ATARI SAFARI

Software for the Atari 400 and Atari 800

Atari Safari
is a CDS Production

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THE STORY OF ATARI SAFARI

On a search through Africa (yes, Africa is east of Cleveland) for diamonds and gold, our Roving (and sometimes Raving) Reporter, Oscar, was taken captive. Now Oscar was one of those "can do" people. In other words, whenever there was something to do, he was in the can. But in all fairness to Oscar, he did have his share of confidence. He's the one who went after Moby Dick with a rowboat, a harpoon, and a jar of tartar sauce. He is the only man we know that is the life -- and death -- of a party.

But, back to his captivity: The natives that captured him decided to boil him and eat him (they'd only make that mistake once). Oscar started to tell them about America, baseball and computers. He told them about playing games on the Atari, how they could use it to keep track of how many "skulls" they had available to spend by using the Checkbook program, how they could use the Shapebuilder to create shapes and figures to use in their own programs, how they could....

The natives loved Oscar's stories so much that they took him out of the hot tub they were marinating him in and came to America with him. When they arrived, Oscar explained his predicament, so we asked his Safari Guide to help in the production of these programs for Oscar and his tribe (they have adopted each other). Oscar is still alive and well--just a little wrinkled from being marinated.

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SOFTWARE SPECIFICATIONS & OVERVIEW

All programs in ATARI SAFARI are written in Atari BASIC. The minimum recommended configuration is either a 16K Atari with a cassette tape player or a 24K Atari with a disk drive. The software will run on either an Atari 400 (with 16K memory) or an Atari 800.

ATARI SAFARI provides a variety of software for the new owner as well as the veteran. All of the programs can be listed and modified. The utilities can be included in your own programs. These programs have been written by some of the best talent on the "Safari", and we know you'll enjoy and appreciate some of the unusual techniques. Like one gentleman who said the programs were a "pretty good buy" at $39.95. After talking with him a little longer, we realized that he thought the programs were $39.95 per program. We told him that all 25 were $39.95 for the disk version and he literally ran to get his checkbook. We still have the feeling that he thinks we're a little crazy to sell such good software at such a great price. Maybe he's right (but we sure smile a lot).

LOADING ATARI SAFARI FROM DISK

Follow these instructions to load from disk:

1. Turn on disk drive.
2. Insert the disk into the disk drive.
3. Turn on the computer.

That's all you need to do, as you can see.

LOADING ATARI SAFARI FROM TAPE

Follow these instructions to load from tape:

1. Press the rewind button on your tape player and completely rewind the tape.

2. Type CLOAD, then press RETURN. Press the PLAY button on your tape player and RETURN again. After a few seconds, the computer will beep.

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3. When the program is loaded, the tape will stop moving. Push STOP on your tape player. Type RUN, then press RETURN.

4. To return to the beginning of your program tape, push SYSTEM RESET and type CLOAD. To go to the beginning of the next program push RESET. Type CLOAD, then press RETURN. Press the PLAY button on your tape player and RETURN again. After a few seconds, the computer will beep. When the program is loaded, the tape will stop moving. Push STOP on your tape player. Type RUN, then press RETURN.

5. For ease in selecting commonly used programs, you may copy each of them on a separate tape.

WHAT TO TRY WHEN IT DOESN'T LOAD

1. Check all cords, cartridges, etc. Wiggle everything carefully!

2. You may have gotten a glitch from a large fluctuation in electrical current. Try to load again.

3. Listen to the T.V. monitor. You should be able to hear the leader tones and the digital program sound. If you don't, your tape deck may be faulty. Try a different tape deck.

4. Try some other software that you have run recently. If it doesn't run, your Atari has problems. Try the various things you usually try. Read your Atari manual. Send out for Pizza--at least your stomach will be happy (unless you don't like Pizza--Chinese food, anyone?)

5. Call your local computer dealer. He'll be glad to help you. If everything but the tape or disk works, bring it in and trade it. That is our policy--we stand behind all of our products.

DATE

Description: Date calculates the number of days between two dates or will tell you what day of the week a particular date is on (such as your birth date). And you thought this was a program to get you dates with those beautiful girls from Idaho!

Instructions: To use the Date program, select it from the Master Menu. You will then see the Date Function Menu, which offers you three choices:

> (1) Days Between Dates.
> (2) Calendar.
> (3) Exit to Master Menu.

To use the Days Between Dates function, type "1" and press RETURN. Then enter the first date using the following "numbers and commas" format: 3,24,1949. Then enter the second date using the same format. Your Safari Guide will then display on the screen the number of days between those two dates.

Comments: The calendar was adjusted in 1582 A.D. (it was adjusted by someone else--we weren't there--we're clever, but not that clever--but we're working on it), so you should try dates after that time. If you have a genuine need to work with Days Between Dates in years before 1582 A.D., we'd like to know what you're up to.

Flash! We have just been given the first example of using Days Between Dates in years before 1582 A.D. The example is told to us as follows: If I have an ancestor born July 23, 1423 A.D. who died April 11, 1477 A.D., how old was he when he was destroyed by the Mongol hordes as they overran his village?

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Well, we took our cue from Mr. Abbot (Mr. Farnsworth's personal private executive secretary in the movie "Heaven Can Wait") who replied in the following way to a similar question: "I think you'd have to define the word destroy." This seemed to confuse and irritate our historian (it didn't work in the movie either) and so we said, "Add 300 years to each date. This will give you the answer of 19,627 days, and all you have to do is divide 19,627 by 365 and you have the number of years that your ancestor lived." Of course, there is a much faster way of doing it, but as any software house knows, the first thing people do with a program is look for holes, bugs and gaps. You'd never do that, would you?

To use the Calendar Function, select it from the Date Function Menu. Enter your date in response to the screen prompt. Use the following "numbers and commas" format: 12,31,1980. Your Safari Guide will then display the day of the week on which the date occurred.

Comments: If Saturday Nite Live stays on Saturday nights and continues for another 50 years (can you see John Belushi at the age of 84?), it will have the curious experience of being on television on the day 2,2,2222--February 2, in the year 2222. Just thought you'd like to know. By the way, in case you didn't know, the comments section of this manual is totally optional. In fact, the whole manual is optional. Actually, the whole computer is optional, but you know that, we hope. Let us move on.

UNITS CONVERSION

Description: Units Conversion is very appropriately named. You can use Units Conversion to convert:

(1) Units of Length: inches, feet, yards, miles, millimeters, centimeters, meters and kilometers.

(2) Units of Weight: ounces, pounds, tons, milligrams, grams, kilograms and metric tons.

(3) Units of Volume: gallons, quarts, bushels, cubic feet, cubic inches, liters and cubic centimeters.

(4) Units of Temperature: Farenheit, Centigrade and Kelvin.

Instructions: To use the Units Conversion program, select it from the Master Menu. Then select the type of conversion you wish to make, i.e., (1) Length, (2) Weight, (3) Volume, or (4) Temperature, from the Units Conversion Function Menu. In response to the screen prompt, enter the unit type that you wish to convert.

Comments: Haven't you always wondered how many cubic inches there are in a gallon of milk?

FINANCIAL CALCULATOR

<u>Description:</u> Financial Calculator will compute the following factors of a loan:

    (1)   Interest Rate.
    (2)   Payment Amount.
    (3)   Number of Payments Needed.
    (4)   Amount of Loan.
    (5)   Amount of Interest Paid.
    (6)   Total Amount Actually Paid.

<u>Instructions:</u> To use Financial Calculator, select it from the Master Menu. Then select the program function you wish to use to perform your calculation. Enter your numbers without dollar signs or commas. If the numbers you enter do not compute, your Safari Guide will display a "DOES NOT COMPUTE" message and allow you to re-enter your calculations. When you are through using the Financial Calculator, you can return to the Master Menu by choosing the last option on the Financial Calculator Function Menu.

<u>Comments:</u> To show you the effect of larger payments, take $40,000.00 @ 16% A.P.R. -- this can be amortized in 165 paymments of $600.00 or 504 payments of $534.00. Financial Calculator is guaranteed to terrify you as you calculate a 30 year loan of $75,000.00 at 18%. If the monthly payments don't scare you, look at the total amount that you will pay the bank in 30 years. Guaranteed to make strong men (and women) faint.

DEMOLITION DERBY

Description: Demolition is a fast moving game of strategy where two players try to force each other to run into the wall or their own trails. It looks so simple until you play someone who has thought of the various strategies that can be used to win.

Instructions: Plug your joysticks into the left two slots on the front of your computer. You can then direct your "destroyer" to go up, left, right and down. Your "destroyer" will not respond to diagonals. Each time you demolish your opponent by forcing him to crash, you get a point (that's a blue or red point--no brownie points in this game). The first player to get three points wins. At the beginning of each game set, you may also select the speed at which your markers move. Simply respond to the screen prompt with a number from 1 to 9 (1=slowest, 9=fastest).

Comments: We know that, at various times, you have wanted to give us your comments. We encourage this and have provided a box below in which you may do this. Please provide us with your total, complete, candid and frank feedback. Thank you.

☐

(Actually, we would very much enjoy hearing from you.)

MATH

Description: The math programs (Addition, Subtraction, Multiplication and Division) are simple, quick and fun for the right people. When you answer five problems correctly, the difficulty increases.

Instructions: To use any of the four math programs, simply choose the "Math" function from the Master Menu. You may then select the math programs you want to run.

Comments: One of the best uses we have seen for these programs is to use them as a model for Computer Assisted Instruction.

THINK

Description: Think is a test of your memory circuits (the ones in your head, not in your computer).

Instructions: To play Think, select it from the Master Menu. There are six rectangles displayed across the screen, numbered 1 to 6. The Safari Guide will play and light up the numbered rectangles. Using the numbers on your computer's keyboard, you then repeat back the same sequence. See how many tones you can repeat back in sequence. Each time you are correct, you get a point. If you are incorrect, you get a strike. Three strikes and you are out. You can vary the length of the tones played by selecting your speed. Respond to the screen prompt with a number from 1 to 255 (1=fastest, 255=slowest).

Comments: The in-house record is 40 tones. At a speed setting of 1, you can barely see the blip.

MOUNTAIN

Description: You are the operator of a gigantic "KABOOM" cannon.
The cannon is so huge that only the top of the barrel appears on
the screen (as the green shape on the far left). You have three
targets on the other side of the big mountain. The targets have
values of 10, 20, or 30 points. The targets change position
randomly. The mountain changes size and shape each time you
shoot. You only have 250 ammo charges, so try to hit the 30
point target each time. Your Safari Guide will automatically
keep track of your total points and the number of ammo charges
that you have left.

Instructions: Simply select Mountain from the Master Menu and
follow your prompts. When you are to the playing screen, simply
input your charge (try 25) and press RETURN. Then input your
angle (try 81) and press RETURN. Adjust your angle and velocity
as necessary to hit the 30 point target as often as possible.
You have only 250 units of ammo charges left from yesterday's
battle. You must very carefully calculate how much charge to use
on each shot, so that you can shoot clear over the mountain as
many times as possible. If you tried our suggestions in the
above instructions, you have learned a few things already. As
little as 15 units of charge will let you hit the far right
target if the mountain is low.

Comments: The targets are canisters of film that contain all the
terrible television commercials that we've had to suffer through
this year. And if you don't destroy them, we'll have to watch
them next year too. Good luck and good shooting.

BLACK HOLE CHASE

Description: You are being chased by creatures from a black
hole. A black hole is an area of outer space (yes, outer space
is west of Cleveland), where gravity is so strong that even light
rays can't escape. You must pilot your spacecraft across the
galaxy and away from them as fast as possible.

At the same time, you must avoid three things: (1) moving your
ship into your own vapor trail--it's radioactive, but will
disappear after a while; (2) the edge of the galaxy; and (3)
the stars and planets in your galaxy. The edge of the galaxy is
visible at first, and then, little by little, minute by minute,
the creatures make parts of the galaxy edge disappear by turning
it into a black hole. Don't run into it or they'll get you.

Instructions: Use the I, J, K and M keys to move up, left, right
and down through the galaxy. You can set the difficulty from 0
to 9. Zero will give you a galaxy free of obstacles to move
around. If you can outrun the Black Hole Creatures for over 200
hours, they'll run out of fuel before you do and you'll be saved.
When you've gone 30 units, the speed increases and then increases
again at 100 units.

Comments: We know you were expecting a game where you could
search for the 18 holes at the Burning Tree Golf Course (they
disappeared last week -- the holes, not the golf course), but
that is not this game. We think it beats looking for golf holes.

LEMANS

Description: Safari Lemans can be as hard as the real race or as easy as a Sunday afternoon drive. You can vary the speed of your car (faster and slower) and as you go faster, the track becomes more treacherous.

Instructions: To begin your Safari Lemans, select Lemans from the Master Menu and follow your screen prompts. To start the race, press your joystick toward the top position. Holding it in the top position increases your speed (and the scale of the sound goes up) and the back position decreases your speed. The faster you travel, the faster your score adds up. You have 60 seconds to drive your course. Your time is shown in the top left corner of your screen. Moving your joystick to the right will move your car to the right and moving your joystick to the left will move your car to the left.

Comments: Only the "front" part of your car is sensitive to crashing, allowing you to "fishtail" as necessary to navigate your course. You can also jump the track and get a free ride if you're really clever. If you're really good, you can jump the track again and get back in without crashing.

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LUNA

Description: Better known as Luna: Crash, Take Off or Land. The primary object of Luna is to land your spacecraft safely on the surface of the moon.

Instructions: You are the pilot of a new lunar vehicle, Model XXY3. The craft has developed a minor problem: the guidance computer has failed. You must now attempt to land on the lunar surface for repair work. You control the descent (or ascent) of the craft by burning fuel at regular periods. If you burn too much too quickly, you may be shot out of the moon's gravitational field and into the cold dark reaches of outer space. If you burn too little fuel, you will reach the surface of the moon--forever.

The amount of fuel you can burn is controlled by the joystick position (wake up and plug 'n your joystick into the left slot on the front of your computer). Putting your joystick in the top right position will burn one unit of fuel each time you press your red button. As you move your joystick around clockwise, you will be able to burn more fuel each time you press your red button on your joystick control. The top position gives your maximum burn rate of 10 units of fuel per burn. Press any key to begin descent.

Comments: Watch your status indicators in the top left portion of your screen. You can see the status of your fuel, velocity, distance, burn rate and time.

ALIEN

Description: You are on the spaceship NIMROD. The alien has killed the rest of the crew and is now searching for you. He wants you for your gourmet qualities. You have a few minutes to break the code number that will open the weapons vault. And you want to do that because the only weapon that will safely destroy the alien is the antimatter laser rifle that is stored in the weapons vault.

Instructions: The secret code is made up of numbers from 1 to 9 in any order, none repeated. Mother, the ship's computer, will allow you to decide the number of digits (from 2 to 9) in the code. If the alien gets you before you break the code or you want to give up (you coward), you can push the space bar on the keyboard to release cyanide gas into the ship which will stop the alien and the program, allowing you to try again or stop.

When you enter numbers to break the code, Mother, the ship's computer, will respond in any combination of the following three ways: (1) no response, which means that none of the numbers in your guess is in the code; (2) "!" symbol, which means that one of your numbers is in the code, but in the wrong place; (3) a "*" symbol, which means that one of your numbers is in the code and in the right place.

Comments: For all of you analytical geniuses, prescient persons, mind-readers and byte-bogglers out there--we know you'll never go over 10 attempts to break the code, but just for fun, you should enter some wrong guesses to see the comments that are waiting for you every once in a while. We could say something about pushing ESCAPE to escape the ALIEN via cyanide gas (a very final escape), but "wisdom" dictates otherwise--and for those of

you out there asking where we got some wisdom to dictate to us, we offer this answer: you can call Dial-A-Wisdom at 937-3862 for the latest in up-to-the-minute wisdom. And now you ask, "Where, oh wise person, did the word "w-i-s-d-o-m" come from?" Well, our On-The-Spot Roving (and sometimes raving) Reporter turns in this scintillatingly scented story (that is to say, we think it may be a little fishy, but in all fairness, we'll let you be the judge).

Story: Origin of Wisdom
Dateline: Chicago, February 31, 1967

(Funny -- I thought a dateline was something like, "Hey, Baby, this is Mr. Available. Whatcha doin' tonight?" -- but, on with the story). There was a certain wise man from Europe that recent immigrants would go to for information about American customs, traditions, government red tape, etc. As many "Schmexperts"* are, this schmexpert was very vain and had an over-blown ego. These poor, struggling immigrants soon realized that to get along with Mr. Schmexpert, they needed to feed his ego, so they would say things like: "We're dumb and you're so smart. Please help us." But with their accents and rough English, it came out: "We's dumb and you's smart, etc." This routine worked so well, they called it their "we's dumb" routine.

As time passed, it came to be known that when you wanted some "wisdom", you were after some knowledge. So wisdom became equated with wise use of knowledge. In honor of this tradition, the Dial-A-Wisdom phone number 937-3862 spells "We's Dumb". And the group that answers, calls themselves "wisdoms". And we think that it is just fine for them to call themselves "We's dumbs", don't you?

*Robert Ringer, "Looking Out for Number One"

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DYNAMITE

Description: Welcome to the wonderful world of Dynamite. Each of you light a stick and pretend you're the Statue of Liberty. Now douse your fuse and read on.

There are 15 sticks of dynamite in an abandoned mine. All of them are unlit except the last one. The ghost of your dead partner has lit the last stick of dynamite and now he wants to play a little game with you.

Instructions: You and your dead partner take turns taking sticks of dynamite from the pile, up to three sticks in a turn. If you take the last stick, you'll be blown up and have to take your partner's place in the mine--forever.

