COLOUR GENIE

AUCKLAND DISTRICT USER GROUP
NEWSHEET

April 1985

Newsletter No. 14

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S E C R E T A R Y ' S   R E P O R T

Hi, once again.   The first thing I would like to say this month is
"Where are you all?" It surely isn't just because we keep forgetting
to put the date of the next meeting in the newsletter that you are
not coming along is it?

Just in case that's the reason, here are the meeting dates from the
next meeting, until the end of the year. Please mark your calendars
and diaries now.

April 1, 1985 (next meeting)
April **29**, 1985
May   27, 1985
June   24, 1985
July   22, 1985
August 19,1985
September 16, 1985
October   14, 1985
November 11, 1985
December   9, 1985

If I remember, I will try and remind you of the next meeting date in
each newsletter.

Last month Allan Clarke showed what the updated RS232 Driver and Word
Processor programs could now do. The Word Processor speed has been
improved to 500 words per minute, and I have had a go at this (not
really believing Allan at the time) and sure enough, it certainly is
a lot faster.

There is only one new command, and this is a K for copying blocks of
text without actually shifting them from where they are now.

A lot of other functions have been improved or speeded up, and all in
all it is a pretty good word processor now. Updated copies will be
sent out any day now, I have just been waiting for Allan's say-so
after several of us have been testing this new version to make sure
it doesn't fall down anywhere.

I have to admit that I really don't know what improvements have been made to the RS232 Driver. All I know is that its capacity has doubled. I am going to persuade Allan to write up a piece in the newsletter to describe its functions a bit better than I have.

Chris Bishop held his second 'Basic for Newcomers' class and there would have been an equal number in his class as there was in Allan's talk. Chris must be doing something right!!

As I have mentioned before I am corresponding with two Dutch Colour Genie Owners now, one is the Secretary of a Colour Genie group in Belgium and the other a Genie owner. The Secretary of the Belgian group would like to know if any members would like to swap our stamps for Dutch stamps. If anyone would, can they get in touch with me please. Alternatively if you aren't interested in Dutch stamps but have some of any sort, lying around, perhaps you could let me have them, so that I can send them over to him. I would like to help him if possible with his stamps, I am hoping that apart from swapping tapes, that the Group can purchase, at a reasonable cost, their 64K card and switchable Character Generator, plus a program/eprom (I'm not sure which) that changes the screen from 40 to 80 characters wide.

Yes, it is a bit like bribery, but it is in a good cause.

The Dutch people really seem to want to 'meet' other Colour Genie owners through letters, and swap programs with them. I have just written to another Dutchman who advertised in one of the English computer magazines wanting to swap programs. More on this whn I get an answer from him.

Graeme Pullar, a newish member, works on the Satellite Station at Warkworth, and he says that when it is completed he would be willing to take group members over the station. It would have to be a Saturday or if a weekday, then after 4 pm and the groups would be around 10-15 persons. If anyone would be interested in this, could they please let the committee know? We could perhaps arrange a day's outing, contributing towards the petrol of those who took their cars up there. What do you think?

All those people who have already paid their subs, or who pay some time during this month, will be sent free of charge and in appreciation for prompt payment, a 40 page 'booklet' on articles about the Colour Genie that have appeared in the Personal Computing Weekly and Computing Today magazines. These articles include an assembler program, programs on 'sprites', sound and colours. There are many programs for you to enter into your machines and many hints and tips. This booklet has cost a lot of money to have photocopied, and will only be sent to members who pay their 1985/86 subs either before. or during April 1986. The booklet cannot be purchased from us later. Also, please remember that this is your last free newsletter. If your sub hasn't been received by us by the end of this month (April) your name will be withdrawn from our mailing list.

New or Updated Software

Saug

There will be a delay on this program update, as the copy I was given has decided that under no circumstances will it load.

Word Processor

This is in the process of being tested by myself and a couple of other people. This is the final test, so the program should be 'on the streets' very shortly.

Flugsimulator

Remember I mentioned this flight simulator with radar and war option last newsletter? Well, Keith has done a fantastic job on translating the manual and this program is now ready for sale. It is a very involved program, probably more so than Flying Bytes. Put it this way, being a dumb female I have trouble even making out the runway (its in 3D) let alone actually taking off. I would say this program would really be terrific for those people who have mastered Flying Bytes and now think that program is a piece of cake. Selling Price is $14.00.

