT(RND*X):: CALL
  HCHAR(R,5,Y,R)
130 CALL HCHAR(25-R,5,Y,R)
140 CALL HCHAR(R,28-R,Y,R)
150 CALL HCHAR(25-R,28-R,Y,R
  )
160 ON INT(2*RND+1)GOTO 170,
  190
170 CALL HCHAR(R,4+R,Y+8,25-
  R*2)
180 CALL HCHAR(25-R,4+R,Y+8,
  25-R*2)
190 NEXT R :: GOTO 120
```

This is a challenging and educational math puzzler which I think is unlike anything you have seen. I had it in my Tigercub catalog for 7 years and sold just 18 copies. If you don't want to key it in, it is now one of the programs on TI-PD disk No. 1300.1.

```
100 GOTO 140
110 J,K,ST,LV,I,R(),T,X,A,$
  ,X$,B,B$,C,C$,D,D$,AY,BY,BE$
  ,BY$,CY,CY$,CE$,Q,Y(),Ye,Xe(
  ),FLAG,R$,RL,Z,YY,DE(),Q$
120 CALL CLEAR :: CALL CHAR
  :: CALL COLOR :: CALL VCHAR
  :: CALL SCREEN :: CALL KEY :
  : CALL SOUND
130 !@P-
140 CALL CLEAR :: FOR J=1 TO
  12 :: CALL COLOR(J,5,16)::
  NEXT J
150 CALL VCHAR(1,3,32,672)::
  DISPLAY AT(5,1):" @%Z##0+#
  RITHMATIK #+Z$0 "
160 DISPLAY AT(10,1):" Selec
  t difficulty level -: " Ty
  pe 1 or 2"
170 CALL KEY(0,K,ST):: IF ST
  <1 THEN 170
180 IF (K<49)+(K>50)THEN 170
190 LV=K-48
200 CALL VCHAR(1,3,32,672)::
  FOR I=1 TO 4 :: RANDOMIZE
```

```
210 R(I)=INT(RND*10):: IF R(
  I)=0 THEN 210
220 FOR T=1 TO I-1 :: IF R(I
  )=R(T)THEN 210
230 NEXT T
240 NEXT I :: X=R(1)*1000+(R(
  2)*100+(R(3)*10+(R(4)
  250 A=INT(4*RND)+1
260 ON A GOSUB 330,340,350,3
  60 :: A$=X$
270 B=INT(4*RND)+1 :: IF B=A
  THEN 270
280 IF (LV=1)*(LEN(STR$(R(B)
  /R(A)-INT(R(B)/R(A))))>2)THE
  N 250
290 ON B GOSUB 330,340,350,3
  60 :: B$=X$
300 C=INT(4*RND)+1 :: IF C=A
  THEN 300
310 IF C=B THEN 300
320 ON C GOSUB 330,340,350,3
  60 :: C$=X$ :: D=10-A-B-C ::
  ON D GOSUB 330,340,350,360
  :: D$=X$ :: GOTO 370
330 X$=" 1st " :: RETURN
340 X$=" 2nd " :: RETURN
350 X$=" 3rd " :: RETURN
360 X$=" 4th " :: RETURN
370 AY=R(B)/R(A):: BY=ABS(R(
  C)-R(B)^2):: IF BY=0 THEN 38
  0 ELSE 390
380 BE$="" :: BY$=" equal to
  " :: GOTO 400
390 BE$=STR$(BY):: BY$=" mor
  e or less than"
400 CY=ABS(R(D)-R(C)-R(B)-R(
  A)):: IF CY=0 THEN 410 ELSE
  420
410 CY$=" equal to" :: CE$="
  " :: GOTO 430
420 CY$=" more or less than"
  :: CE$=STR$(CY)
430 DISPLAY AT(2,1):" I have
  a 4-digit number ":" with n
  o two digits the":" same." :
  : DISPLAY AT(6,1):" The";B$;
  "digit is";AY;" times the";A
  $;"digit."
440 DISPLAY AT(9,1):" The";C
  $;"digit is ";B$;BY$;" the
  square of the";B$;" digit."
  :: DISPLAY AT(14,1):" The";D
  $;"digit is ";C$;" ";CY$;"
  the sum of the other digits"
450 DISPLAY AT(18,1):" What
  is the number?" :: ACCEPT AT
  (20,2)VALIDATE(DIGIT)SIZE(4)
  BEEP:Q :: IF Q=X THEN 530
460 Y(1)=INT(Q/1000):: Y(2)=
  INT((Q-1000*Y(1))/100):: Y(3
```

```
)=INT((Q/100-INT(Q/100))*10)
  :: Y(4)=(Q/10-INT(Q/10))*10
  :: IF Y(B)<>INT(Y(A)*AY)THEN
  570
470 IF BY<>0 THEN 490
480 IF Y(C)<>Y(B)^2 THEN 570
  ELSE 500
490 IF (Y(C)<>Y(B)^2+BY)*(Y(
  C)<>Y(B)^2-BY)THEN 570
500 IF CY<>0 THEN 520
510 IF Y(D)<>Y(A)+Y(B)+Y(C)T
  HEN 570 ELSE 530
520 IF (Y(D)<>Y(A)+Y(B)+Y(C)
  +CY)*(Y(D)<>Y(A)+Y(B)+Y(C)-
  C Y)THEN 570
530 DISPLAY AT(22,1):" Corre
  ct!" :: FOR J=1 TO 2 :: C
  ALL SOUND(100,392,5):: CALL
  SOUND(100,440,5):: CALL SOUN
  D(100,494,5):: CALL SOUND(10
  0,523,5)
540 NEXT J :: CALL SOUND(100
  0,523,5,392,5,330,5)
550 DISPLAY AT(24,1):" Hit a
  ny key"
560 CALL KEY(0,K,ST):: IF ST
  <1 THEN 560 ELSE 200
570 DISPLAY AT(22,1):" Wrong
  ." :: CALL SOUND(900,30000,3
  0,30000,30,400,30,-4,0):: DI
  SPLAY AT(23,1):" Type A to t
  ry again or Z:" to see the
  number"
580 CALL KEY(0,K,ST):: IF ST
  <1 THEN 580
590 IF K=65 THEN 450
600 IF K=90 THEN 610 ELSE 58
  0
610 DISPLAY AT(22,1):" The n
  umber was";X:" " :: GOTO 550
  :: END
```

Nearly out of memory and all out of ideas. More next time, maybe.

Jim Peterson

Tigercub

NEXT MEETING

TUESDAY, AUGUST 14

6:30 PM --- WEST MUSIC COMPANY

LAST MEETING OF THE SUMMER!

COME EARLY, STAY LATE! OR COME

LATE, LEAVE EARLY! BUT COME!

**Cedar Valley 99'er Users Group
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