Comments: If you lose and get stuck in the mine, the really bad news is that Howard Cosell spends every Wednesday and Thursday in the mine with you. We realize the this is unfair to you, but then again, when we think of you--maybe it's unfair to Howard! Well, you two can discuss that every Wednesday and Thursday. Good luck with the ghost of your dead partner. By the way, why did you shoot him? Oh, you say he used to listen to Howard Cosell on the radio and television all the time? And the jury let you off because it was justifiable homicide? How true, how true.

MUSIC

Description: Music contains various sound effects that you can use in your own programs.

Instructions: Select Music from the Master Menu. Follow the instructions as shown. You may want to review the listings of Atari Safari to see how the sounds are used in the programs.

PACIFIER

Description: Pacifier is a continuous random graphics and sound generator.

Instructions: Select Pacifier from the Master Menu. Press space for a new pattern. Press any letter to return to the Master Menu.

Comments: Uncle Howard watched this for two hours last New Year's Eve before asking where Guy Lombardo was.

PLOT

Description: Plot will plot various math equations, quickly.

Instructions: For a quick demo, simply answer "Y" to "Is this the function you want (Y/N)?". Then press RETURN in response to the other questions. To change equations, answer "N" to "Is this the function you want (Y/N)?" Then enter your function by typing 1000 and the function that you want to use. Do not use variables beginning with Q. Press RETURN after typing 1000 and the function. Then type RUN and press RETURN.

Comments: You have the option of an X and/or Y axis. You also have the option specifying the tics (hash marks, or whatever) on the axes and what units they represent.

TIC TAC TOE

Description: Tic Tac Toe is Tic Tac Toe.   The screen layout is shown below.

1	2	3
4	5	6
7	8	9

Bet you can't beat it more than once each time!

SHAPEBUILDER

Description: Shapebuilder is not an exercise program, but it
will allow you to use your joystick to design your own graphics.

Instruction: To use the Shapebuilder program, select it from the
Master Menu and follow the screen prompts until a dot appears on
the screen which may be moved with your joystick to any location
on the screen. When the dot is in location where you would like
to begin your picture, depress the red button and use your
joystick to draw the picture. When your graphic design is
complete, simply follow the screen prompts to save your picture
for future viewing. If you are using tape, you will not be able
to store your pictures, but you can still draw some fantastic
shapes.

If you wish to save more than one picture at a time, you may use
the following procedure:

1. Load Shapebuilder Program.

2. Press "SYSTEM RESET".

3. Type: OPEN #2,8,0,"D:[name of your picture (8)]"
            Press RETURN
            CLOSE #2
            Press RETURN
            4010 A$="D1:[name of picture]"
            RUN
            Press RETURN

Comments: To view a graphic design which has been saved under a
new name, you should press "SYSTEM RESET", type 4010 A$="D1:[name
of picture]", press RETURN, and type RUN and press RETURN. See
the program listing for additional file numbers that may be used.

CHECKBOOK

Description: Checkbook will allow you to keep track of your checkbook transactions, including:

1. CHECK NUMBER.

2. DATE.

3. AMOUNT OF CHECK.

4. PARTY PAID.

5. ITEM PAID FOR.

6. WHETHER THE EXPENSE IS TAX DEDUCTIBLE.

7. CHECKING ACCOUNT DEPOSITS.

8. OTHER ACCOUNT ADJUSTMENTS (service charges, etc.).

Instructions: To use the Checkbook program with a disk-based system, simply select it from the Master Menu. You may then use the screen prompts to use the particular function you wish to work with. To use Checkbook with cassette:

1. Copy the program onto another tape.

2. Load the program and follow the prompts. To end, rewind the tape recorder, set the recorder for recording, and type three lines as the screen directs (push RETURN twice after "CSAVE".)

3. The last check number and balance are now stored in lines 90 and 100 of the program.

Comments: While the Checkbook program will keep track of your checking account transactions, it will not earn the money for you. You will have to do that yourself. But it will keep track of what you make and spend.

THIS SPACE FOR USER NOTES

INDEX OF PROGRAM LISTINGS

```
10 REM --MENU--                    MASTER
20 OPEN #1,4,0,"K:"                 MENU
30 DIM A$(10)
40 GOTO 2000
90 GRAPHICS 0
95 TRAP 40
100 ? "         MASTER MENU   "
110 ? " A.    DATE"
120 ? "B.    UNIT CONVERSION"
130 ? "C.    FINANCIAL CALCULATOR"
140 ? "D.    DEMOLITION"
150 ? "E.    MATH"
160 ? "F.    THINK"
170 ? "G.    MOUNTAIN"
180 ? "H.   ·BLACK HOLE CHASE"
190 ? "I.    LEMMIS"
200 ? "J.    LUNA C,T,OR L"
210 ? "K.    ALIEN"
220 ? "L.    DYNAMITE"
230 ? "M.    MUSIC UTILITY"
240 ? "N.    PACIFIER"
250 ? "O.    PLOT"
260 ? "P.    TIC TAC TOE"
270 ? "Q.    SHAPE BUILDER"
280 ? "R.    CHECKBOOK"
300 ? " INPUT THE LETTER OF YOUR CHOICE.
    ";
310 GET #1,A
320 IF A<65 OR A>90 THEN 310
330 IF A>82 AND A<91 THEN GRAPHICS 0:END

340 A$=CHR$(A):GOSUB 6000
350 IF A$="A" THEN RUN "D:DATE"
360 IF A$="B" THEN RUN "D:UNITS"
370 IF A$="C" THEN RUN "D:MORTGAGE"
380 IF A$="D" THEN RUN "D:DEMOLITI"
390 IF A$="E" THEN RUN "D:MATH"
400 IF A$="F" THEN RUN "D:THINK"
410 IF A$="G" THEN RUN "D:MOUNTAIN"
420 IF A$="H" THEN RUN "D:BLACK"
430 IF A$="I" THEN RUN "D:LEMMIS"
440 IF A$="J" THEN RUN "D:LUNA"
450 IF A$="K" THEN RUN "D:ALIEN"
460 IF A$="L" THEN RUN "D:DYNAMITE"
470 IF A$="M" THEN RUN "D:MUSIC"
480 IF A$="N" THEN RUN "D:PACIFIER"
490 IF A$="O" THEN RUN "D:PLOT"
500 IF A$="P" THEN RUN "D:TIC"
510 IF A$="Q" THEN RUN "D:SHAPE"
520 IF A$="R" THEN RUN "D:CHECKING"
2000 REM --INTRO TO MENU--
2010 ATARI=4000:SAFARI=4100:CALCULATE=43
00:ANIMAL=4500:ERASE=5000:AA=5500
2020 LEG=0:RR=5600:II=5700
3010 TRAP 3112
3015 Z=0
3020 GRAPHICS 3:? :? :? :? :? :? "PUSH SPAC
E TO STOP DISPLAY."
3030 SETCOLOR 0,10,5:SETCOLOR 1,3,6:SETC
OLOR 2,0,3:SETCOLOR 4,12,2
3040 GOSUB ATARI
3050 GOSUB SAFARI
3060 Z=Z+1
3080 GOSUB ANIMAL
3090 FOR W=1 TO 10:NEXT W
3110 IF PEEK(764)=255 THEN 3060
3115 IF PEEK(764)<>255 THEN 90
3120 OPEN #2,4,0,"D:ATARI.SAF"
3130 INPUT #2,BIG:GRAPHICS BIG
3140 SETCOLOR 0,12,6:SETCOLOR 1,3,8
3150 FOR Y=0 TO 19
3160 FOR X=0 TO 39
3170 INPUT #2,COLR
3180 COLOR COLR:PLOT X,Y
3190 NEXT X
3200 NEXT Y
3210 CLOSE #2
3230 IF PEEK(764)<>255 THEN 3240
3240 GRAPHICS 3:REM --STRIPE--
3245 ? "PRESS SPACE TO STOP DISPLAY."
3260 FOR B=0 TO 15
3270 FOR C=0 TO 15

3275 IF A=3 THEN 3330
3280 SETCOLOR 0,C,B
3295 IF PEEK(764)<>255 THEN 90
3300 COLOR C
3310 YY=8:GOSUB 4020
3315 COLOR C+2
3320 YY=19:GOSUB 4120
3325 COLOR C+3
3326 PLOT 0,10:DRAWTO 39,10
3330 NEXT C:NEXT B
3340 GOTO 2000
4000 REM --ATARI--
4010 COLOR 2:YY=8
4020 XX=4:GOSUB AA
4030 REM --T--
4040 PLOT 11,2:DRAWTO 15,2
4050 PLOT 13,3:DRAWTO 13,8
4060 XX=17:GOSUB AA
4070 XX=24:GOSUB RR
4080 XX=30:GOSUB II
4090 RETURN
4100 REM --SAFARI--
4110 COLOR 1:YY=19
4120 PLOT 2,19:DRAWTO 6,19
4130 DRAWTO 6,16:DRAWTO 2,16
4140 DRAWTO 2,13:DRAWTO 6,13
4150 XX=8:GOSUB AA
4160 REM --F--
4170 PLOT 15,19:DRAWTO 15,13
4180 DRAWTO 18,13:PLOT 16,17
4190 DRAWTO 17,17
4200 XX=20:GOSUB AA
4210 XX=27:GOSUB RR
4220 XX=33:GOSUB II
4230 RETURN
4500 REM --ANIMAL--
4510 COLOR 2
```

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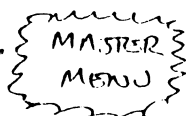
```
4520 X=Z
4530 TRAP 3120
4540 IF X<0 THEN 4560
4550 PLOT X,10
4560 X=Z-1
4580 IF X<0 THEN 4592
4590 PLOT X,10:DRAWTO X,15
4592 X=Z-2
4593 IF X<0 THEN 4635
4594 COLOR 0:PLOT X,10
4596 DRAWTO X,13
4600 PLOT X,16:DRAWTO X,19
4635 REM --LEGS--
4640 IF LEG=0 THEN COLOR 3
4650 IF LEG=1 THEN COLOR 2
4652 X=Z
4655 IF X<0 THEN 4670
4660 PLOT X,15:DRAWTO X,18
4670 X=Z-7
4685 IF X<0 THEN 4700
4690 PLOT X,16:DRAWTO X,19
4700 IF LEG=0 THEN COLOR 2
4710 IF LEG=1 THEN COLOR 3
4720 LEG= NOT LEG
4730 X=Z-1
4745 IF X<0 THEN 4760
4750 PLOT X,16:DRAWTO X,19
4760 X=Z-6
4775 IF X<0 THEN 4790
4780 PLOT X,16:DRAWTO X,18
4790 X=Z-8
4795 COLOR 0
4800 IF X<0 THEN 4820
4810 PLOT X,14:DRAWTO X,19
4820 X=Z-2
4830 IF X<0 THEN 4850
4840 PLOT X,16:DRAWTO X,19
4850 COLOR 2
4860 RETURN
5000 REM --ERASE--
5090 RETURN

5500 REM --AA--
5510 PLOT XX,YY:DRAWTO XX,YY-4
5520 DRAWTO XX+2,YY-6:DRAWTO XX+3,YY-6
5530 DRAWTO XX+5,YY-4:DRAWTO XX+5,YY
5540 PLOT XX+1,YY-2:DRAWTO XX+5,YY-2
5550 RETURN
5600 REM --RR--
5610 PLOT XX,YY:DRAWTO XX,YY-6
5620 DRAWTO XX+4,YY-6:DRAWTO XX+4,YY-3
5630 DRAWTO XX+1,YY-3:DRAWTO XX+4,YY
5640 PLOT XX+3,YY:DRAWTO XX+2,YY-1
5650 RETURN
5700 REM --II--
5710 PLOT XX,YY:DRAWTO XX+4,YY
5720 PLOT XX,YY-6:DRAWTO XX+4,YY-6
5730 PLOT XX+2,YY:DRAWTO XX+2,YY-5
5740 RETURN
6000 REM --COPYRIGHT INFO--
6010 GRAPHICS 2:? #6:? #6:? #6
6020 ? #6;" COPYRIGHT, COS CORP"
6030 ? #6:? #6;"  1980  ALL RIGHTS"
6040 ? #6;"      RESERVED"
6050 FOR W=1 TO 100:NEXT W
6060 RETURN
```

```
1550 OPEN #1,4,0,"K:"
1560 DIM WE$(10):GOTO 1700
1570 WE$="SATURDAY":GOTO 2380
1580 WE$="SUNDAY":GOTO 2380
1590 WE$="MONDAY":GOTO 2380
1600 WE$="TUESDAY":GOTO 2380
1610 WE$="WEDNESDAY":GOTO 2380
1620 WE$="THURSDAY":GOTO 2380
1630 WE$="FRIDAY":GOTO 2380
1700 FOR X=0 TO 255
1710 SOUND 0,255-X,10,8
1730 SOUND 1,X,10,8
1740 NEXT X
1750 SOUND 0,0,0,0
1760 SOUND 1,0,0,0
1790 DIM G$(5)
1800 DIM A$(10)
1810 DIM MS$(30)
1820 GRAPHICS 0
1830 PRINT :PRINT
1840 ? "     THIS PROGRAM CALCULATES"
1850 ? "     THE DAY OF THE WEEK OR"
1860 ? "     NUMBER OF DAYS BETWEEN"
1870 ? "     DATES AFTER 1582 A.D."
1880 PRINT
1890 PRINT
1900 PRINT "     1.  DAYS BETWEEN DATES"

1910 PRINT :PRINT
1920 PRINT "     2.  CALENDAR"
1930 PRINT :PRINT
1940 PRINT "     3.  EXIT TO MASTER MENU
"
1950 ? :?
1960 PRINT "ENTER OPTION NUMBER: ";
1980 GET #1,A:IF A<49 OR A>51 THEN 1980
1990 A$=CHR$(A):N=VAL(A$)
2000 ON N GOTO 2010,2260,2420
2010 REM --DAYS BETWEEN DATES--
2020 GRAPHICS 0
2030 PRINT :PRINT :PRINT
2040 PRINT "  1.  DAYS BETWEEN DATES"
2055 PRINT :PRINT "SAMPLE DATE = 3,24,19
49":PRINT
2070 MS$="ENTER FIRST DATE   ":GOSUB 245
0
2080 GRAPHICS 0
2090 PRINT :PRINT :PRINT
2100 PRINT "FIRST DATE: ";MO,DA,YR
2110 PRINT :PRINT :PRINT
2120 IF MO<3 THEN GOSUB 3000
2130 IF MO>2 THEN GOSUB 3500
2140 D1=F
2150 MS$="ENTER SECOND DATE   ":GOSUB 24
50
```

```
2160 IF MO<3 THEN GOSUB 3000
2170 IF MO>2 THEN GOSUB 3500
2180 D2=F :PRINT
2200 PRINT "SECOND DATE: ";MO,DA,YR
2210 PRINT
2220 PRINT "NUMBER OF DAYS BETWEEN DATES
 : ";ABS(D2-D1)
2230 FOR X=1 TO 5:PRINT :NEXT X
2240 PRINT "PUSH RETURN TO CONTINUE"
2250 INPUT G$:GOTO 1820
2260 REM --COMPUTE DAY OF WEEK--
2270 GRAPHICS 0:PRINT :PRINT
2280 PRINT "   2.  CALENDAR":PRINT
2300 ? :? "EXAMPLE: (12,31,1980)"
2305 MS$="ENTER---MONTH,DAY,YEAR."
2310 GOSUB 2450
2320 IF MO<3 THEN GOSUB 3000
2330 IF MO>2 THEN GOSUB 3500
2340 GRAPHICS 0:PRINT :PRINT
2350 PRINT :PRINT :PRINT "DATE IS ";MO,D
A,YR

2360 DN=7*(F/7-INT(F/7))+1
2370 ON DN GOTO 1570,1580,1590,1600,1610
,1620,1630
2380 PRINT :PRINT :PRINT :PPRINT "DAY IS
 ";WE$
2390 PRINT :PRINT :PRINT "PUSH RETURN TO
 GO ON";:INPUT A$
2400 GOTO 1820
2420 TRAP 2440
2430 RUN "D:MENU"
2440 GRAPHICS 0:END
2450 TRAP 2450:? :? :? MS$;:INPUT MO,DA,
YR
2460 IF MO<1 OR MO>12 THEN GRAPHICS 0:?
 :? :? "MONTH OUT OF RANGE.":? "EXAMPLE:
 12,31,1980":GOTO 2450
2470 IF DA<1 OR DA>31 THEN GRAPHICS 0:?
 :? :? "DAY IS OUT OF RANGE.":? "EXAMPLE:
 12,31,1980":GOTO 2450
2480 IF YR<100 THEN GRAPHICS 0:? :? :? "
ENTER FULL YEAR.":? "EXAMPLE: 12,31,1980"
:GOTO 2450
2490 IF YR<1582 THEN GRAPHICS 0:PRINT :P
RINT "  IT MUST BE AFTER 1582":PRINT :GO
TO 2450
2500 RETURN
3000 REM --FUNCTION 1 --
3010 F=365*YR+DA+31*(MO-1)+INT((YR-1)/4)
-INT(0.75*(INT(((YR-1)/100)+1)))
3020 RETURN
3500 REM --FUNCTION 2 --
3510 F=365*YR+DA+31*(MO-1)-INT(0.4*MO+2.
3)+INT(YR/4)-INT(0.75*(INT(YR/100)+1))
3520 RETURN
```