Jump

This program is being released with a wee Colour problem. When you are entering your name at the end of the game, the screen comes up blank randomly. Just press any key 7 or 8 times until the screen changes. Instead of your name, you will have a row of A's, but you will still know who you are. Unfortunately Andy hasn't had a chance to look at this program yet and won't be able to for a while, so this will have to be updated when Andy has had a chance to fix it.

Basic +5

Same applies to this program. We just can't release it as it is, as the whole thing is in German and machine code.

I have at last heard from Gumboot about the 30 programs I ordered before Xmas. They reckon they sent them all to our box number by surface mail (even though I paid some 11.00 pounds for airmail postage!) so I have written back and asked them to send some more. Among this long-awaited software is the Compiler, the Jumbo 747 flight simulator, Jet Set Billy, Exile and the German Phrase Book tape. Hopefully some of it will be here by next month. I won't hold my breath though.

I also complained about not receiving Gum magazines since the Sept/Oct one, and lo and behold, they sent us two at once, November/December 84, and January/February 1985. These are in the process of being photocopied now and will be sent out (or handed out at the meeting) as soon as Chris has been able to do them.

That's my lot for this month, look forward to seeing you all on the 1st April next.

Nola Huggins

EDITORS NOTES

   Firstly a few words about the 3-D programe. Its instructions are
very clear but the object of the program is to plot an isometric shape
on the high res' screen and to be able to turn the shape left/right
and to tilt it up/down. Once you have typed it in and seen the effect
of inputing various numbers when asked try a different shape by
deleting or changing all the data lines except line 2000 which must
remain as is.

                              SWAPS
                              *****

DISSASSEMBLE
BANK ACCOUNT   swap for games
THE LINK
        contact:- DES AUSTIN
                   KARAKA
                   2927-863

DOUBLE AGENT for   w.h.u
GRAPHICS MASTER for w.h.u or sell $8
        contact:- KEITH McGILL

Open letter to all club members.

     I would like to thank all members who send in programmes
for others to enjoy,it is very nice to sit down at the
C.G.and type in ready made 'shows',but i wonder if,while you
are rapturously punching them in you give a thought to the
people who made it possible. Having produced programmes for
my local school,I know that it represents a lot of time,work
and effort,so I feel that if you want the club to flourish
and continue the good work,you should all try to send in
programmes of one sort or another,be it games,utilities,or
educational.
     The computer is a tool with which we have only scratched
the surface,there must be many other uses that it can be put
to,so how about writing to the club about any experiments
you have carried out,and what you have been trying to do,and
of course any programmes you have made up,as without your
input,we shall never get any new idea's,it's up to ordinary
members,not just the 'whiz kids' to write material.
     Remember,without the club,you will not have any new
programmes to run,so it is up to all of us to look after a
good thing, so come on and let's hear from you.
     In closing,I would like to express on behalf of all club
members our appreciation of the excellent work of the
committee for all the hard work that they put in.

                         Ron Burton.   Te Aroha.

The GREAT UNDERLINE MYSTERY

Hello to all Super 5/CP80, Epson MX80 III and similar clone printer owners. You are no doubt aware of a small problem that you have with outputting a CHR$(0) to the printer to control underlining, superscript etc. Well, it is no longer a problem! At the last club night, Ross's Super 5 dealt me a knock-out blow while I was attempting to demonstrate the revised Wordmate - WP2 word processor. Later that evening, we had a long investigation into the problem. Working from a suggestion made by Olwen, I was able to make a patch to the Genie's RAM which solved the difficulty. In short, the problem lay in the Genie not outputting a null character [CHR$(0)] and not in the printer. This has been inheritted from grandfather TRS80-I. The null character is used to mark the ends of strings, program lines etc.

There are two ways of incorporating the patch into your program. The first is for those programs that do not have any DATA statements:

<u>Patch 1</u> 10 FOR J=0 TO 10:READ K:POKE 16422 + J,K:NEXT
          20 DATA 45,64,67,0,0,80,82,121,195,235,4

The second is for those programs that already contain DATA statements:

<u>Patch 2</u> 10 X$="0450640670000000800821211195235004"
          20 FOR J=0 TO 10:K=VAL(MID$(X$,J*3+1,3)):POKE 16422 + J,K:NEXT

Naturally, the patch has been incorporated in the word processor (not in the same way as above) and this article has been printed with WP2. The patch is robust and will survive all computer activities except a cold reboot (hold down the R key and press RSTs).