26

```
10 OPEN #1,4,0,"K:"
90 DIM A$(5)
100 GRAPHICS 0
110 PRINT :PRINT
120 PRINT "      UNIT  CONVERSION"
130 GOTO 150
140 PRINT :PRINT "NO, TYPE 1,2,3,4,OR 5"

150 PRINT :PRINT "WHICH NUMBER WOULD YOU
 LIKE?  "
160 PRINT
170 PRINT :PRINT "   1.  LENGTH"
180 PRINT :PRINT "   2.  WEIGHT"
190 PRINT :PRINT "   3.  VOLUME"
200 PRINT :PRINT "   4.  TEMPERATURE"
210 PRINT :PRINT "   5.  EXIT TO MASTER
MENU"
220 GET #1,A:IF A<49 OR A>53 THEN 220
230 A$=CHR$(A):A=VAL(A$)
250 ON A GOTO 260,800,1300,1800,2300
260 GRAPHICS 0:PRINT :PRINT :PRINT
270 PRINT " LENGTH - CONVERT UNITS FROM
:"
280 PRINT :PRINT "     1.  INCHES"
290 PRINT "     2.  FEET"
300 PRINT "     3.  YARDS"
310 PRINT "     4.  MILES"
320 PRINT "     5.  MILLIMETERS"
330 PRINT "     6.  CENTIMETERS"
340 PRINT "     7.  METERS"
350 PRINT "     8.  KILOMETERS"
360 PRINT "     9.  RETURN TO MENU"

370 GET #1,A:IF A<49 OR A>57 THEN 370
380 A$=CHR$(A)
390 A=VAL(A$)
400 REM --CONVERT ENERYTHING TO METERS--

405 TRAP 400
410 ON A GOTO 420,440,460,480,500,520,54
0,550,100
420 PRINT "HOW MANY INCHES ";
430 INPUT A:G=A/39.37:GOTO 570
440 PRINT "HOW MANY FEET ";
450 INPUT B:G=B*0.3048:GOTO 570
460 PRINT "HOW MANY YARDS ";
470 INPUT C:G=C/1.094:GOTO 570
480 PRINT "HOW MANY MILES ";
490 INPUT D:G=D*1609:GOTO 570
500 PRINT "HOW MANY MILLIMETERS ";
510 INPUT E:G=E/1000:GOTO 570
520 PRINT "HOW MANY CENTIMETERS ";
530 INPUT F:G=F/100:GO TO 570
540 PRINT "HOW MANY METERS ";:INPUT G:GO
 TO 570
550 PRINT "HOW MANY KILOMETERS ";
560 INPUT H:G=H*1000:GOTO 570
570 REM --PRINT LENGTH EQUIVALENCE TABLE
--
580 GRAPHICS 0:PRINT :PRINT :PRINT
590 PRINT "     INCHES    =";G*39.37
600 PRINT "     FEET      =";G/0.3048
610 PRINT "     YARDS     =";G*1.094
620 PRINT "     MILES     =";G/1609
630 PRINT "     MILLIMETERS=";G*1000
640 PRINT "     CENTIMETERS=";G*100
650 PRINT "     METERS     =";G
660 PRINT "     KILOMETERS =";G/1000
670 IF G<0 THEN GOSUB 2400
680 PRINT :PRINT "DO YOU WANT ANOTHER LE
NGTH?"
690 PRINT :PRINT "     Y OR N   "
;:INPUT A$
700 IF A$="Y" THEN 260
710 GOTO 100
800 REM --WEIGHT CONVERSIONS--
810 GRAPHICS 0:PRINT :PRINT
820 PRINT "   WEIGHT - CONVERT FROM:"
830 PRINT :PRINT "     1.  OUNCES"
835 PRINT
840 PRINT "     2.  POUNDS"
845 PRINT
850 PRINT "     3.  TONS"
855 PRINT
860 PRINT "     4.  MILLIGRAMS"
865 PRINT
870 PRINT "     5.  GRAMS"
875 PRINT
880 PRINT "     6.  KILOGRAMS"
885 PRINT
890 PRINT "     7.  METRIC TONS"
895 PRINT
900 PRINT "     8.  RETURN TO MENU"
910 PRINT :PRINT "     ";
920 GET #1,A:IF A<49 OR A>56 THEN 920
930 A$=CHR$(A):A=VAL(A$)
940 REM --CONVERT EVERYTHING TO KILOGRAM
S--
945 TRAP 940
950 ON A GOTO 960,980,1000,1020,1040,106
0,1080,100
960 PRINT "HOW MANY OUNCES";
970 INPUT A:F=A/35.27:GOTO 1100
980 PRINT "HOW MANY POUNDS";
990 INPUT B:F=B/2.205:GOTO 1100
1000 PRINT "HOW MANY TONS";
1010 INPUT C:F=C*907.2:GOTO 1100
1020 PRINT "HOW MANY MILLIGRAMS";
1030 INPUT D:F=D/1000000:GOTO 1100
1040 PRINT "HOW MANY GRAMS";
1050 INPUT E:F=E/1000:GOTO 1100
1060 PRINT "HOW MANY KILOGRAMS";
1070 INPUT F:GOTO 1100
1080 PRINT "HOW MANY METRIC TONS";
1090 INPUT G:F=G*2000:GOTO 1100
1100 REM --PRINT WEIGHT EQUIVALENCE TABL
ES--
1110 GRAPHICS 0:PRINT :PRINT :PRINT
1120 PRINT "     OUNCES    =";F*35.27
1130 PRINT "     POUNDS    =";F*2.205
```

27

```
1140 PRINT "      TONS      =";F/907.2
1150 PRINT "      MILLIGRAMS =";F*100000
00
1160 PRINT "      GRAMS      =";F*1000
1170 PRINT "      KILOGRAMS  =";F
1180 PRINT "      METRIC TONS=";F/2000
1190 IF F<0 THEN GOSUB 2400
1200 PRINT :PRINT :PRINT "    DO YOU WA
NT ANTHER WEIGHT ?"
1210 PRINT :PRINT "          Y OR N";
1220 INPUT A$:IF A$="Y" THEN GOTO 800
1230 GOTO 100
1300 REM --VOLUME CONVERSIONS--
1310 GRAPHICS 0:PRINT :PRINT
1320 PRINT " VOLUME - CONVERT FROM:"
1330 PRINT :PRINT "     1.   GALLONS"
1340 PRINT :PRINT "     2.   QUARTS"
1350 PRINT :PRINT "     3.   BUSHELS"
1360 PRINT :PRINT "     4.   CUBIC FEET
"
1370 PRINT :PRINT "     5.   CUBIC INCH
ES"
1380 PRINT :PRINT "     6.   LITERS"
1390 PRINT :PRINT "     7.   CUBIC CENT
IMETERS"
1400 PRINT :PRINT "     8.   EXIT TO ME
NU"
1410 GET #1,A:IF A<49 OR A>56 THEN 1410
1420 A$=CHR$(A):A=VAL(A$)
1450 REM --CONVERT EVERYTHING TO GALLONS
--
1455 TRAP 1450
1460 ON A GOTO 1470,1490,1510,1530,1550,
1570,1590,100
1470 PRINT "HOW MANY GALLONS ";
1480 INPUT A:GOTO 1610
1490 PRINT "HOW MANY QUARTS ";
1500 INPUT B:A=B/4:GOTO 1610
1510 PRINT "HOW MANY BUSHELS ";
1520 INPUT C:A=C*9.309:GOTO 1610
1530 PRINT "HOW MANY CUBIC FEET ";
1540 INPUT D:A=D*7.481:GOTO 1610
1550 PRINT "HOW MANY CUBIC INCHES ";
1560 INPUT E:A=E/231:GOTO 1610
1570 PRINT "HOW MANY LITERS ";
1580 INPUT F:A=F/3.785:GOTO 1610
1590 PRINT "HOW MANY CUBIC CENTIMETERS "
;
1600 INPUT G:A=G/3785:GOTO 1610
1610 REM --PRINT VOLUME EQUIVALENCE TABL
ES--
1620 GRAPHICS 0:PRINT :PRINT
1630 PRINT :PRINT "    GALLONS      =
";A
1640 PRINT :PRINT "    QUARTS       =
";A*4
1650 PRINT :PRINT "    BUSHELS      =
";A/9.309
1660 PRINT :PRINT "    CUBIC FEET   =
";A/7.481
1670 PRINT :PRINT "    CUBIC INCHES  =
";A*231
1680 PRINT :PRINT "    LITERS         =
";A*3.785
1690 PRINT :PRINT "    CUBIC CENTIMETERS=
";A*3785
1695 IF A<0 THEN GOSUB 2400
1700 PRINT :PRINT "    DO YOU WANT ANOTH
ER VOLUME?"
1710 PRINT "          Y OR N ";
1720 INPUT A$:IF A$="Y" THEN GOTO 1300
1730 GOTO 100
1800 REM --TEMPERATURE CONVERSIONS--
1810 GRAPHICS 0:PRINT :PRINT :PRINT
1820 PRINT " TEMPERATURE - CONVERT FROM
:"
1825 PRINT :PRINT :PRINT
1830 PRINT :PRINT "     1.  FARENHEIT"
1840 PRINT :PRINT "     2.  CENTIGRADE
"
1850 PRINT :PRINT "     3.  KELVIN"
1860 ? :? "     4.  EXIT TO MENU"
1870 GET #1,A:IF A<49 OR A>52 THEN 1870
1880 A$=CHR$(A):A=VAL(A$)
1890 IF A<1 OR A>4 THEN GOTO 1800
1900 REM --CONVERT EVERYTHING TO CENTIGR
ADE--
1905 TRAP 1900
1910 ON A GOTO 1920,1940,1960,100
1920 PRINT "HOW MANY DEGREES FARENHEIT "
;
1930 INPUT A:B=(A-32)*5/9:GOTO 1980
1940 PRINT "HOW MANY DEGREES CENTIGRADE"
;
1950 INPUT B:GOTO 1980
1960 PRINT "HOW MANY DEGREES KELVIN";
1970 INPUT C:B=C-273:GOTO 1980
1980 REM --PRINT TEMPERATURE EQUIVALENCE
 TABLES--
1990 GRAPHICS 0:PRINT :PRINT :PRINT :PRI
NT
2000 PRINT :PRINT "    FARENHEIT = ";B
*9/5+32
2010 PRINT :PRINT "    CENTIGRADE = ";B
2020 PRINT :PRINT "    KELVIN     = ";B
+273
2030 IF B<-273 THEN GOSUB 2500
2040 PRINT :PRINT :PRINT "DO YOU WANT AN
OTHER TEMPERATURE?"
2050 PRINT :PRINT "          Y OR N";
2060 INPUT A$:IF A$="Y" THEN GOTO 1800
2070 GOTO 100
2300 TRAP 2320
2310 RUN "D:MENU"
2320 GRAPHICS 0:END
2400 PRINT :PRINT :PRINT "HOLD YOUR HORS
ES--NO MINUSES ALLOWED"
2410 RETURN
2500 PRINT :PRINT "   !!!WAIT, YOU CAN'T
 DO THAT!!!"
2510 PRINT "ZERO DEGREES KELVIN = ABSOLU
TE BOTTOM"
2520 RETURN
```

```
212 TRAP 230 (FINANCIAL CALCULATOR)
213 DIM A$(2),FI$(10),N$(6)
214 DIM FI$(10)
215 DIM N$(6)
216 GOTO 270
217 ? :? "PRESS RETURN FOR PROGRAM MENU.
"
218 INPUT A$:IF A$="A$" THEN 230
230 GRAPHICS 0:PRINT :PRINT
235 TRAP 1471
240 PRINT :PRINT :PRINT "            COM
PUTE:"
250 PRINT
260 PRINT :PRINT "       1.  INTEREST RA
TE"
270 PRINT :PRINT "       2.  PAYMENT"
280 PRINT :PRINT "       3.  NUMBER OF P
AYMENTS"
290 PRINT :PRINT "       4.  AMOUNT OF L
OAN"
300 ? :? "       5.  RETURN TO MASTER ME
NU"
310 ? :? :?
320 PRINT "ENTER NUMBER, PLEASE ";
360 INPUT A:A=INT(A)
370 IF A<1 OR A>5 THEN 230
380 IF A=5 THEN GRAPHICS 0:TRAP 1700:RUN
"D:MENU"
400 ON A GOTO 410,700,900,1030
410 GRAPHICS 0:PRINT :PRINT :PRINT "
   COMPUTE INTEREST RATE"
420 ? :?
450 GOSUB 1380
460 ?
470 GOSUB 1430
480 N=N*N1
490 ?
500 GOSUB 1260
510 ?
520 GOSUB 1320
530 GOSUB 580
540 ? :?
550 F=I*1000:PRINT "PERCENTAGE RATE = ";
:GOSUB 1480
560 F=I*1200:PRINT "ANNUAL PERCENTAGE RA
TE = ";:GOSUB 1480:PRINT F
570 GOTO 217
580 U1=PV/PM1
590 I=1/U1-U1/N/2
600 U1=U1*I
610 U2=(1+I)^-N
620 U3=1-U2
630 U4=U1-U3
640 U5=((((N*(1/I+1)+1)*U2)-1)/I)
650 U6=U4/U5
660 I=I+U6
```

```
670 U7=ABS(U6)
680 IF 1E-05<U7 THEN 600
690 RETURN
700 GRAPHICS 0:PRINT :PRINT
710 PRINT "COMPUTE PAYMENT"
720 ? :?
730 GOSUB 1200
740 PRINT
750 GOSUB 1260
760 PRINT
770 GOSUB 1430
780 PRINT
790 GOSUB 1380
800 PRINT :PRINT
810 N=N*N1
820 I=I/1200
830 I1=I+1
840 PM1=PV*(I/(1-I1^-N))
850 PRINT "PAYMENT AMOUNT = $";:F=PM1:GOS
UB 1480:PRINT F
852 PRINT "AMOUNT ACTUALLY PAID = $";:F=P
M1*N:GOSUB 1480:PRINT F
854 PRINT "AMOUNT OF INTEREST PAID = $";:
F=F-PV:GOSUB 1480:PRINT F
860 GOTO 217
870 F=I*1000:? "DO YOU MEAN":GOSUB 1480:
? "% (Y / N)";
880 GET #1,A:N$=CHR$(A)
885 IF N$="N" THEN 870

890 I=I/100:RETURN
900 GRAPHICS 0:PRINT :PRINT
910 PRINT "        COMPUTE NUMBER OF PAYM
ENTS"
920 PRINT :PRINT :PRINT
930 GOSUB 1200
940 PRINT
950 GOSUB 1260
960 PRINT
962 GOSUB 1380
964 PRINT
970 GOSUB 1320
990 I=I/1200
1000 N=-((LOG(1-I*PV/PM1)/LOG(1+I)))
1010 PRINT " NUMBER OF PAYMENTS: ";:F=N:
GOSUB 1480:PRINT F
```

```
1020 GOTO 217
1030 GRAPHICS 0:PRINT :PRINT
1040 PRINT "  COMPUTE AMOUNT OF LOAN"
1050 PRINT :PRINT :PRINT :PRINT
1060 GOSUB 1200
1070 PRINT
1080 GOSUB 1320
1090 PRINT
1100 GOSUB 1380
1110 PRINT
1120 GOSUB 1430
1130 PRINT :PRINT :PRINT
1140 N=N*N1
1150 I=I/1200
1160 PV=PMT*((1-(1+I)^-N)/I)
1165 F=PMT*N:PRINT "AMOUNT ACTUALLY PAID
: $";:GOSUB 1480:PRINT F
1167 F=F-PV:PRINT "AMOUNT OF INTEREST PA
ID: $";:GOSUB 1480:PRINT F
1170 F=PV:PRINT "AMOUNT OF LOAN: $";:GOS
UB 1480:PRINT F
1180 GOTO 217
1190 GOTO 1470
1200 REM --ENTER INTEREST RATE--
1210 PRINT "ENTER INTEREST RATE  "
1220 INPUT I:IF I<0 THEN GRAPHICS 0:GOTO
 1210

1230 IF I<1 THEN GOSUB 870
1240 F=I:GOSUB 1480
1250 RETURN
1260 REM --AMOUNT OF LOAN--
1260 REM --AMOUNT OF LOAN--
1270 PRINT "ENTER AMOUNT OF LOAN. "
1280 INPUT PV
1290 IF PV<0 THEN GRAPHICS 0:GOTO 1270
1300 F=PV:GOSUB 1480
1310 RETURN
1320 REM --ENTER AMOUNT OF PAYMENT--
1330 ? "ENTER AMOUNT OF PAYMENT. "
1340 INPUT PMT
1350 IF PMT<=0 THEN GRAPHICS 0:GOTO 1330

1360 GOSUB 1480
1370 RETURN
1380 REM --INPUT NUMBER OF PAYMENTS PER
YEAR--
1390 PRINT "ENTER NUMBER OF PAYMENTS PER
 YEAR. "
1400 INPUT N:IF N<1 THEN GRAPHICS 0:GOTO
 1390
1420 RETURN
1430 PRINT "ENTER NUMBER OF YEARS "
1440 INPUT N1:IF N1<0 THEN GOTO 1430
1460 RETURN
1470 GOTO 1600
1471 GRAPHICS 0:? "        DOES NOT COMP
UTE!"
1472 FOR W=1 TO 200:NEXT W
1473 GOTO 230
1480 F=F*100+0.5
1490 F=INT(F)
1520 F=F/100
1525 IF F<0 THEN 1471
1540 RETURN
1600 TRAP 1620
1610 RUN "D1:MENU"
1620 GRAPHICS 0:END
```

```
1391 DIM A$(1)
1392 OPEN #1,4,0,"K:"          DEMOLITION
1400 GRAPHICS 0                   DERBY
1410 PRINT :PRINT
1420 PRINT "     DEMOLITION DERBY"
1430 PRINT :PRINT
1440 PRINT "DEMOLITION DERBY IS A FAST-M
OVING"
1450 PRINT "GAME OF STRATEGY WHERE TWO P
LAYERS"
1460 PRINT "TRY TO FORCE EACH OTHER INTO
 THE"
1470 PRINT "WALL OR INTO A TRAIL.":PRINT

1480 PRINT "USE JOYSTICKS IN THE LEFT TW
O SLOTS"
1490 PRINT "TO GO UP, RIGHT, LEFT, OR DO
WN."
1500 PRINT "IT DOES NOT RESPOND TO A DIA
GONAL"
1510 PRINT "COMMAND.":PRINT
1521 PRINT "EACH TIME YOU DEMOLISH YOUR"

1522 PRINT "OPPONENT BY FORCING HIM TO C
RASH,"
1523 PRINT "YOU GET A POINT! (WOW)  FIRS
T"
1524 PRINT "PLAYER TO 3 POINTS WINS!"
1526 PRINT :PRINT "PUSH RETURN TO GO ON"
;
1530 INPUT A$
1535 GOSUB 3000
1540 XS=0:YS=0
1550 GRAPHICS 3+16:COLOR 2
1555 SETCOLOR 0,3,4
1560 PLOT 0,0:DRAWTO 39,0
1570 DRAWTO 39,20:DRAWTO 0,20:DRAWTO 0,0
1580 X1=4:Y1=10
1590 D1=1:E1=0
1600 X2=35:Y2=10
1610 D2=-1:E2=0
1630 COLOR 1:PLOT X1,Y1
1650 COLOR 3:PLOT X2,Y2
1660 MV1=STICK(0):MV2=STICK(1)
1680 IF MV1=14 THEN D1=0:E1=-1
1690 IF MV1=11 THEN D1=-1:E1=0
1700 IF MV1=13 THEN D1=0:E1=1
1710 IF MV1=7 THEN D1=1:E1=0
1720 IF MV2=14 THEN D2=0:E2=-1
1730 IF MV2=11 THEN D2=-1:E2=0
1740 IF MV2=13 THEN D2=0:E2=1
1750 IF MV2=7 THEN D2=1:E2=0
1760 FOR W=1 TO 200 STEP WAIT:NEXT W
1790 X1=X1+D1:Y1=Y1+E1
1800 X2=X2+D2:Y2=Y2+E2
1810 IF X1<0 OR X1>39 THEN 1980
1820 IF X2<0 OR X2>39 THEN 2040
1830 IF Y1<0 OR Y1>20 THEN 1980
1840 IF Y2<0 OR Y2>20 THEN 2040
1850 LOCATE X1,Y1,B
1855 IF B<>0 THEN 1880
1860 LOCATE X2,Y2,C
1865 IF C<>0 THEN 1930
1870 GOTO 1630
1880 REM --X CRASH--
1890 LOCATE X2,Y2,D
1895 IF D<>0 THEN 2100
1900 COLOR 1
1910 PLOT X1,Y1
1920 YS=YS+1:GOTO 2140
1930 REM --Y CRASH--
1940 LOCATE X1,Y1,E
1945 IF E<>0 THEN 2100
1950 COLOR 3
1960 PLOT X2,Y2
1970 XS=XS+1:GOTO 2140
1980 REM --X OVERFLOW--
1990 IF X1<0 THEN X1=0
2000 IF X1>39 THEN X1=39
2010 IF Y1<0 THEN Y1=0
2020 IF Y1>20 THEN Y1=20
2030 GOTO 1900
2040 REM --Y OVERFLOW--
2050 IF X2<0 THEN X2=0
2060 IF X2>39 THEN X2=39
2070 IF Y2<0 THEN Y2=0
2080 IF Y2>20 THEN Y2=20
2090 GOTO 1950
2100 REM --TIED CRASHES--
2110 COLOR 1:PLOT X1,Y1
2120 XS=XS+1:YS=YS+1
2135 IF XS=3 AND YS=3 THEN GRAPHICS 2:?
#6;? #6;"IT'S A TIE":GOTO 2190
2140 IF XS=3 THEN GRAPHICS 2:? #6;? #6;?
 #6;" RED PLAYER WINS!!":GOTO 2190
2150 IF YS=3 THEN GRAPHICS 2:? #6;? #6;?
 #6;" BLUE PLAYER WINS!!":GOTO 2190
2160 FOR X=100 TO 200
2162 SOUND 2,200-X,10,12
2163 SOUND 3,60,10,15
2165 NEXT X
2167 SOUND 2,0,0,0
2168 SOUND 3,0,0,0
2170 GOTO 1550
2190 ? #6;? #6;? #6;"    PLAY AGAIN?"
2191 SOUND 0,243,10,8:SOUND 1,96,10,8
2192 FOR W=1 TO 200:NEXT W
2193 ? #6;? #6;"      Y / N ?"
2195 SOUND 0,0,0,0:SOUND 1,0,0,0:GET #1,
A
2196 A$=CHR$(A)
2197 IF A$="Y" THEN 1535
2220 GRAPHICS 0
2222 SOUND 0,0,0,0
2224 SOUND 1,0,0,0
2230 TRAP 2250
2240 RUN "D:MENU"
2250 GRAPHICS 0:END
3000 GRAPHICS 0:? "     INPUT SPEED. (1=
SLOW TO 9=FAST) "
3010 GET #1,A:IF A<49 OR A>57 THEN 3010
3020 A$=CHR$(A):WAIT=VAL(A$)
3030 RETURN
```

31

```
3740 X1=X+4:Y1=Y+2
3750 Y1=39-Y1
3760 X1=INT(X1):Y1=INT(Y1)
3770 IF Y1>39 THEN 3980
3780 IF X1>79 THEN 3880
3790 IF Y1<0 THEN 3870
3800 LOCATE X1,Y1,CLR:IF CLR=1 THEN 3900

3810 IF CLR=3 THEN 3980
3820 L=10
3830 IF Y1<0 THEN 3850
3840 REM -----------
3850 REM -----------
3860 PLOT X1,Y1
3870 X=X+1:GOTO 3715
3880 GOTO 4120
3900 REM --HIT BARRIER--
3910 FOR X=0 TO 3
3920 COLOR X
3930 PLOT X1,Y1
3940 GOSUB 4210
3950 NEXT X
3960 COLOR 0:PLOT X1,Y1
3970 GOTO 3390
3980 REM --MAYBE YES, MAYBE NO--
3990 IF Y1>39 THEN Y1=39
4000 LOCATE X1,Y1,E
4010 IF X1>=22 AND X1<=25 THEN C1=A1:L1=
22:L2=25
4020 IF X1>=28 AND X1<=31 THEN C1=A2:L1=
28:L2=31
4030 IF X1>=34 AND X1<=37 THEN C1=A3:L1=
34:L2=37
4040 IF E<>3 THEN 4120
4050 REM --YES--
4060 COLOR 2
4065 FOR X=1 TO 6
4070 PLOT L1,40-X:DRAWTO L2,40-X
4085 L=4
4090 GOSUB 4230
4100 NEXT X
4110 GOTO 3390
4120 REM --NO--
4130 GOSUB 4190

4140 GOTO 3390
4150 REM
4160 GRAPHICS 2:? #6:? #6:? #6
4170 ? #6;"FINAL SCORE = ";:? #6;SC
4180 ? #6:? #6:? #6;"   PLAY AGAIN? Y/N"
```

```
4182 GET #1,A:A$=CHR$(A)
4184 IF A$<>"Y" THEN 4270
4185 GOTO 3380
4190 GOTO 4600
4210 GOTO 4700
4220 REM
4230 GOTO 4800
4250 REM
4260 RETURN
4270 TRAP 4290
4280 RUN "D:MENU"
4290 GRAPHICS 0:END
4570 GOTO 4700
4600 REM --RASBERRY--
4610 FOR Z=200 TO 250 STEP 5
4620 SOUND 0,Z,14,8
4630 FOR W=1 TO 5:NEXT W
4640 NEXT Z
4660 SOUND 0,0,0,0
4670 RETURN
4700 REM --NOISE--
4710 FOR Z=1 TO 2
4720 FOR V=0 TO 15
4730 SOUND 0,100,10,V
4740 NEXT V
4750 NEXT Z
4760 SOUND 0,0,0,0
4770 RETURN
4800 REM --SCALE--
4810 FOR Z=1 TO 8
4820 READ N
4830 SOUND 0,N,10,8
4850 NEXT Z
4870 SOUND 0,0,0,0
4880 RESTORE
4890 RETURN
```

```
5 DATA 122,109,97,92,82,73,65,61
10 DIM A$(10):R=5
20 GRAPHICS 0:? :? :? :? :? ⌐ MATH ⌐
25 TRAP 20
30 PRINT "          MATH    "
50 ? :? :? "    1.  ADD"
60 ? :? "    2.  SUBTRACT"
70 ? :? "    3.  MULTIPLY"
80 ? :? "    4.  DIVIDE"
85 ? :? "    5.  RETURN TO MASTER MEN
U"
90 ? :? "TYPE STOP AFTER A PROBLEM"
100 ? "TO RETURN TO MENU"
110 ? :? "ENTER YOUR NUMBER, PLEASE";
120 INPUT A$
130 IF A$="STOP" THEN 1320
140 A=VAL(A$):A=INT(A)
150 IF A<1 OR A>5 THEN ? "ENTER NUMBER F
ROM 1 TO 5":GOTO 120
160 ON A GOTO 370,580,790,1010,1320
370 REM -- ADD --
390 REM -- SET INITIAL LEVELS --
400 L1=10:L2=10
410 C=0:C1=0:REM -- SET COUNTER --
420 A1=INT(RND(1)*L1):A2=INT(RND(1)*L2)
421 GRAPHICS 2
422 POSITION 5,3:? #6;"ADDITION"
424 POSITION 5,4:? #6;"++++++++"
430 POSITION 5,7:? #6;A1;
435 ? "+";:? #6;A2;:? #6;"=";
440 INPUT A$
441 IF A$="STOP" THEN 20
445 A=VAL(A$):? #6;A
460 IF A=A1+A2 THEN 510
470 GOSUB 1290
480 ? #6;? #6;"  NO, ";:? #6;A1;:? #6;"+
";:? #6;A2;
490 ? #6;"=";:? #6;A1+A2
495 C=0:FOR W=1 TO 1000:NEXT W
500 GOTO 420
510 REM
520 ? #6;? #6;"  RIGHT !!!!!!!"
530 GOSUB 1380
540 C=C+1:IF C<R THEN 420
550 REM --DO NEXT LEVEL--
560 C1=C1+1
570 L1=L1+C1*10:L2=L1:C=0:GOTO 420
580 REM -- SUBTRACT--
600 L1=10:L2=10
610 C=0:C1=0
620 A1=INT(RND(1)*L1)
630 A2=INT(RND(1)*(A1+1)):REM --THIS AVO
IDS NEG. NUMBERS--
640 GRAPHICS 2
642 POSITION 5,3:? #6;"SUBTRACTION"
644 POSITION 5,4:? #6;"-----------"
646 POSITION 5,7:? #6;A1;
650 ? #6;"-";:? #6;A2;:? #6;"=";
660 INPUT A$
670 IF A$="STOP" THEN 20
680 A=VAL(A$):? #6;A
690 IF A=A1-A2 THEN 740
700 GOSUB 1290
710 ? #6;? #6;"  NO, ";:? #6;A1;:? #6;"-
";:? #6;A2;
720 ? #6;"=";:? #6;A1-A2
730 C=0:FOR W=1 TO 1000:NEXT W
735 GOTO 620
740 ? #6;? #6;"    RIGHT !!!!!!!"
750 GOSUB 1380
760 C=C+1:IF C<R THEN 620
770 C=0:C1=C1+1
780 L1=L1+5*C1:GOTO 620
790 REM --MULTIPLY--
810 L1=5:L2=5
820 C=0:C1=0
830 A1=INT(RND(1)*L1)
840 A2=INT(RND(1)*L2)
845 GRAPHICS 2
850 POSITION 4,3:? #6;"MULTIPLICATION"
855 POSITION 4,4:? #6;"XXXXXXXXXXXXX"
860 POSITION 4,7:? #6;A1;
865 ? #6;"X";:? #6;A2;:? #6;"=";
870 INPUT A$
880 IF A$="STOP" THEN 20
890 A=VAL(A$):? #6;A
900 IF A=A1*A2 THEN 950
910 GOSUB 1290
920 ? #6;? #6;"  NO, ";:? #6;A1;:? #6;"X"
;:? #6;A2;
925 ? #6;"=";:? #6;A1*A2
930 C=0:FOR W=1 TO 1000:NEXT W
940 GOTO 830
950 ? #6;? #6;"    RIGHT !!!!!!!"
960 GOSUB 1380
970 C=C+1:IF C<R THEN 830
980 C=0:C1=C1+1
990 IF L1=L2 THEN L1=L1*2:GOTO 830
1000 L2=L2*2:GOTO 830
1010 REM --DIVISION--
1030 L1=5:L2=5
1040 C=0:C1=0
1050 A1=INT(RND(1)*L1)
1060 A2=INT(RND(1)*L1):IF A2=0 THEN 1060
1065 A1=A1*A2
1070 GRAPHICS 2
1080 POSITION 5,3:? #6;"DIVISION"
1090 POSITION 5,4:? #6;"////////"
1100 POSITION 5,7:? #6;A1;
1110 ? #6;"/";:? #6;A2;:? #6;"=";
1120 INPUT A$
1130 IF A$="STOP" THEN 20
1140 A=VAL(A$):? #6;A
1150 IF A=A1/A2 THEN 1210
```

```
1160 GOSUB 1390
1170 ? #6;? #6;" NO, ";? #6;A1;? #6,"
?";? #6;A2
1180 ? #6;"=";? #6;A1/A2
1190 C=0:FOR W=1 TO 1000:NEXT W
1200 GOTO 1050
1210 ? #6;? #6;"    RIGHT !!!!!!!"
1220 GOSUB 1380
1230 C=C+1:IF C>R THEN 1050
1240 C=0:C1=C1+1
1250 IF L1=L2 THEN L1=L1+3:GOTO 1050
1260 L2=L2+3:GOTO 1050
1290 REM --RASBERRY--
1300 FOR N=200 TO 250 STEP 5
1302 SOUND 0,N,14,8
1304 FOR W=1 TO 10:NEXT W
1306 NEXT N
1308 FOR W=1 TO 100:NEXT W
1310 SOUND 0,0,0,0
1312 RETURN
1320 TRAP 1340
1330 RUN "D:MENU"
1340 GRAPHICS 0:END
1380 REM --THAT ONE WAS RIGHT--
1390 FOR V=1 TO 8
1392 READ N
1394 SOUND 0,N,10,8
1395 FOR W=1 TO 20:NEXT W
1396 NEXT V
1397 FOR W=1 TO 100:NEXT W
1398 SOUND 0,0,0,0
1399 RESTORE
1400 RETURN

1 OPEN #1,4,0,"K:"
2 DIM A(40)
3 DIM A$(20)
5 DATA 122,109,97,92,82,73,65,61
1790 GRAPHICS 0
1800 POSITION 2,3
1810 ? "THINK IS A MEMORY TEST PROGRAM"
1820 ? "(YOURS,NOT THE ATARI'S).  THE AT
ARI"
1830 ? "WILL PLAY AND LIGHT UP NUMBERED"
1840 ? "RECTANGLES AT THE SAME TIME.  YO
U"
1850 ? "REPEAT BACK THE SAME SEQUENCE US
ING"
1860 ? "THE NUMBERS ON THE ATARI'S KEYBO
ARD."
1880 ? :? "YOU CAN VARY THE LENGTH OF TH
E TONES"
1890 ? "PLAYED BY SETTING YOUR SPEED FRO
M 1"
1900 ? "TO 255, 1 IS THE FASTEST, 255 IS
 THE"
1910 ? "SLOWEST.  TRY 150 TO START."
1920 ? :? :? :? :? :? "           SPEED
= ";
1950 TRAP 1920:INPUT L:L=INT(L)
1960 IF L<1 OR L>255 THEN ? "1 TO 255, P
LEASE":GOTO 1950
1970 GOSUB 2920
1990 GRAPHICS 3+16:COLOR 1
2000 PLOT 0,7:DRAWTO 7,7
2010 PLOT 3,7:DRAWTO 3,20
2020 PLOT 4,7:DRAWTO 4,20
2030 COLOR 2
2040 PLOT 9,7:DRAWTO 9,20
2050 PLOT 10,7:DRAWTO 10,20
2060 PLOT 15,7:DRAWTO 15,20
2070 PLOT 14,7:DRAWTO 14,20
2080 PLOT 9,13:DRAWTO 15,13
2090 COLOR 3
2100 PLOT 17,7:DRAWTO 23,7
2110 PLOT 17,20:DRAWTO 23,20
2120 PLOT 20,7:DRAWTO 20,20
2130 COLOR 1
2140 PLOT 25,7:DRAWTO 25,20
2150 PLOT 31,7:DRAWTO 31,20
2160 DRAWTO 25,7
2250 COLOR 3
2260 PLOT 33,7:DRAWTO 33,20
2270 PLOT 39,7:DRAWTO 34,13
2280 DRAWTO 39,20
2400 COLOR 2
2410 PLOT 2,23:DRAWTO 6,23
2420 PLOT 8,23:DRAWTO 12,23
2430 PLOT 14,23:DRAWTO 18,23
2440 PLOT 20,23:DRAWTO 24,23
2450 PLOT 26,23:DRAWTO 30,23
2460 PLOT 32,23:DRAWTO 36,23
2465 FOR W=1 TO 300:NEXT W
2470 GRAPHICS 2
2480 FOR X=1 TO 6
```

```
2490 POSITION 2+(X-1)*3,1:? #6;X
2500 NEXT X
2520 FOR X=1 TO 40
2530 B=INT(RND(1)*6)+1
2535 A(X)=B
2540 NEXT X
2550 ST=0
2560 SC=0
2570 POSITION 2,5:? #6;"STRIKES = ";:? #
6;ST
2575 POSITION 2,7:? #6;"SCORE   = ";:? #
6;SC
2576 FOR W=1 TO 500:NEXT W
2580 FOR X=1 TO SC+1
2600 C=A(X)
2610 GOSUB 2790
2620 NEXT X
2631 REM --YOUR TURN--
2640 FOR X=1 TO SC+1

2650 GET #1,A:A$=CHR$(A)
2652 TRAP 2650
2655 IF A$=" " THEN END
2660 A=VAL(A$):IF A=0 OR A>6 THEN 2650
2670 IF A<>A(X) THEN 2740
2680 C=A:GOSUB 2790
2690 NEXT X
2710 SC=SC+1
2720 IF SC>39 THEN GRAPHICS 2:? #6:? #6;
"  PERFECT !!":GOTO 3250
2730 GRAPHICS 2:GOTO 2570
2740 GOSUB 2880
2750 ST=ST+1
2770 IF ST<3 THEN GRAPHICS 2:GOTO 2570
2780 GOTO 3200
2790 REM --BEEP AND SHOW--
2800 GRAPHICS 5:COLOR 1
2810 C1=12*(C-1)
2815 C2=12*C
2820 PLOT C1+4,23:DRAWTO C2+4,23
2830 N=C*2-(C>4)
2840 GOSUB 3000
2850 COLOR 2:PLOT C1+4,23:DRAWTO C2+4,23

2860 RETURN
2870 GOTO 2870
2871 REM ----------------
2880 REM --RASBERRY--
2882 FOR N=200 TO 250 STEP 5
2884 SOUND 0,N,14,8
2886 FOR W=1 TO 10:NEXT W
2888 NEXT N
2890 FOR W=1 TO 100:NEXT W
2892 SOUND 0,0,0,0
2900 RETURN
2910 GRAPHICS 0:END
2920 REM ----------------
2940 CC=2^(1/12)
2960 RETURN
2970 REM --RANDOM BLIP--
2971 FOR Z=1 TO 50
2972 FOR V=0 TO 15
```

```
2974 SOUND 0,100,10,V
2976 NEXT V
2980 NEXT Z
2990 RETURN
3000 REM --SCALE NOTE PLAYER--
3010 PRINT C
3020 ON C GOTO 3030,3040,3050,3060,3070,
3080
3030 SOUND 0,121,10,8:GOTO 3155
3040 SOUND 0,108,10,8:GOTO 3155
3050 SOUND 0,97,10,8:GOTO 3155
3060 SOUND 0,92,10,8:GOTO 3155
3070 SOUND 0,82,10,8:GOTO 3155
3080 SOUND 0,72,10,8:GOTO 3155
3155 FOR W=1 TO L:NEXT W
3157 SOUND 0,0,0,0
3190 RETURN
3200 GRAPHICS 2:POSITION 2,3
3210 ? #6;"THREE STRIKES!"
3220 POSITION 2,4:? #6;"YOU'RE OUT!"
3230 POSITION 2,6
3232 ? #6;"FINAL SCORE = ";:? #6;SC
3234 IF HS<SC THEN HS=SC
3235 POSITION 2,8
3236 ? #6;"HIGH SCORE  = ";:? #6;HS
3250 POSITION 2,9
3252 ? #6;"PLAY AGAIN? Y/N"
3254 GET #1,A
3256 A$=CHR$(A)
3260 IF A$="Y" THEN GRAPHICS 0:GOTO 1920

3265 IF A$<>"N" THEN 3254
3270 TRAP 3290
3280 FOR "D THRU"
3290 GRAPHICS 0:END
```
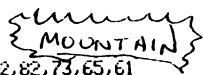
35

```
1 OPEN #1,4,0,"K:"
2 DIM A$(20)
5 DATA 122,109,97,92,82,73,65,61
3320 GRAPHICS 0:POSITION 14,3
3322 ? "MOUNTAIN":GOSUB 4570
3324 ? :? :? "THE OBJECT IS TO HIT A SER
IES OF"
3326 ? "TARGETS WITH YOUR  KABOOM  GUN."
3328 ? "YOU CONTROL THE VELOCITY AND THE
"
3330 ? "ANGLE OF THE PROJECTILE."
3332 ? :? "THE TARGETS ARE WORTH 10, 20,
 OR 30"
3334 ? "POINTS AND CHANGE AT RANDOM."
3336 ? :? :? "PRESS ANY KEY TO GO ON."
3338 GET #1,A
3340 GRAPHICS 0:? :? :? :? "BETWEEN YOU
AND THE TARGETS THERE IS"
3342 ? "A MOUNTAIN WHOSE HEIGHT CHANGES
AT"
3344 ? "RANDOM.  YOU MUST SHOOT OVER THE
"
3346 ? "MOUNTAIN TO REACH THE TARGET."
3348 ? :? "YOU ONLY HAVE 250 AMMO CHARGE
S."
3349 ? "SO TRY TO HIT THE 30 POINT TARGE
T"
3350 ? "WITH EACH SHOT."
3360 ? :? :? "PRESS ANY KEY TO GO ON."
3370 GET #1,A
3380 SH=250:SC=0:C1=0
3390 SC=SC+C1
3400 IF SH=0 THEN 4160
3410 C1=0
3415 MAX=INT(RND(1)*20)+15
3420 GRAPHICS 5
3435 SETCOLOR 1,13,10
3440 COLOR 1
3450 FOR X=0 TO 3
3460 PLOT X+14,MAX-(3-X):DRAWTO X+14,39
3470 PLOT 14-X,MAX-(3-X):DRAWTO 14-X,39
3480 NEXT X
3490 COLOR 2
3500 FOR X=0 TO 6
3510 PLOT 0,39-X:DRAWTO 4,39-X
3520 NEXT X
3530 REM --SET THE TARGETS--
3540 COLOR 3
3545 FOR H=0 TO 5
3550 PLOT 22,39-H:DRAWTO 25,39-H
3560 PLOT 28,39-H:DRAWTO 31,39-H
3570 PLOT 34,39-H:DRAWTO 37,39-H
3572 NEXT H
3580 A1=INT(RND(1)*3)+1
3590 A2=INT(RND(1)*3)+1:IF A1=A2 THEN 35
90
3600 A3=INT(RND(1)*3)+1:IF A1=A3 OR A2=A
3 THEN 3600
3610 A1=A1*10:A2=A2*10:A3=A3*10
3620 ? "         ";A1;"  ";A2;"  ";A3;" SC
ORE=";SC;" CHARGE=";SH
3630 IF SC>99 THEN 3650
3640 ?
3650 ? "
            "
3660 ? " INPUT CHARGE ";
3670 TRAP 3650
3672 INPUT V
3673 ?
3674 ? "
            "
3675 ? " INPUT ANGLE ";
3676 TRAP 3674
3677 INPUT O
3680 IF O<1 OR O>89 THEN ? :? :? :? "ANG
LE OUT OF RANGE":GOTO 3620
3695 IF SH<V THEN GRAPHICS 1:POSITION 9,
5:? #6;"POP":FOR W=1 TO 200:NEXT W:GOTO
3430
3697 SH=SH-V
3700 O=O*3.14159265/180
3710 X=0
3712 SOUND 0,57,8,8
3715 T=X/(V*COS(O))
3720 Y=V*T*SIN(O)-4.9*T^2
3730 COLOR 2
```

```
1 DIM A$(10)
5 OPEN #1,4,0,"K:"    BLACK HOLE CHASE
6 DATA 122,109,97,92,82,73,65,61
220 GOSUB 1060
230 GRAPHICS 0:? :?
240 ? "        BLACK HOLE CHASE "
250 ?
260 ? "YOU ARE BEING CHASED BY CREATURES
"
265 ? "FROM A BLACK HOLE.  YOU MUST PILO
T"
270 ? "YOUR SPACECRAFT ACROSS THE GALAXY
"
280 ? "AND AWAY FROM THEM AS FAST AS"
290 ? "POSSIBLE.  AT THE SAME TIME, YOU"
300 ? "MUST AVOID MOVING INTO YOUR OWN V
APOR"
310 ? "TRAIL (WHICH IS RADIOACTIVE AND D
IS-"
320 ? "APPEARS AFTER A WHILE) AND AVOID"
330 ? "HITTING THE EDGE OF THE GALAXY.
THE"
340 ? "EDGE OF THE GALAXY IS VISIBLE AT"
345 ? "FIRST, AND THEN LITTLE BY LITTLE
THE"
350 ? "CREATURES MAKE PARTS OF THE EDGE"
360 ? "DISAPPEAR BY TURNING IT INTO A BL
ACK"
370 ? "HOLE-SO DON'T RUN INTO THE HOLE O
R"
380 ? "THEY'LL GET YOU."
390 ? :? "PRESS SPACE TO GO ON."
400 GET #1,A
410 GRAPHICS 0
420 ? :? :?
430 ? "USE THE I,J,K,AND M KEYS TO MOVE"
440 ? "UP, LEFT, RIGHT AND DOWN THROUGH
THE"
450 ? "GALAXY.  YOU CAN SET THE DIFFICUL
TY"
460 ? "LEVEL FROM 0 TO 9.  ZERO WILL GIV
E"
470 ? "YOU A GALAXY WITHOUT ANY OBSTACLE
S TO"
480 ? "MOVE AROUND.  LEVELS OF DIFFICULT
Y"
490 ? "(1-9) WILL GIVE YOU AN INCREASING
"
495 ? "NUMBER OF PLANETS AND STARS TO MO
VE"
500 ? "YOUR SHIP AROUND.  IF YOU CAN OUT
RUN"
510 ? "THE BLACK HOLE CREATURES FOR 200"
520 ? "HOURS, THEY'LL RUN OUT OF FUEL BE
FORE"
530 ? "YOU DO AND YOU WILL BE SAVED."
540 ?
```

```
550 ? "  DIFFICULTY LEVEL (0-9)= ";
555 GET #1,A:A$=CHR$(A)
556 IF A<48 OR A>57 THEN 555
557 D=VAL(A$)
560 GRAPHICS 5
590 COLOR 5:PLOT 0,0:DRAWTO 79,0:DRAWTO
79,39:DRAWTO 0,39:DRAWTO 0,0
600 S=0
610 IF D=0 THEN 920
620 REM --
630 X=40:Y=20
640 COLOR 2
650 PLOT X,Y
660 XD=INT(RND(1)*3+1)-2
670 IF XD=0 THEN 660
680 YD=0
690 IF PEEK(764)<>255 THEN 820
700 IF X+XD>79 OR X+XD<0 THEN 900
710 IF Y+YD>39 OR Y+YD<0 THEN 900
720 X=X+XD
730 Y=Y+YD
740 COLOR 3:PLOT INT(RND(1)*80+1)-1,INT(
RND(1)*40+1)-1
750 LOCATE X,Y,COL:IF COL<>0 THEN 900
760 COLOR 2
770 GOSUB 1110
780 S=S+1
790 IF S<>200 THEN 800
792 GRAPHICS 2:POSITION 4,4:? #6;"YOU HA
VE OUT"
794 POSITION 6,6:? #6;"RUN THE"
795 POSITION 5,8:? #6;"CREATURES!"
796 GOSUB 1140
797 FOR W=1 TO 200:NEXT W
798 GOTO 1370
800 PLOT X,Y
810 GOTO 690
820 GET #1,A:A$=CHR$(A)
830 X1=XD:Y1=YD
840 XD=0:YD=0
850 IF A$="J" THEN XD=-1:GOTO 690
860 IF A$="K" THEN XD=1:GOTO 690
870 IF A$="M" THEN YD=1:GOTO 690
880 IF A$="I" THEN YD=-1:GOTO 690
890 XD=X1:YD=Y1:GOTO 690
900 GRAPHICS 2:POSITION 7,5:PRINT #6;"CR
ASH"
905 GOSUB 1020
910 GOTO 1340
920 REM --SET OBSTRUCTIONS--
930 FOR X=1 TO 10*D
940 COLOR 1
950 X1=INT(RND(1)*77+1)+1
960 Y1=INT(RND(1)*37+1)+1
970 IF X1=40 AND Y1=20 THEN 950
990 PLOT X1,Y1
1000 NEXT X
```

```
1010 GOTO 620
1020 REM --RASBERRY--
1030 FOR RAS=200 TO 250 STEP 5
1032 SOUND 0,RAS,14,8
1033 SOUND 1,50,8,8
1034 FOR W=1 TO 10:NEXT W
1036 NEXT RAS
1038 FOR W=1 TO 100:NEXT W
1040 SOUND 0,0,0,0
1041 SOUND 1,0,0,0
1042 RETURN
1050 GRAPHICS 0:END
1060 FOR INTRO=1 TO 250
1062 SOUND 0,INTRO,10,8
1064 SOUND 1,250-INTRO,10,8
1068 NEXT INTRO
1070 SOUND 0,0,0,0
1072 SOUND 1,0,0,0
1100 RETURN
1110 REM --BLIP--
1111 KB=2:IF S>100 THEN KB=1
1112 AMB=1:IF S>30 THEN AMB=3
1113 FOR BLIP=1 TO KB
1114 FOR PILB=0 TO 15 STEP AMB
1116 SOUND 0,50,10,PILB
1118 NEXT PILB
1120 NEXT BLIP
1125 SOUND 0,0,0,0
1130 RETURN
1140 REM --SCALE--
1150 FOR SCALE=1 TO 8
1160 READ N
1170 SOUND 0,N,10,8
1180 FOR W=1 TO 20:NEXT W
1190 NEXT SCALE
1200 FOR W=1 TO 150:NEXT W
1210 SOUND 0,0,0,0
1220 RESTORE
1320 RETURN
1340 D=10-D
1350 IF D=0 THEN D=5
1370 REM --
1373 GRAPHICS 2:POSITION 3,3:? #6;"YOUR
SCORE = ";:? #6;S
1375 POSITION 5,5:? #6;"PLAY AGAIN?"
1377 POSITION 7,7:? #6;"Y / N"
1378 GET #1,A:A$=CHR$(A):IF A$="Y" THEN
GRAPHICS 0:GOTO 540
1379 IF A$<>"N" THEN 1378
1380 TRAP 1400
1390 RUN "D:MENU"
1400 GRAPHICS 0:END
```

```
1 DIM A$(10)
5 OPEN #1,4,0,"S:"          {LEMANS}
6 OPEN #2,4,0,"K:"
1020 GRAPHICS 0:? :? "          LEMANS "
:?
1030 ? "SAFARI LEMANS CAN BE AS HARD AS
THE"
1040 ? "REAL THING OR AS EASY AS A SUNDA
Y"
1050 ? "DRIVE.":?
1060 ? "TO START THE RACE, PRESS THE JOY
STICK"
1070 ? "TOWARD THE TOP POSITION.  TOP"
1080 ? "POSITION INCREASES SPEED, BACK"
1090 ? "POSITION SLOWS SPEED."
1100 ? :? "THE FASTER YOU TRAVEL, THE FA
STER"
1110 ? "YOUR SCORE ADDS UP...SO GO!!!!!!
"
1120 ? :? "YOU HAVE 60 SECONDS, SO HURRY
!"
1150 ? :? :? "PUSH RETURN TO GO ON"
1152 INPUT A$
1154 SEC=INT((PEEK(18)*65536+PEEK(19)*25
6+PEEK(20))/60)
1160 GRAPHICS 0
1170 SP=0:FIRSTX=12:NCARPOS=16:SC=0
1180 FOR STBORDER=1 TO 19:GOSUB 1600:NEX
T STBORDER
1190 REM --PUT CAR IN PLACE--
1200 POSITION NCARPOS,12:? " ":POKE (752
),1
1210 POSITION NCARPOS,11:? " "
1220 STK=STICK(0)
1222 SEC1=INT((PEEK(18)*65536+PEEK(19)*2
56+PEEK(20))/60)
1224 SECONDS=SEC1-SEC:POSITION 2,1:PRINT
SECONDS
1226 IF SECONDS=60 THEN GRAPHICS 2:GOTO
1752
1230 IF STK=10 OR STK=14 OR STK=6 THEN S
P=SP+1
1240 IF STK=9 OR STK=13 OR STK=5 THEN SP
=SP-1
1250 IF SP<0 THEN SP=0
1260 IF SP>10 THEN SP=10
1270 IF SP=0 THEN 1220
1280 RL=RND(1)
1290 IF RL>0.52 THEN FIRSTX=FIRSTX+1.3
1300 IF RL<0.48 THEN FIRSTX=FIRSTX-1.3
1310 IF FIRSTX<0 THEN FIRSTX=0
1320 IF FIRSTX>29 THEN FIRSTX=29
1330 GOSUB 1600
1335 SOUND 0,200-7*SP,6,8
1336 SOUND 1,250-20*SP,10,8
1337 IF SP=10 THEN 1350
1340 FOR W=0 TO 200-SP*20:NEXT W
1350 POSITION NCARPOS,11:? " "
1355 POSITION NCARPOS,10:? " "
1360 IF STK>=9 AND STK<=11 THEN NCARPOS=
NCARPOS-1
```