While on the subject of the Super 5 printer, it is worth mentioning that nearly all of the CTRL (control) and other codes are available from the keyboard of the Genie. The CTRL function is obtained by holding the SHIFT and down-arrow keys down and then pressing the CTRL code letter. The ESC (escape) function is obtained by SHIFT/up-arrow. Codes 28-31 are obtained by CTRL as above and F1 to F4 keys. CHR$(0) is not available from the keyboard but is so in WP2 and there is a slight variation of operation for ESC in WP2 and the RS232 driver.

                                                    - Allan Clarke

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<u>REMINDER</u>.

PAYMENT OF MEMBERSHIP FEES IS DUE NOW
ANY ONE WHO HAS NOT PAID BY 10TH APRIL
WILL NOT RECEIVE THE "BOOKLET"
              <u>ALSO</u>

THEY WILL NOT BE CONSIDERED MEMBERS FOR
THE PURPOSE OF ATTENDING MEETINGS AND
BEING SENT NEWSLETTERS UNTIL THE FEES
ARE PAID

```
10 CLS:PRINT@48,"THE EASTER BUNNY'S TIMETABLE"
20 PRINT:PRINT
30 PRINT"DATE OF EASTER SUNDAY"
40 PRINT:PRINT
50 PRINT"WHAT IS THE REQUIRED YEAR"
60 INPUT A
70  B=A-(INT(A/19)*19)
80 C=INT(A/100)
90 D=A-(INT(A/100)*100)
100 E=INT(C/4)
110 F=C-(INT(C/4)*4)
120 G=INT((C+8)/25)
130 H=INT((C-G+1)/3)
140 I=((19*B)+C-E-H+15)-(INT(((19*B)+C-E-H+15)/30)*30)
150 J=INT(D/4)
160 L=D-(INT(D/4)*4)
170 M=(32+(2*F)+(2*J)-I-L)-(INT((32+(2*F)+(2*J)-I-L)/7)*7)
180 N=INT((B+(11*I)+(22*M))/451)
190 P=INT((I+M-(7*N)+114)/31)
200 Q=(I+M-(7*N)+114)-(INT((I+M-(7*N)+114)/31)*31)
210  Q=Q+1
220 IF P=3 THEN 260
230 PRINT:PRINT"FOR ";A;"EASTER SUNDAY FALLS ON "
240 PRINT
250 IF P=4 THEN PRINTQ,"APRIL":GOTO 270
260 PRINTQ,"MARCH"
270 END
280 REM:FROM AN APPLE PROGRAM IN 'APPLEMATE'  :AKMc.
```

```
  CLS
10 '       3-D Graphics
20 CLEAR100
30 CLS
40 PRINT"This program displays a predefined."
50 PRINT"3-dimensional shape as viewed from"
60 PRINT"different angles."
70 PRINT
80 PRINT"The program asks for two numbers."
90 PRINT"'RIGHT' is the number of degrees you"
100 PRINT"want to move to the right,relative"
110 PRINT"to the front straight-on.position.It"
120 PRINT"can be negative if you want to move"
130 PRINT"to the left"
140 PRINT
150 PRINT"Similarly,'UP' is the number of"
160 PRINT"degrees you want to move up."
170 PRINT
180 PRINT"PRESS ANY KEY TO CONTINUE"
200 K$=INKEY$:IFK$=""THEN200
210 CLS:FCLS:RESTORE
220 PRINT@0,:INPUT"UP";U$:IFLEN(U$)>4THENPRINT@40,STRING$(10,32):GOTO220
230 IFLEN(U$)=4AND(ASC(MID$(U$,1,1))<>45ANDASC(MID$(U$,1,1))<>43)
      THENPRINT@40,STRING$(10,32):GOTO220
240 PRINT@40,:INPUT"RIGHT";R$:IFLEN(R$)>4THENPRINT@80,STRING$(13,32):GOTO240
250 IFLEN(R$)=4AND(ASC(MID$(R$,1,1))<>45ANDASC(MID$(R$,1,1))<>43)
      THENPRINT@80,STRING$(13,32):GOSUB240
260 U=VAL(U$):R=VAL(R$)
500 READX,Y,Z,L:'L=LINEMODE
510 IFX=999THEN2010
520 GOSUB4000
530 GOTO500
540 'Each of the following
550 'DATA statements speci-
560 'fies a point, plus a
570 'code: 0 to move to the