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```
1370 IF STK>=5 AND STK<=7 THEN NCARPOS=N
CHRPOS+1
1380 POSITION NCARPOS,12
1386 GET #1,A
1387 POKE (93),A
1420 IF PEEK(93)=88 THEN 1630
1425 POSITION NCARPOS,12:PRINT " "
1426 POSITION NCARPOS,11:PRINT " "
1428 SC=SC+1:SP
1430 GOTO 1370
1600 REM ---
1610 POSITION FIRSTX,23:? "%%     %%"
1620 RETURN
1630 SOUND 2,30,10,12
1640 FOR N=0 TO 200 STEP 5
1650 SOUND 3,N,10,8
1660 GRAPHICS 2:POSITION 6,3:? #6;"CRASH
"
1665 POSITION 3,6:? #6;"SCORE = ";
1666 ? #6;SC
1670 NEXT N
1680 FOR W=1 TO 300:NEXT W
1690 FOR SND=0 TO 3
1700 SOUND SND,0,0,0
1710 NEXT SND
1740 POSITION 3,8:? #6;"PLAY AGAIN? Y/N"
1745 GET #2,A
1747 A$=CHR$(A)
1748 IF A$="Y" THEN 1154
1749 IF A$<>"N" THEN 1745
1750 GOTO 1760
1752 POSITION 3,6:? #6;"SCORE = ";
1753 SOUND 0,0,0,0:SOUND 1,0,0,0
1754 ? #6;SC:GOTO 1740
1760 TRAP 1780
1770 RUN "D:MENU"
1780 GRAPHICS 0:END
```

```
1 OPEN #1,4,0,"K:"
3 DATA 81,2,81,2,91,1,96,1
4 DATA 96,2,102,1,96,1,96,5
5 DIM A$(10)
110 GRAPHICS 3+16
112 SETCOLOR 1,5,6
114 FOR COL=1 TO 19
115 COLOR COL
116 SOUND 0,40,COL/2,8
120 PLOT 5,2:DRAWTO 5,17:DRAWTO 10,17
130 PLOT 12,6:DRAWTO 12,17
140 DRAWTO 17,17:DRAWTO 17,6
150 PLOT 19,17:DRAWTO 19,6
160 DRAWTO 25,17:DRAWTO 25,6
170 PLOT 27,17:DRAWTO 27,11
180 DRAWTO 30,6:DRAWTO 33,11
190 DRAWTO 33,17:PLOT 27,12
200 DRAWTO 33,12
210 NEXT COL
220 FOR W=1 TO 1200:NEXT W
230 SOUND 0,0,0,0
240 GOTO 1030
500 GRAPHICS 0:? :? :? :?
510 ? "FUEL=":POKE (752),1
511 ? "VEL ="
512 ? "DIST="
513 ? "BURN="
514 ? "TIME="
520 REM --SET INITIAL CONDITIONS--
530 FUEL=130:VEL=-50:DIST=500:TIME=0:BUR
N=0:OLDDIST=DIST
550 REM --UPDATE CONDITIONS--
560 IF FUEL<0 THEN FUEL=0
570 POSITION 5,4:? FUEL;
580 ? "    "
590 POSITION 5,6:? VEL;
591 ? "    "
600 POSITION 8,8:? DIST;
601 ? "    "
620 IF FUEL=0 THEN 640
630 IF STRIG(0)=0 THEN F=1:FOR W=1 TO 10
0:SOUND 0,50,8,8:NEXT W:SOUND 0,0,0,0:GO
TO 650
640 F=0
650 POSITION 8,10:? BURN;
655 ? "    "
660 POSITION 8,12:? TIME;
665 ? "    "
670 IF STICK(0)=15 THEN BURN=BURN
671 IF STICK(0)=14 THEN BURN=10
672 IF STICK(0)=6 THEN BURN=1
673 IF STICK(0)=7 THEN BURN=2
674 IF STICK(0)=5 THEN BURN=3
675 IF STICK(0)=13 THEN BURN=4
676 IF STICK(0)=9 THEN BURN=5
677 IF STICK(0)=11 THEN BURN=6
678 IF STICK(0)=10 THEN BURN=8
680 REM --DRAW--
685 IF 21-DIST/700*23<0 THEN 1930
690 POSITION 30,21-OLDDIST/700*23:? " "

691 POSITION 30,22-OLDDIST/700*23:? " "
```
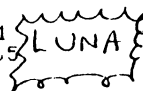
```
700 POSITION 30,21-DIST/700*23:? CHR$(8)
;CHR$(10)
701 POSITION 30,22-DIST/700*23:? CHR$(13
7);CHR$(143)
703 OLDDIST=DIST
710 IF INT(TIME/2)<>TIME/2 THEN 740
730 GOTO 750
740 FOR W=1 TO 100:NEXT W
750 IF FUEL<BURN THEN B1=FUEL
760 IF F THEN B1=BURN:GOTO 780
770 B1=0
780 REM --

790 FUEL=FUEL-B1
800 B1=B1*5
810 ACC=B1-5
830 OD=DIST
840 VEL=VEL+ACC
861 DIST=INT(DIST+VEL+ACC/8)
870 TIME=TIME+0.5
880 IF DIST<=0 AND VEL<-30 THEN SOUND 0,
240,8,8:SOUND 1,250,14,8:GOTO 940
886 IF 22-DIST/700*23>22 THEN 940
890 IF DIST>675 THEN 1930
900 GOTO 560
910 END
940 REM --PRINT FINAL CONDITIONS--
950 IF DIST<0 THEN DIST=0
960 POSITION 8,4:? FUEL;:? "        "
970 POSITION 8,6:? VEL;:? "        "
980 POSITION 8,8:? DIST;:? "        "
990 POSITION 8,10:? BURN;:? "        "
1000 POSITION 8,12:? TIME;:? "        "
1010 FOR W=1 TO 200:NEXT W
1012 IF VEL>-31 THEN 1821
1030 REM --CRASH--
1040 GOTO 1830
1090 GRAPHICS 0
1100 ? :? :?
1110 ? "       INSTRUCTIONS:"
1120 ? :?
1130 ? "YOU ARE THE PILOT OF A NEW MODEL
   XXY3"
1140 ? "LUNAR VEHICLE. THE CRAFT HAS DEV
EL-"
1150 ? "OPED A MINOR PROBLEM--THE GUIDAN
CE"
1160 ? "COMPUTER HAS FAILED. YOU MUST NO
W"
1170 ? "ATTEMPT TO LAND ON THE LUNAR SUR
FACE"

1180 ? "FOR REPAIR WORK."
1200 ? :? "YOU CONTROL THE CRAFT BY BURN
ING FUEL"
1210 ? "AT REGULAR PERIODS. IF YOU BURN
TOO"
1220 ? "MUCH FUEL, YOU MAY BE SHOT OUT O
F THE"
1230 ? "MOON'S GRAVITY AND INTO THE COLD
,"
```

```
1240 ? "DARK REACHES OF SPACE. IF YOU BU
RN"
1250 ? "TOO LITTLE FUEL, YOU WILL REACH
THE"
1260 ? "LUNAR SURFACE-FOREVER."
1270 ? :? "PRESS ANY KEY TO GO ON."
1275 GET #1,A
1280 GRAPHICS 0:? :? :? :? :? "THE AMOUNT O
F FUEL YOU BURN IS"
1290 ? "CONTROLLED BY THE JOYSTICK POSIT
ION."
1300 ? "TOP-RIGHT BURNS 1 UNIT OF FUEL.
THE"
1310 ? "AMOUNT OF FUEL BURNED INCREASES
AS"
1320 ? "YOU MOVE THE STICK AROUND CLOCKW
ISE."
1330 ? "TOP POSITION BURNS 10 UNITS. PRE
SSING"
1340 ? "THE RED PUSHBUTTON WILL IGNITE T
HE"
1350 ? "FUEL...SELECT THE BURN RATE WITH
 THE"
1360 ? "JOYSTICK AND PUSH THE BUTTON"
1370 ? :? :? "PUSH ANY KEY TO BEGIN DESC
ENT."
1380 GET #1,A
1390 GOTO 500


1821 GRAPHICS 2:POSITION 4,6:? #6;"good
landing":GOSUB 1940
1822 POSITION 3,8:? #6;"PLAY AGAIN? Y/N"

1823 GET #1,A:A$=CHR$(A)
1824 IF A$="Y" THEN 500
1825 IF A$<>"N" THEN 1823
1826 GOTO 1850
1830 REM --CRASH ENDING--
1832 GRAPHICS 2
1833 POSITION 7,6:? #6;"CRASH"
1835 SOUND 0,0,0,0:SOUND 1,0,0,0
1840 GOTO 1822
1850 TRAP 1870
1860 RUN "D:MENU"
1870 GRAPHICS 0:END
1930 GRAPHICS 2:POSITION 1,6:? #6;"blast
 off for Pluto":GOSUB 1931:GOTO 1822
1931 FOR N=150 TO 0 STEP -1
1932 SOUND 0,N,10,8
1935 FOR W=1 TO 2:NEXT W
1936 NEXT N
1938 RETURN
1940 FOR SUCCESS=1 TO 8
1941 READ N
1942 READ TIM
1945 SOUND 0,N,10,8
1946 FOR W=1 TO 20*TIM:NEXT W
1947 SOUND 0,0,0,0
1948 NEXT SUCCESS
1955 SOUND 0,0,0,0
1960 RESTORE
1970 RETURN
```

```
1 OPEN #1,4,0,"K:"
10 DIM A$(20),D$(10)
15 DIM NK(20),MK(20)
20 GRAPHICS 0
40 BLIPS=1000:ERASE=1100:PLAYAGAIN=1200
50 CYANIDE=1300:CONGRATS=1400:RAS=1500
100 ? "            ALIEN "
110 ? " YOU ARE ON SPACESHIP NIMROD. YOU
"
120 ? "HAVE A FEW MINUTES TO BREAK THE C
ODE"
130 ? "NUMBER THAT WILL OPEN THE WEAPONS
"
140 ? "VAULT SO THAT YOU CAN GET AN ANTI
-"
150 ? "MATTER LASER RIFLE - THE ONLY WEA
PON"
160 ? "THAT WILL SAFELY DESTROY THE ALIE
N."
170 ? :? "THE ALIEN HAS KILLED THE REST
OF THE"
180 ? "CREW AND IS SEARCHING FOR YOU. HE
"
190 ? "WANTS YOU FOR YOUR GOURMET QUALIT
IES."
200 GOSUB BLIPS
210 ? :? :? "PRESS SPACE TO GO ON."
220 GET #1,A
230 GRAPHICS 0
240 ? "        )THE SECRET CODE IS MADE OF
 NUMBERS"
250 ? "FROM 1 TO 9 IN ANY ORDER, NONE"
260 ? "REPEATED. MOTHER, THE SHIPS COMPU
TER,"
270 ? "WILL ALLOW YOU TO DECIDE THE NUMB
ER"
280 ? "OF DIGITS (2 TO 9) IN THE CODE."
290 GOSUB BLIPS
300 ? :? :? "PRESS SPACE TO GO ON."
310 GET #1,A
320 GRAPHICS 0
330 ? "        )ONE LAST WORD: IF THE ALIE
N GETS YOU"
340 ? "BEFORE YOU BREAK THE CODE, YOU CA
N"
350 ? "PUSH THE SPACE BAR FOR CYANIDE GA
S"
360 ? "WHICH WILL KILL YOU AND THE ALIEN
 AT"
370 ? "THE SAME TIME.":GOSUB BLIPS
380 ? :? :? "PRESS SPACE NOW TO GO ON."
390 GET #1,A:GRAPHICS 0
400 ? "        )AFTER YOU ENTER YOUR GUESS AN
D PRESS"
410 ? "<RETURN>, THE COMPUTER WILL EVALU
ATE"
420 ? "YOUR GUESS AS FOLLOWS:"
430 ? :? " !: THIS MEANS ONE OF YOUR N
UMBERS"
440 ? "     IS IN THE CODE, BUT IN THE"
450 ? "     WRONG PLACE."
460 ? "     &: THIS MEANS ONE OF YOUR NU
MBERS"
470 ? "     IS BOTH IN THE CODE AND IN
THE"
480 ? "     RIGHT PLACE."
490 ? " NO SYMBOLS DISPLAYED MEANS THAT
NO"
500 ? "NUMBER IN YOUR GUESS IS IN THE CO
DE."
505 GOSUB BLIPS
510 ? :? "PRESS SPACE TO GO ON."
520 GET #1,A
530 GRAPHICS 0

600 ? "        )HOW MANY NUMBERS IN THE COD
E? ";
610 GET #1,A:A$=CHR$(A):IF A<50 OR A>57
THEN 610
620 B=VAL(A$):? B
630 FOR X=1 TO.B
640 NK(X)=INT(RND(1)*9+1)
643 IF X=1 THEN 680
645 FOR Y=1 TO X-1
650 IF NK(X)=NK(Y) THEN NK(X)=INT(RND(1)*9+
1):Y=1:GOTO 650
660 NEXT Y
680 NEXT X
690 TGUESSES=0
700 IF TGUESSES<>10 THEN 710
703 ? :? "THE ALIEN TOOK ONE LOOK AT YOU
 AND"
704 ? "WENT BACK FOR SOME MEAT TENDERIZE
R."
705 ? "YOU'D BETTER HURRY UP."
706 GOSUB ERASE
710 IF TGUESSES<>15 THEN 720
713 ? :? "THE ALIEN HAS GONE OUT FOR PIZ
ZA. IF"
714 ? "THAT DOESN'T KILL HIM, HE'LL BE B
ACK"
715 ? "TO EAT YOU WITHIN 5 MINUTES"
716 GOSUB ERASE
720 IF TGUESSES<>20 THEN 730
723 ? :? "THE ALIEN IS NIBBLING ON YOUR
LEFT"
724 ? "LEG"
725 ? ""
726 GOSUB ERASE
730 IF TGUESSES<>25 THEN 750
733 ? :? "THE ALIEN IS NOW CHEWING ON YO
UR"
734 ? "RIGHT LEG! IF YOU WANT TO STOP, Y
OU"
735 ? "CAN PRESS <SPACE>."
736 GOSUB ERASE
743 ? :? "BUT WE'RE GETTING OFF THIS SHI
P."
```

```
744 ? "GOOD LUCK!!"
745 ? ""
746 GOSUB ERASE
750 IF TGUESSES<>30 THEN 760
753 ? :? "THE ALIEN GOT YOU! MOTHER TUMS
 IS"
754 ? "MAKING AN EMERGENCY FLIGHT"
755 ? "(POOR ALIEN)." :GOSUB RAS:GOSUB ER
ASE
756 GOTO PLAYAGAIN
760 ?
765 FOR X=1 TO B
770 ? "_ ";
780 NEXT X
790 FOR X=1 TO B:? "   ";:NEXT X
800 REM --GET THE GUESS--
805 IC=0:EX=0
810 TGUESSES=TGUESSES+1
820 FOR F=1 TO B
830 GET #1,A:A$(F)=CHR$(A)
831 IF A$(F)=" " THEN GOTO CYANIDE
832 IF A$(F)<"1" OR A$(F)>"9" THEN 830
850 G=VAL(A$(F))
853 T(F)=G
856 H=T(F)
857 GOSUB 1600
858 IF ANB=1 THEN GOTO 830
859 ? G;" ";
860 IF G=H THEN EX=EX+1:GOTO 876
870 FOR Y=1 TO B
871 H=T(Y)
872 IF G=H THEN IC=IC+1
874 NEXT Y
876 NEXT F
882 IF EX=0 THEN 890
884 FOR Z=1 TO EX
886 ? "*";
888 NEXT Z
890 IF IC=0 THEN 900
892 FOR Z=1 TO IC
894 ? "!";
896 NEXT Z
900 REM --CONTINUE--
910 IF EX=B THEN GOTO CONGRATS
990 GOTO 700
1000 FOR C=1 TO 20
1010 NO=INT(RND(1)*255)
1020 SOUND 0,NO,10,8
1040 NEXT C
1060 SOUND 0,0,0,0
1070 RETURN
1100 FOR W=1 TO 500:NEXT W
1110 ? "        "
1120 ? "
       "
1130 ? "
       "
1140 ? "
       "
1150 ? "      "
1160 RETURN
```

```
1200 GRAPHICS 2:POSITION 4,5:? #6;"PLAY
AGAIN ?"
1210 POSITION 7,8:? #6;"Y / N"
1220 GET #1,D
1230 D$=CHR$(D)
1240 IF D$="Y" THEN GRAPHICS 0:GOTO 600
1250 IF D$<>"N" THEN 1220
1260 TRAP 1280
1270 RUN "D:MENU"
1280 GRAPHICS 0:END
1300 REM --SIZZLE--
1310 SOUND 0,50,8,8
1320 GRAPHICS 2:POSITION 6,5:? #6;"CYANI
DE"
1322 POSITION 6,8:? #6;"SIZZLE!"
1325 FOR W=1 TO 300:NEXT W
1340 SOUND 0,0,0,0
1350 GOTO PLAYAGAIN
1400 GRAPHICS 2:POSITION 2,6:? #6;"CONGR
ATULATIONS!"
1405 FOR Z=1 TO 5
1410 FOR NO=100 TO 0 STEP -5
1420 SOUND 0,NO,10,8
1430 NEXT NO
1440 NEXT Z
1450 SOUND 0,0,0,0
1460 FOR W=1 TO 200:NEXT W
1470 GOTO PLAYAGAIN
1500 FOR I=200 TO 250 STEP 5
1510 SOUND 0,I,14,8
1520 FOR W=1 TO 10:NEXT W
1530 NEXT I
1540 FOR W=1 TO 150:NEXT W
1550 SOUND 0,0,0,0
1560 RETURN
1600 REM --HAS NUMBER BEEN USED?--
1605 ANB=0
1610 FOR T=1 TO F
1615 IF F=1 OR T=1 THEN 1630
1620 IF G=T(T-1) THEN ANB=1
1630 NEXT T
1640 RETURN
```