580 'point, 1 to draw a
590 'line there from the
600 'previously mentioned
610 'point.
620 '
1000 '    front of house
1010 DATA0.7,-1.5,-1.5,0
1020 DATA0.7,0.5,-1.5,1
1030 DATA0.7,0.5,1.5,1
1040 DATA0.7,-1.5,1.5,1
1050 DATA0.7,-1.5,-1.5,1
1060 '    end of house
1070 DATA0.7,-1.5,1.5,0
1080 DATA-0.7,-1.5,1.5,1
1090 DATA-0.7,0.5,1.5,1
1100 DATA0.7,0.5,1.5,1
1110 '    roof
1120 DATA0,1.2,1.5,1
1130 DATA-0.7,0.5,1.5,1
1140 DATA0,1.2,1.5,0
1150 DATA0,1.2,-1.5,1
1160 DATA0.7,0.5,-1.5,1
1170 '    back of roof
1180 DATA0,1.2,-1.5,0
1190 DATA-0.7,0.5,-1.5,1
1200 DATA-0.7,0.5,1.5,1
1210 DATA0,1.2,1.5,1
1220 '    remainder of back
1230 DATA-0.7,-1.5,1.5,0
1240 DATA-0.7,-1.5,-1.5,1
```

```
1250 DATA0.7,-1.5,-1.5,1
1260 DATA-0.7,-1.5,-1.5,0
1270 DATA-0.7,0.5,-1.5,1
1280 DATA0.7,0.5,-1.5,1
1290 '   front door
1300 DATA0.7,-1.5,-0.25,0
1310 DATA0.7,-0.1,-0.25,1
1320 DATA0.7,-0.1,0.25,1
1330 DATA0.7,-1.5,0.25,1
1340 '   windows
1350 DATA0.7,-0.1,-1.1,0
1360 DATA0.7,-0.1,-0.6,1
1370 DATA0.7,-1,-0.6,1
1380 DATA0.7,-1,-1.1,1
1390 DATA0.7,-0.1,-1.1,1
1400 DATA0.7,-0.1,1.1,0
1410 DATA0.7,-0.1,0.6,1
1420 DATA0.7,-1,0.6,1
1430 DATA0.7,-1,1.1,1
1440 DATA0.7,-0.1,1.1,1
1450 DATA0.3,-0.1,1.5,0
1460 DATA0.3,-1,1.5,1
1470 DATA-0.3,-1,1.5,1
1480 DATA-0.3,-0.1,1.5,1
1490 DATA0.3,-0.1,1.5,1
2000 DATA999,999,999,999
2010 Z$=INKEY$:IFZ$=""THEN2010ELSELGR
2012 PRINT@80,:INPUT"DO YOU WISH TO DRAW AGAIN (Y/N)";Z$
2030 IFZ$="Y"THEN210
2040 CLS:END
3000 '   Subroutine
3010 'Given 3-D co-ord's X,Y,Z
3020 'with X toward viewer,Y up,and Z toright,
3030 'performs transformation to allow for a
3040 'viewing position U degrees above X-Y plane
3050 'and R degrees to right of X-Y plane,
3060 'then determines XPC,YPC for plotting
3070 'on screen
3080 FGR:FCOLOUR4
3090 '   Step 1: allow for R
3100 R1=R/(45/ATN(1)):'conv to radians
3110 X1=X*COS(R1)+Z*SIN(R1)
3120 Y1=Y
3130 Z1=-X*SIN(R1)+Z*COS(R1)
3140 '   Step 2: allow for U
3150 U1=U/(45/ATN(1)):'conv to radians
3160 X2=X1*COS(U1)+Y1*SIN(U1)
3170 Y2=-X1*SIN(U1)+Y1*COS(U1)
3180 Z2=Z1
3190 '   Step 3: put onto flat plane
3200 YR=Y2:XR=Z2
3210 '   Step 4: convert to C.G's scale
3220 YPC=47-24.9999*YR
3230 XPC=30*XR+80
3240 '
3250 RETURN
4000 '   Subroutine
4010 'Given a point X,Y,Z in the 3-D co-ord's
4020 'descibed above,locates it on the screen and plots a
4030 'point there if LINEMODE=0,or draws a line to it
4040 'from the previously plotted if LINEMODE<>0.
4050 '
4060 GOSUB3000:'find YPC,YPC
4070 IFL=0THENPLOTXPC,YPCELSEPLOTM,NTOXPC,YPC
4075 M=XPC:N=YPC
4080 RETURN
```

TELEPHONE FILE

INSTRUCTIONS
       With this file you may save up to 100 names and phone numbers and addresses.
It is also possible to file any other information in a three-column format

(1) BUILDING A FILE
       You will be prompted for Name, Phone No. and Address. When you want to finish, enter SHIFT
@ (') for Name.
The information entered may be displayed on screen, saved on tape, or sent to the printer.