```
1 OPEN #1,4,0,"K:"    ⟨DYNAMITE⟩
5 DIM A$(10)
10 DATA 122,109,97,92,82,73,65,61
30 GRAPHICS 0
50 ? "          DYNAMITE  "
55 GOSUB 870
70 ? " WELCOME TO DYNAMITE! THE GAME IS"
80 ? "VERY SIMPLE. THERE ARE 15 STICKS O
F"
90 ? "DYNAMITE IN AN ABANDONED MINE. ALL
"
100 ? "OF THEM ARE UNLIT EXCEPT THE LAST
"
110 ? "ONE. THE GHOST OF YOUR DEAD PARTN
ER"
120 ? "HAS LIT THE LAST STICK OF DYNAMIT
E"
130 ? "AND NOW HE WANTS TO PLAY A GAME W
ITH"
140 ? "YOU (HA HA)."
145 ? :? "EACH OF YOU TAKE TURNS TAKING
STICKS"
150 ? "OF DYNAMITE FROM THE PILE, UP TO
3"
160 ? "STICKS IN A TURN. IF YOU TAKE THE
"
170 ? "LAST STICK, YOU'LL BE BLOWN UP AN
D"
180 ? "HAVE TO TAKE YOUR PARTNER'S PLACE
 IN"
185 ? "THE MINE --FOREVER."
190 ? :? "PRESS SPACE TO GO ON.":GET #1,
A
200 GRAPHICS 0
210 GOTO 250
220 N=15
230 M=3
240 RETURN
250 GOSUB 220
260 IF N>=N THEN 710
270 IF N=1 THEN 710
280 IF N=0 AND N=0 THEN 710
290 IF N=0 THEN 710
300 ? :? :? :?
310 ?
320 G=1
330 GRAPHICS 0:? :? :? :? :? :? "DO YOU
WANT TO GO FIRST? (Y/N)";
335 GET #1,A
340 GOSUB 220
350 A$=CHR$(A)
355 IF A$="Y" THEN 540
356 IF A$<>"N" THEN 335
360 REM --I MOVE FIRST--
370 GOSUB 720:REM --UPDATE--
380 IF RND(1)<1/G THEN 510
390 REM --STRATEGY--
400 L=N/(M+1)
410 I=L-INT(L)
420 O=INT(I*(M+1)+0.5)
430 IF O=0 THEN O=N:GOTO 400
440 O=O-1
450 IF O=0 THEN 510
460 ? "     I'LL TAKE ",
465 ? O
470 N=N-O
480 FOR T=1 TO 800:NEXT T
490 IF N=0 THEN 690
500 GOTO 540
510 REM --PICK AT RANDOM--
520 IF N<M THEN O=INT(RND(1)*(N+1)):GOTO 4
60
530 O=INT(RND(1)*M+1):GOTO 460
540 REM --HUMAN PICKS--
550 GOSUB 720
570 ? "     HOW MANY WILL YOU TAKE ";
575 TRAP 570:INPUT A$
580 ?
590 D=INT(VAL(A$))
595 IF D<=0 THEN ? "SORRY, THAT WON'T WO
RK!":GOTO 570
600 IF D>M THEN ? "THAT'S TOO MANY. THE
MOST YOU CAN"
610 IF D>M THEN ? "TAKE IS ", ? M:GOTO 5
70
620 IF D>N THEN ? "THERE AREN'T THAT MAN
Y TO TAKE!":GOTO 570
630 N=N-D:IF N=0 THEN 650
640 GOTO 370
650 GRAPHICS 0
660 ? "          )          YOU LOSE!!" GOSUB
830
670 ? "DO YOU WANT TO PLAY AGAIN? (Y/N)
";
675 GET #1,A:A$=CHR$(A)
680 IF A$="Y" THEN G=G+1:GOTO 330
682 IF A$<>"N" THEN 675
685 TRAP 687
686 RUN "D:MENU"
687 GRAPHICS 0:END
690 GRAPHICS 0:? "          I LOSE, YOU GET
 ALL THE GOLD!":GOSUB 950:GOTO 670
700 STOP
710 ?
720 REM --UPDATE SCREEN--
730 GRAPHICS 0
740 ? :? :? :? :?
750 FOR X=1 TO N
760 ? "*";:GOSUB 920
770 NEXT X
780 ?
790 IF N=1 THEN 820
800 ? "THERE ARE ";:? N;:? " STICKS IN T
HE PILE"
```

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```
810 RETURN
820 ? "THERE IS ONE STICK IN THE PILE":R
ETURN
830 REM --RASBERRY--
840 FOR NO=200 TO 250
842 SOUND 0,NO,10,8
846 NEXT NO
848 FOR N=1 TO 200:NEXT N
850 SOUND 0,0,0,0
852 RETURN
860 GRAPHICS 0:END
870 REM --INTRO--
872 FOR TI=1 TO 10
875 FOR VOL=0 TO 15 STEP 3
880 SOUND 0,50,14,VOL
890 NEXT VOL
892 NEXT TI
900 SOUND 0,0,0,0
910 RETURN
920 REM --RANDOM BLIP--
922 FOR TI=1 TO 4
924 NO=INT(RND(1)%255)
926 SOUND 0,NO,10,8
928 NEXT TI
930 SOUND 0,0,0,0
940 RETURN
950 REM --SCALE--
960 FOR TI=1 TO 8
970 READ NO
980 SOUND 0,NO,10,8
990 FOR N=1 TO 10:NEXT N
1000 NEXT TI
1010 FOR N=1 TO 300:NEXT N
1020 SOUND 0,0,0,0
1030 RESTORE
1040 RETURN
```

44

```
10 DATA 122,109,97,92,82,73,65,61
20 BEEPS=5000:SCALE=5100:RASBERRY=5200:C
RASH=5300:CROSSOVER=5400
50 GOSUB 100
60 GOSUB BEEPS
70 GOSUB SCALE
80 GOSUB RASBERRY
90 GOSUB CRASH
95 GOSUB CROSSOVER
96 GOTO 4970
100 GRAPHICS 0:? "                    MUS
IC      "
110 ? " THE MUSIC UTILITY PROGRAM CAN BE
"
120 ? "USED TO START YOUR OWN PROGRAM WI
TH"
130 ? "SOUND.  USE IT AS FOLLOWS:"
140 ? " 1. LOAD THE MUSIC UTILITY."
150 ? "2. DELETE LINES 50 TO 4990 "
160 ? "3. ADD YOUR PROGRAM USING SOUNDS"

170 ? "    LISTED IN LINE 20."
180 ? "  (EXAMPLE: GOSUB CRASH)"
190 ? "4. SAVE THE PROGRAM UNDER A NEW N
AME."
200 RETURN
4970 TRAP 4990
4980 RUN "D:MENU"
4990 GRAPHICS 0:END
5000 REM --BEEPS--
5010 FOR Z=1 TO 10
5020 FOR V=0 TO 15
5030 SOUND 0,100,10,V
5040 NEXT V
5050 NEXT Z
5060 RETURN

5100 REM --SCALE--
5110 FOR Z=1 TO 8
5120 READ N
5130 SOUND 0,N,10,8
5140 FOR W=1 TO 20:NEXT W
5150 NEXT Z
5160 FOR W=1 TO 300:NEXT W
5170 SOUND 0,0,0,0
5180 RESTORE
5190 RETURN
5200 REM --RASBERRY--
5210 FOR Z=200 TO 250 STEP 5
5220 SOUND 0,Z,14,8
5230 FOR W=1 TO 10:NEXT W
5240 NEXT Z
5250 FOR W=1 TO 300:NEXT W
5260 SOUND 0,0,0,0
5270 RETURN

5300 REM --CRASH--
5310 SOUND 0,240,14,8
5320 SOUND 1,50,8,8
5330 FOR W=1 TO 300:NEXT W
5340 SOUND 0,0,0,0
5350 SOUND 1,0,0,0
5360 RETURN
5400 REM --CROSSOVER--
5410 FOR X=1 TO 255
5420 SOUND 0,X,10,8
5430 SOUND 1,255-X,10,8
5440 NEXT X
5450 SOUND 0,0,0,0
5460 SOUND 1,0,0,0
5470 RETURN
```

```
5 DIM A$(10)
10 OPEN #1,4,0,"K:"      {PACIFIER}
20 VAR=700
40 GRAPHICS 7
46 ? "PRESS SPACE FOR A NEW PATTERN."
47 ? "PRESS ANY LETTER TO STOP."
50 XC=160/2-1
60 YC=79/2:REM --CHOOSE CENTERS--
70 RX=XC:GOSUB VAR:X=FUN
80 RX=YC:GOSUB VAR:Y=FUN
100 RX=3:GOSUB VAR:XD=FUN-2:REM --PICK A
 NEW DIRECTION--
110 RX=100:GOSUB VAR
112 IF FUN<3 THEN 40
115 IF PEEK(764)<>255 THEN GET #1,A:GOTO
 800
120 RX=3:GOSUB VAR:YD=FUN-2
130 RX=XC/2:GOSUB VAR:L=FUN
140 FOR N=1 TO L
150 IF X+XD<0 THEN 100
160 IF X+XD>XC THEN 100
170 X=X+XD
180 IF Y+YD<0 THEN 100
190 IF Y+YD>YC THEN 100
200 Y=Y+YD
202 SETCOLOR 4,9,0
203 SETCOLOR 1,3,3
205 COLOR 1
206 SOUND 0,X,10,8
207 SOUND 1,Y*3,10,8
210 PLOT X,Y
220 PLOT 159-X,Y
230 PLOT X,79-Y
240 PLOT 159-X,79-Y
250 NEXT N
260 GOTO 100
280 GRAPHICS 0
290 ? "BAD ERROR!":END


700 REM --FUNCTION SUBROUTINE--
710 FUN=INT(RND(1)*RX+1)
720 RETURN
800 REM --WHAT BUTTON WAS PUSHED--
810 A$=CHR$(A)
820 IF A$=" " THEN 40
830 TRAP 850
840 RUN "D:MENU"
850 GRAPHICS 0:END
```

```
10 OPEN #1,4,0,"K:"
20 DIM A$(10),B$(10)
30 REM
35 QQ=0
70 GRAPHICS 0:? "          ))FOR A QUICK DEMO
, PRESS RETURN IN"
80 ? "ANSWER TO ALL QUESTIONS."
90 ? " THE CURRENT FUNCTION LOOKS LIKE T
HIS:"
100 LIST 1000,1499
110 ? " IS THIS THE FUNCTION YOU WANT?"
120 ? "          (Y / N);"
130 GET #1,A:A$=CHR$(A)
135 IF A$="N" THEN 1520
136 IF A$<>"Y" THEN 130
140 GRAPHICS 7:SETCOLOR 0,6,10
150 ? "ENTER Y MAXIMUM ";
160 INPUT A$:IF A$="" THEN Q1=1:GOTO 180

170 Q1=VAL(A$)
180 ? "ENTER Y MINIMUM ";
190 INPUT A$:IF A$="" THEN Q2=-1:GOTO 21
0
200 Q2=VAL(A$)
210 IF Q2>=Q1 THEN ? "MIN. IS GREATER TH
AN MAX.--REENTER.":GOTO 150
220 ? "ENTER X MINIMUM ";

230 INPUT A$:IF A$="" THEN Q3=-10:GOTO 2
40
235 Q3=VAL(A$)
240 ? "ENTER X MAXIMUM ";
245 INPUT A$:IF A$="" THEN Q4=10:GOTO 26
0
250 Q4=VAL(A$)
260 IF Q3>=Q4 THEN ? "MIN. IS GREATER TH
AN MAX.--REENTER.":GOTO 220
270 IF Q2<=0 AND Q1>=0 THEN ? "WOULD YOU
 LIKE A Y AXIS? ":GET #1,A:A$=CHR$(A):IF
 A$="Y" THEN QQ=1
275 IF A$<>"Y" THEN QQ=0
280 IF Q3<=0 AND Q4>=0 THEN ? "WOULD YOU
 LIKE AN X AXIS? ":GET #1,A:B$=CHR$(A):I
F B$="Y" THEN QX=1
285 IF B$<>"Y" THEN QX=0
290 IF QX THEN 1590
300 IF QQ THEN 1800
310 REM --DO THE PLOT--
320 QX=0
330 FOR X=Q3 TO Q4 STEP (Q4-Q3)/159
340 GOSUB 1000
350 QY=Y-Q2
360 IF QY<0 THEN ? "PLOT AT 'X' IS OUT O
F THE AREA.":QQ=0:GOTO 420
370 QY=QY/(Q1-Q2)*79
380 QY=79-QY
390 IF QY<0 THEN 360
395 PRINT X,Y
396 COLOR 2
```

```
397 SOUND 0,QY*2,10,8
400 IF  NOT QQ THEN PLOT QX,QY:QQ=1
410 IF QQ THEN DRAWTO QX,QY
420 QX=QX+1
425 SOUND 0,0,0,0
430 NEXT X
440 ? "ANOTHER PLOT? (Y / N)":GET #1,A:
A$=CHR$(A)
450 IF A$="Y" THEN 30
460 GOTO 2000
1000 Y=COS(X)
1500 RETURN
1520 REM --NO, SOMETHING ELSE--
1530 GRAPHICS 0
1540 ? :? :?
1550 ? "ENTER YOUR FUNCTION BY TYPING 10
00,"
1551 ? "THEN YOUR FUNCTION.  1000 IS THE
"
1552 ? "LINE NUMBER OF THE PROGRAM.  DO
NOT"
1554 ? "USE VARIABLES BEGINNING WITH Q.
PRESS"
1555 ? "RETURN AFTER ENTERING 1000 AND Y
OUR"
1556 ? "FUNCTION.  THEN TYPE RUN AND PRE
SS"
1557 ? "RETURN."
1560 END
1580 GOTO 2000
1590 REM --DRAW X AXIS, TICS--
1600 COLOR 1
1610 QA=ABS(Q2)/(Q1-Q2)
1620 Q2=79-QA*79
1630 PLOT 0,Q2:DRAWTO 159,Q2
1640 ? "WOULD YOU LIKE TICS ON THE X AXI
S? ":GET #1,A:A$=CHR$(A)
1650 IF A$<>"Y" THEN 300
1660 ? "ENTER 'TIC' INTERVAL. ";
1665 INPUT QT
1670 IF QT<=0 THEN ? "OUT OF RANGE.":GOT
O 1660
1680 IF Q3<0 AND Q4>=0 THEN 1760
1690 FOR QW=Q3 TO Q4 STEP QT
1700 QW=(QW-Q3)/(Q4-Q3)
1710 QY=QW*159
1720 COLOR 1
1730 PLOT QY,Q2-3*(QZ=3):DRAWTO QY,Q2+3
*(Q1<=80)
1740 NEXT QW
1750 GOTO 300
1760 REM --COMPUTE "DIFFERENT" START--
1770 QL=ABS(Q3/QT):QL=INT(QL):QL=QL*QT:Q
L=-QL
1780 FOR QW=QL TO Q4 STEP QT
1790 GOTO 1700
1800 REM --DRAW Y AXIS, ETC--
1810 COLOR 1
1820 QA=ABS(Q3)/(Q4-Q3)
```

```
1830 QZ=QA*160
1840 PLOT QZ,0:DRAWTO QZ,79
1850 ? "WOULD YOU LIKE TICS ON THE Y AXI
S? ":GET #1,A:A$=CHR$(A)
1860 IF A$<>"Y" THEN 310
1870 ? "ENTER 'TIC' INTERVAL. ";
1875 INPUT QT
1880 IF QT<=0 THEN ? "OUT OF RANGE.":GOT
O 1870
1890 IF Q2<=0 AND Q1>=0 THEN 1960
1900 FOR QN=Q2 TO Q1 STEP QT
1910 QN=(QN-Q2)/(Q1-Q2)
1920 QY=79-QN*79
1930 PLOT QZ-3*(QZ>=3),QY:DRAWTO QZ+3*(Q
Z<=160),QY
1940 NEXT QN
1950 GOTO 310
1960 REM --DIFFERENT START--
1970 QL=ABS(Q2/QT):QL=INT(QL):QL=QL*QT:Q
L=-QL
1980 FOR QN=QL TO Q1 STEP QT
1990 GOTO 1910
2000 TRAP 2020
2010 RUN "D:MENU"
2020 GRAPHICS 0:END
```

```
2100 GRAPHICS 0        TIC TAC TOE
2110 DIM A$(10)
2120 DIM A(10)
2130 XSOUND=5000:OSOUND=5100
2140 YSOUND=5200
2150 OPEN #1,4,0,"K:"
2190 PRINT ")"
2200 POSITION 2,5:? "    1          2
            3"
2210 POSITION 2,11:? "    4          5
            6"
2220 POSITION 2,19:? "    7          8
            9";
2300 FOR X=12 TO 26 STEP 14
2310 POSITION X,0
2320 FOR Y=0 TO 22
2330 ? "I  ";
2340 NEXT Y
2350 NEXT X
2360 POSITION 2,7:? "_____
_____"
2370 POSITION 2,15:? "_____
_____"
2380 POSITION 12,1:? "  TIC TAC TOE  "
2390 POSITION 8,3:? "THE SCREEN IS NUMBE
RED:"
2400 POSITION 6,22:? "PRESS SPACE TO STA
RT GAME.";
2410 GET #1,A
2470 FOR RESET=1 TO 9
2472 A(RESET)=0
2474 NEXT RESET
2480 X=1:O=2
2490 T=0
2500 REM --DRAW GRAPHICS GRID--
2530 GRAPHICS 3
2540 SETCOLOR 0,5,7
2545 SETCOLOR 1,2,12:COLOR 1
2550 PLOT 0,6:DRAWTO 39,6
2560 PLOT 0,13:DRAWTO 39,13
2570 PLOT 13,0:DRAWTO 13,19
2580 PLOT 26,0:DRAWTO 26,19
2590 REM --
2600 ? "ENTER YOUR MOVE. "
2610 GET #1,A
2640 IF A<49 OR A>58 THEN 2610
2650 A$=CHR$(A):M=VAL(A$)
2655 IF A(M)<>0 THEN 2610
2660 ? "YOUR MOVE. ";M
2670 IF S1 THEN 2480
2680 A(M)=X
2690 GOSUB 2840
2700 REM --NOW IT'S MY TURN--
2710 IF T=0 THEN 2730
2720 GOTO 3100
2730 REM --TURN=0--
2740 IF A(5)=0 THEN M=5:A(M)=O:GOSUB 284
0:GOTO 2760
2750 M=1:A(M)=O:GOSUB 2840
2760 ? "    MY MOVE. ";
2770 ? M+1
2800 T=1
```