(2) DISPLAYING A FILE
This will display what you have entered in the order you have entered it. You will need this fun
ction to find the number of an entry you wish to alter or delete.

(3) PICK AN INITIAL
This will display all entries having the same name initial

(4) DELETING AN ENTRY
To delete an entry you must first use (2) or (3) to find the number of the entry

(5) ADDING TO AN EXISTING FILE
This is similar to building a file. You must type (') - SHIFT @ - to end the additions.

(6) SAVING TO TAPE
Simply follow the instructions. Make sure you have enough tape - a long file may take most of a
C10 tape. Make a backup copy.

(7) LOADING A FILE TAPE
Follow instructions. As the saved tape is not alphabetized so as not to restrict a later printin
g format, you must alphabetize when the tape is loaded.

(8) QUIT

Note that when you quit, you will lose the file in memory

(9) SEND TO PRINTER and (10) ALPHABETIZE
Before you alphabetize, you will be asked to format the output. The options are <E> or envelope
format, where the three entries are printed one below the other, and <L> or Line output, where t
he three entries are output in a single line, with spacings you decide - I use 25,15. The choice
 is yours, as long as you do not exceed the width of your printer. You may also input a heading,
 printed in double width elongated type.
You are also given the choice of single or double spaced output

(11) ALTER AN ENTRY
You may alter any part of an entry - name,address or telephone number, after you have found the
number of the entry to be altered

(12) NAME SEARCH
If you input a name in the exact form it was entered in (1) or (5), the programme will display p
hone number and address.

       Experiment with the programme - it can be used in other ways than as a telephone file. It t
akes a little learning, but I have found it most useful.
       Do not hesitate to alter it for your own purposes if you have the knowledge of BASIC. I hav
e been through 10 versions with alterations and additions - the next will be to delete the shell
 sort and replace it with a monkey-puzzle sort when I find a listing, which will speed up the al
phabetization process. Best of luck!

```
5000 CLS
5010 PRINT@50,"JJJJJ J J      JJJJJ"
5020 PRINT@90,"J       J J      J "
5030 PRINT@130,"JJJJJ J J      JJJJJ"
5040 PRINT@170,"J       J J      J "
5050 PRINT@210,"J       J JJJJJ JJJJJ"
5060 PRINT@445,"THIS PROGRAMME WILL SAVE UP TO 100 "
5065 PRINT@485,"NAMES,ADDRESSES,AND TELEPHONE Nos."
5070 PRINT@808,"PRESS ANY KEY TO CONTINUE"
5080 K$=INKEY$:IF K$="" THEN 5080
5090 CLEAR5000
5100 CLS:DIM N$(80),P$(80),A$(80)
5110 GOSUB 5830
5120 ON Q GOTO 5130,5240,5260,5470,5570,5580,5710,6000,6020
5130 FOR N=1 TO 80
5140 PRINT@160,"NAME";:INPUT N$(N)
5150 IF N$(N)="9999" THEN P1=N:GOTO 5110
5160 PRINT"TEL.NO.";:INPUT P$(N)
5170 PRINT "ADDRESS";:INPUT A$(N)
5180 PRINT@160,STRING$(39,32)
5190 PRINT@200,STRING$(39,32)
5200 PRINTSTRING$(39,32)
5210 NEXT N
5220  CLS:PRINT"LIST COMPLETE"
5230 GOTO 5110
5240 INPUT" ENTIRE FILE";S$
5250 IF S$="Y" THEN 5400 ELSE 5110
5260 PRINT"PICK AN INITIAL"
5270 INPUT J$
5280 FOR N=1 TO 80
5290 IF J$= LEFT$(N$(N),1) THEN GOSUB 5350
5300 NEXT N
5310 PRINT"NAME NOT IN FILE":FOR V=1 TO 500:NEXT
5320 INPUT "TYPE(1) TO RETURN TO MENU,OR         TYPE(2) FOR ANOTHER INITIAL";
5330 IF Q<1 OR Q>2 THEN 5320
5340 CLS:ON Q GOTO  5110,5260
5350 PRINT"NAME- ";N$(N)
5360 PRINT"NUMBER- ";P$(N)
5370 PRINT"ADDRESS- ";A$(N)
5380 INPUT "PRESS RETURN TO CONTINUE";X
5390 RETURN
5400 FOR N=1 TO P1
5410 PRINT"NAME - ";N$(N)
5420 PRINT"TEL NO:- ";P$(N)
5430 PRINT"ADDRESS:- ";A$(N)
5440 NEXT N
5450 INPUT"TO RETURN TO THE MENU,PRESS RETURN";X
5460 CLS:GOTO 5110
5470 CLS:PRINT"ENTER THE NAME FOR THE ENTRY YOU WISH   TO CHANGE"
5480 INPUT N$
5490 FOR N=1 TO P1:IF N$=N$(N) THEN 5520
5500 NEXT N
5510 PRINT"NAME NOT IN FILE":GOTO 5550
5520 PRINT"ENTER THE CORRECT INFORMATION"
5530 INPUT N$(N),P$(N),A$(N)
5540 PRINT"THE LINE NOW READS :":PRINTN$(N):PRINT P$(N):PRINTA$(N)
5550 INPUT" TO RETURN TO THE MENU,PRESS RETURN";X
5560 CLS:GOTO 5110
5570 CLS:FOR N=P1 TO 80:GOTO 5140
5580 CLS:PRINT
5590 PRINT"PLEASE PREPARE DATA CASSETTE FOR "
5600 PRINT"RECORDING.PRESS THE PLAY AND RECORD"
5610 PRINT"KEYS OF THE RECORDER,THEN ANY KEY OF"
5620 PRINT"THE COMPUTER"
5630 K$=INKEY$:IF K$="" THEN 5630
```

```
     PRINT"RECORDING NOW..."
   0 PRINT#-1,P1
  50 FOR N=1 TO P1:PRINT£-1,N$(N),P$(N),A$(N):NEXT
 70 PRINT"RECORDING COMPLETE-PRESS STOP BUTTON "
680 PRINT"AND REWIND CASSETTE":PRINT"PRESS ANY KEY TO RETURN TO MENU"
5690 K$=INKEY$:IF K$="" THEN 5690
5700 CLS:GOTO 5110
5710 CLS:PRINT
5720 PRINT"PREPARE DATA CASSETTE TO REPLAY"
5730 PRINT"PRESS ANY KEY WHEN READY"
5740 K$=INKEY$:IF K$="" THEN 5740
5750 PRINT"LOADING DATA INTO COMPUTER NOW..."
5760 INPUT #-1,P1
5770 FOR N=1 TO P1:INPUT#-1,N$(N),P$(N),A$(N):NEXT
5780 PRINT"DATA LOADED:PRESS ANY KEY TO CONTINUE"
5790 K$=INKEY$:IF K$="" THEN 5790
5800 CLS:PRINT@160,"DATA LOADED"
5810 INPUT"TO SEE MENU PRESS RETURN";X
5820 GOTO 5110
5830 REM:MENU
5840 PRINT@135,"* MENU *"
5850 PRINT
5860 PRINT" TO BUILD A FILE,TYPE  1 (ENTER 9999      WHEN COMPLETE"
5870 PRINT
5880 PRINT" TO DISPLAY WHOLE FILE, TYPE 2"
5890 PRINT" TO  DISPLAY ONE INITIAL, TYPE 3"
5900 PRINT" TO MAKE A CORRECTION,TYPE 4"
5910 PRINT" TO ADD TO THE FILE IN MEMORY, TYPE 5"
5920 PRINT" TO SAVE A FILE ON TAPE, TYPE 6"
5930 PRINT" TO RETRIEVE A FILE FROM TAPE, TYPE 7"
5940 PRINT" TO QUIT,TYPE 8"
5950 PRINT" TO SEND A FILE TO THE PRINTER,TYPE 9"
5960 INPUT Q
5970 IF Q<1 OR Q>9 THEN PRINT"ILLEGAL CHOICE-TRY AGAIN":GOTO 5960
5980 CLS
5990 RETURN
6000 END
6010 REM:ADAPTED FROM A TRS-80 PROGRAM BY A.K.McGILL
6020 PRINT"PREPARE THE PRINTER TO RECEIVE THE FILE"
6030 PRINT"PRESS ANY KEY OF THE COMPUTER WHEN READY"
6040 K$=INKEY$:IF K$="" THEN 6040
6050 CLS:PRINT"PRINTING NOW"
6060 LPRINTP1:PRINT:PRINT
6070 FOR N=1 TO P1:LPRINT N$(N),P$(N),A$(N):NEXT
6080 PRINT"PRESS ANY KEY TO RETURN TO THE MENU"
6090 K$=INKEY$:IF K$="" THEN 6090
6100 CLS:GOTO 5110
```

```
10 CLS
20 PRINTSTRING$(39,"%")
30 PRINT
40 PRINT
50 PRINT"      M A T H S   T E A C H E R  "
60 PRINT
70 PRINT
80 PRINT
90 PRINTSTRING$(39,"%")
100 FOR Z=1 TO 1500:NEXT Z:CLS
110 INPUT"HOW MANY QUESTIONS";A
120 PRINT"DIFFICULTY LEVEL:"
130 PRINT"(1) BEGINNER"
140 PRINT"(2) INTERMEDIATE"
150 PRINT"(3) EXPERT"
160 INPUT"ENTER 1,2 OR 3";L
170 C=0:I=0
180 PRINT"ENTER 1 FOR ADDITION, 2 FOR SUBTRACTION,"
190 INPUT "3 FOR DIVISION, OR 4 FOR MULTIPLICATION";B
200 PRINT"PEN AND PAPER NOT ALLOWED!":FOR Z=1 TO 1500:NEXT Z
210 IF B=1 THEN 260
220 IF B=2 THEN 400
230 IF B=3 THEN 490
240 IF B=4 THEN 590
250 PRINT"ILLEGAL! - WE'LL START WITH ADDITION!"
260 FOR N=1 TO A
270 PRINT"QUESTION No.";N
280 E=RND(1000):F=RND(1000)
290 IF L=1 AND (E>100  OR F>100) THEN 280
300 IF L=2 AND (E>500 OR F>500) THEN 280
310 PRINTE;" + ";F;" = ";
320 INPUT G:H=E+F
330 IF G=H THEN 360
340 PRINT"SORRY, INCORRECT!"
350 I=I+1:GOTO 380
360 PRINT"ABSOLUTELY RIGHT!"

370 C=C+1
380 NEXT N
390 GOTO 680
400 FOR N=1 TO A
410 PRINT"QUESTION No.";N
420 E=RND(1000):F=RND(1000)
430 IF L=1 AND (E>100 OR F>100) THEN 420
440 IF L=2 AND (E>500 OR F>500) THEN 420
450 PRINTE;" - ";F;" = ";
460 INPUT G:H=E-F
470 IF G=H THEN 360
480 GOTO 340
490 FOR N=1 TO A
500 PRINT"QUESTION No.";N
510 E=RND(10)
520 IF L=1 THEN F=RND(10)*E
530 IF L=2 THEN F=RND(500)*3
540 IF L=3 THEN F=RND(1000)*E
550 PRINTF;" / ";E;" = ";
560 INPUT G:H=F/E
570 IF G=H THEN 360
580 GOTO 340
590 FOR N=1 TO A
600 PRINT"QUESTION No.";N
610 IF L=1 THEN E=RND(10):F=RND(10)
620 IF L=2 THEN E=RND(15):F=RND(15)
630 IF L=3 THEN E=RND(20):F=RND(20)
640 PRINTE;" X ";F;" = ";
650 INPUT G:H=E*F
660 IF G=H THEN 360
670 GOTO 340
680 FOR Z=1 TO 1000:NEXT Z:CLS
690 PRINT"   F I N A L   T A L L Y"
700 PRINT"   SSSSSSSSSSSSSSSSSSSS"        <— Modsel. "I"
710 PRINT"CORRECT ANSWERS ----";C
720 PRINT"INCORRECT ANSWERS---";I
730 PRINT

740 T=C/A*100:PRINTT;"% FOR THIS EXERCISE"
750 PRINT@880,"WANT TO TRY AGAIN ? (Y/N)"
760 K$=INKEY$:IF K$="" THEN 760
770 IF K$="Y" THEN RUN ELSE END
```