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```
2810 SE=0
2820 GOSUB 3420:IF S1 THEN 3660
2830 GOTO 2590
2840 ON A(M) GOTO 2850,2950
2850 REM --X--
2860 GOSUB 3030
2870 REM --DRAW AN X--
2880 COLOR 2
2890 FOR X2=0 TO 2
2900 PLOT CX-X2,CY+X2
2910 PLOT CX+X2,CY+X2
2920 PLOT CX-X2,CY-X2
2930 PLOT CX+X2,CY-X2
2940 NEXT X2
2945 GOSUB XSOUND:RETURN
2950 REM --DRAW AN O--
2960 GOSUB 3030
2970 COLOR 3
2980 PLOT CX-2,CY-2:DRAWTO CX+2,CY-2
2990 DRAWTO CX+2,CY+2
3000 DRAWTO CX-2,CY+2
3010 DRAWTO CX-2,CY-2
3020 GOSUB OSOUND:RETURN
3030 REM --X1,Y1--
3040 M=M-1
3050 Y1=INT(M/3)
3060 X1=INT(3*(M/3-Y1)+0.5)
3070 CX=7+X1*13
3080 CY=3+Y1*7
3090 RETURN
3100 REM --OTHER THAN 1--
3110 SE=X:GOSUB 3420
3120 IF S1 THEN ? "YOU WIN!!!!!":GOSUB
     OUND:GOTO 3770
3130 IF RND(1)X0.05 THEN 3160
3140 SE=0:GOSUB 3570
3150 IF R>0 THEN M=R:GOTO 3400
3160 IF RND(1)X0.05 THEN 3190
3170 SE=X:GOSUB 3570
3180 IF R>0 THEN M=R:GOTO 3400
3190 IF RND(1)X0.1 THEN 3210
3200 IF (A(1)=X AND A(9)=X) OR (A(3)=X A
     ND A(7)=X) THEN P=4+2...:IF A(P)=
     0 THEN M=P:GOTO 3400
3210 IF RND(1)X0.5 THEN 3230
3220 IF A(2)=X AND A(4)=X AND A(1)=0 THE
     N M=1:GOTO 3400
3230 IF A(4)=X AND A(8)=X AND A(7)=0 THE
     N M=7:GOTO 3400
3240 IF A(8)=X AND A(6)=X AND A(9)=0 THE
     N M=9:GOTO 3400
3250 IF A(2)=X AND A(6)=X AND A(3)=0 THE
     N M=3:GOTO 3400
3260 IF A(4)=X AND A(6)=X AND A(1)=0 THE
     N M=1:GOTO 3400
3270 IF A(2)=X AND A(7)=X AND A(1)=0 THE
     N M=1:GOTO 3400
3280 IF A(6)=X AND A(1)=X AND A(2)=0 THE
     N M=2:GOTO 3400
3290 IF A(8)=X AND A(3)=X AND A(9)=0 THE
     N M=9:GOTO 3400
3300 IF A(8)=X AND A(1)=X AND A(7)=0 THE
     N M=7:GOTO 3400
3310 IF A(2)=X AND A(9)=X AND A(3)=0 THE
     N M=3:GOTO 3400
3320 REM --CHECK FOR DRAW--
3330 FOR X1=1 TO 9
3340 IF A(X1)=0 THEN 3360
3350 NEXT X1:? "THE GAME IS A DRAW":GOSU
     B YSOUND:GOTO 3780
3360 M=INT(RND(1)*9)+1
3370 IF A(M)<>0 THEN 3360
3380 GOTO 3400
3390 END
3400 A(M)=0:GOSUB 2840:GOTO 2760
3410 END
3420 REM --SEARCH1--
3430 DATA 1,2,3
3440 DATA 4,5,6
3450 DATA 7,8,9
3460 DATA 1,4,7
3470 DATA 2,5,8
3480 DATA 3,6,9
3490 DATA 1,5,9
3500 DATA 3,5,7
3510 RESTORE
3520 S1=0
3530 FOR X1=1 TO 8
3540 READ A,B,C
3550 IF A(A)=SE AND A(B)=SE AND A(C)=SE
     THEN S1=1:RETURN
3560 NEXT X1
3570 REM --SEARCH2--
3580 RESTORE
3590 R=0
3600 FOR X1=1 TO 8
3610 READ A,B,C
3620 IF A(A)=SE AND A(B)=SE AND A(C)=0 T
     HEN R=C:RETURN
3630 IF A(A)=SE AND A(C)=SE AND A(B)=0 T
     HEN R=B:RETURN
3640 IF A(B)=SE AND A(C)=SE AND A(A)=0 T
     HEN R=A:RETURN
3650 NEXT X1:RETURN
3660 ? "I WIN!!!!!!!":GOSUB YSOUND:GOTO
     3780
3750 RETURN
3770 REM --GAME IS OVER--
3780 ? "DO YOU WANT TO PLAY AGAIN? (Y/N)
     ";
3785 GET #1,A:A$=CHR$(A)
3790 S1=0:FOR T=0 TO 9:A(T)=0:NEXT T
3800 IF A$="Y" THEN 2400
3810 IF A$<>"N" THEN 3785
3820 TEMP 3840
3830 RUN "D:MENU"
3840 GRAPHICS 0:END
5000 REM --XSOUND--
5010 SOUND 3,68,10,8
```

```
5020 SOUND 0,81,10,8
5030 SOUND 1,96,10,8
5040 SOUND 2,121,10,8
5050 GOTO 5150
5100 REM --OSOUND--
5110 SOUND 3,72,10,8
5120 SOUND 0,144,10,8
5130 SOUND 1,121,10,8
5140 SOUND 2,91,10,8
5150 FOR N=1 TO 200:NEXT N
5160 FOR OFF=0 TO 3
5170 SOUND OFF,0,0,0
5180 NEXT OFF
5190 RETURN
5200 REM --YSOUND--
5205 FOR TIM=1 TO 5
5210 FOR N=15 TO 0 STEP -1
5220 SOUND 0,29,10,N
5230 SOUND 1,193,10,15-N
5240 NEXT N
5250 NEXT TIM
5260 SOUND 1,0,0,0
5270 RETURN
```

```
10 DIM A$(20)    ( SHAPE BUILDER )
20 OLDCOLOR=0:CHANGE=1000:NXY=2000:SAVPA
T=3000:WHATLIMIT=5000
50 OPEN #1,4,0,"K:"
60 GRAPHICS 0:? "        DO YOU WANT TO DR
AW A NEW PICTURE OR"
61 GOTO 70
62 ? :? :? :? A$;" WAS NOT FOUND ON DISK
.":FOR N=1 TO 2000:NEXT N
63 GOTO 60
70 ? "LOOK AT AN OLD ONE? (O=OLD  N=NEW)
";
75 TRAP 62
80 GET #1,A:A$=CHR$(A):IF A$="O" THEN 45
00
85 IF A$<>"N" THEN 80
90 GRAPHICS 0
100 ? "              SHAPE  "
110 ? " THE SHAPE PROGRAM USES A JOYSTI
CK IN"
120 ? "NUMBER ONE SLOT TO DRAW THE DESIG
N"
130 ? "WHICH YOU CONTROL."
140 ? " FIRST, TYPE IN THE GRAPHICS MODE
 YOU"
150 ? "WISH TO USE, THEN THE COLOR, THEN
"
160 ? "MOVE THE STICK IN THE DIRECTION Y
OU"
170 ? "WANT TO GO."
180 ? " WHEN YOU WANT TO DRAW, PUSH THE
RED"
190 ? "BUTTON."
200 ? :? :? "  PUSH SPACE TO CONTINUE.
";
210 GET #1,A:GRAPHICS 0
220 ? "  INPUT GRAPHICS MODE (3 - 8)? "
;
230 GET #1,A
240 IF A<51 OR A>56 THEN 230
250 A$=CHR$(A):? A$
260 BIG=VAL(A$)
270 S=100
280 IF BIG>5 THEN S=FRE(0)-2*(BIG-5)*100
0
290 IF S<100 THEN GRAPHICS 0:? " YOU MAY
 NOT HAVE ENOUGH MEMORY.":? "USE A LOWER
 GRAPHICS NUMBER.":GOTO 220
300 REM --GET STARTING POSITION--
310 GRAPHICS BIG:SETCOLOR 0,12,6:SETCOLO
R 1,3,8
320 IF BIG=3 OR BIG=5 OR BIG=7 THEN COLR
=4
330 IF BIG=4 OR BIG=6 OR BIG=8 THEN COLR
=2
340 ? "YOU HAVE '0' TO ";COLR-1;" COLORS
 AVAILABLE."
350 ? "'0' IS BACKGROUND."
360 ? "INPUT THE COLOR. ";
370 GET #1,A
380 IF A-48<0 OR A-48>COLR-1 THEN 370
390 A$=CHR$(A):COLR=VAL(A$):COLOR COLR:?
 COLR
```

```
400 GOSUB WHATLIMIT
440 X=XLIM/2:Y=YLIM/2
450 IF X<0 THEN X=0
460 IF X>XLIM THEN X=XLIM
470 IF Y<0 THEN Y=0
480 IF Y>YLIM THEN Y=YLIM
490 PLOT X,Y
500 IF COLR=0 THEN ? "YOU CAN'T SEE 0, I
T IS THE":? "SAME AS BACKGROUND  IT IS N
OW '1'":COLOR 1:COLR=1:GOTO 490
505 FOR N=1 TO 500:NEXT N
506 ? :? :? "PUSH RETURN TO SAVE THE
PICTURE OR"
507 ? "DRAW A NEW ONE."
510 IF PEEK(764)<>255 THEN GOSUB CHANGE
520 IF STICK(0)<>15 THEN GOSUB NEXXY
530 IF STRIG(0)=1 AND STICK(0)<>15 THEN
COLOR COLR:PLOT X,Y:COLOR OLDCOLOR1:PLOT
 OLDX,OLDY
535 IF STRIG(0)=1 AND STICK(0)=15 THEN C
OLOR COLR:PLOT X,Y
540 IF STRIG(0)=0 THEN COLOR COLR:PLOT X
,Y
550 FOR N=1 TO 300/BIG:NEXT N
560 GOTO 510
1000 REM --CHANGE--
1010 GET #1,A:A$=CHR$(A)
1020 IF A>47 AND A<53 THEN COLR=VAL(A$)
1030 IF A=155 THEN POP :GOTO SAVEPAT
1040 RETURN
2000 REM --NEXXY--
2005 OLDX=X:OLDY=Y
2006 OLDCOLOR1=OLDCOLOR
2010 IF STICK(0)=6 THEN X=X+1:Y=Y-1
2020 IF STICK(0)=7 THEN X=X+1
2030 IF STICK(0)=5 THEN X=X+1:Y=Y+1
2040 IF STICK(0)=13 THEN Y=Y+1
2050 IF STICK(0)=9 THEN X=X-1:Y=Y+1
2060 IF STICK(0)=11 THEN X=X-1
2070 IF STICK(0)=10 THEN X=X-1:Y=Y-1
2080 IF STICK(0)=14 THEN Y=Y-1
2090 IF X<0 THEN X=0
2100 IF X>XLIM THEN X=XLIM
2110 IF Y<0 THEN Y=0
2120 IF Y>YLIM THEN Y=YLIM
2130 LOCATE X,Y,OLDCOLOR
2140 RETURN
3000 REM --SAVEPATTERN--
3010 ? :? :? :? "DO YOU WANT TO SAVE YOU
R CREATION"
3020 ? " ON DISK?  (Y/N)";
3025 TRAP 3010
3030 GET #1,A:A$=CHR$(A)
3040 IF A$="Y" THEN GOTO 3200
3050 IF A$<>"N" THEN GOTO 3030
3060 ? :? :? :? :? :? "WANT TO DRAW ANOT
HER ONE?  (Y / N)";
3061 TRAP 3063
3062 GOTO 3070
3063 GRAPHICS 0:END
3070 GET #1,A:A$=CHR$(A)
3080 IF A$="Y" THEN GRAPHICS 0:GOTO 90
3090 IF A$<>"N" THEN GOTO 3070
```

```
3100 RUN "D:MENU"
3200 REM --SAVE THE PICTURE--
3220 GOSUB 4000
3300 OPEN #2,8,0,A$
3305 PRINT #2;BIG
3310 FOR Y=0 TO YLIM
3330 FOR X=0 TO XLIM
3340 LOCATE X,Y,COLR
3350 PRINT #2;COLR
3360 NEXT X
3390 NEXT Y
3400 CLOSE #2
3410 GOTO 3060
3990 REM --NAME THE PICTURE--
4000 A$="D1:PICTURE"
4099 ? :? A$
4100 RETURN
4500 REM --RECALL THE PICTURE--
4510 GOSUB 4000
4520 OPEN #2,4,0,A$
4530 INPUT #2,BIG
4540 GRAPHICS BIG
4550 SETCOLOR 0,12,6:SETCOLOR 1,3,8
4560 GOSUB WHATLIMIT
4570 FOR Y=0 TO YLIM
4580 FOR X=0 TO XLIM
4590 INPUT #2,COLR
4600 COLOR COLR:PLOT X,Y
4610 NEXT X
4620 NEXT Y
4630 CLOSE #2
4640 GOTO 3060
5000 REM --WHAT ARE THE GR. LIMITS--
5010 IF BIG=3 THEN XLIM=39:YLIM=19
5020 IF BIG=4 OR BIG=5 THEN XLIM=79:YLIM
=39
5030 IF BIG=6 OR BIG=7 THEN XLIM=159:YLI
M=79
5040 IF BIG=8 THEN XLIM=319:YLIM=159
5050 RETURN
```

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CHECKBOOK

```
10 DIM A$(10),CODE$(5),MMM$(25),WHO$(25)
,THING$(25),TD$(1)
20 VALUE=500:TAG=600:WORDS=700:MONEY=800
:WRITE=900
30 CNUM=0:MO=0:DA=0:YR=0
50 OPEN #1,4,0,"K:"
100 GRAPHICS 0:? "          CHECKBOO
K"
110 ? "      1.   WRITE A CHECK"
120 ? "      2.   MAKE A DEPOSIT"
130 ? "      3.   SERVICE CHARGE OR"
140 ? "           OTHER ADJUSTMENT"
145 ? "      4.   FIND TAX DEDUCTIONS"
146 ? "      5.   FIND BALANCE"
150 ? "      6.   EXIT TO MASTER MENU"
155 ? " TURN PRINTER OFF FOR SCREEN"
156 ? "DISPLAY ONLY."
160 ? "      ENTER THE NUMBER. ";
170 GET #1,A:IF A<49 OR A>54 THEN 170
175 GRAPHICS 0
180 A$=CHR$(A)
190 TRAP 200:GOTO 210
200 GRAPHICS 0:END
210 IF A$="6" THEN RUN "D:MENU"
220 PICK=VAL(A$)
230 IF PICK=4 OR PICK=5 THEN GOSUB 7000
240 ON PICK GOTO 1000,2000,3000,4000,500
0
500 REM --INPUT A NUMBER--
510 TRAP 520:GOTO 540
520 TRAP 520:? "
                "
530 ? "          "
540 INPUT NUMBER
550 RETURN
600 REM --INPUT DATE--
610 TRAP 620:GOTO 640
620 TRAP 620:? "
                "
630 ? "          "
640 INPUT MO,DA,YR
650 RETURN
700 REM --INPUT WORDS--
710 TRAP 720:GOTO 740
720 TRAP 720:? "
                "
730 ? "          "
740 INPUT MMM$
750 RETURN
800 REM --INPUT DOLLARS--
810 TRAP 820:GOTO 840
820 TRAP 820:? "
                "
830 ? "          "
840 INPUT DOLLARS
850 DOLLARS=(INT(DOLLARS*100))/100
860 IF DOLLARS>999999 OR DOLLARS<0.01 TH
EN ? " ":GOTO 820
870 RETURN
```

```
900 REM --WRITE TO DISK--
905 IF CODE$="CODE2" OR CODE$="CODE3" TH
EN CNUM=99999
910 PRINT #2;CODE$
920 PRINT #2;CNUM;",";MO;",";DA;",";YR;"
,";WHO$
930 PRINT #2;THING$
940 PRINT #2;DOLLARS;",";TD$
950 RETURN
1000 REM --WRITE A CHECK--
1010 OPEN #2,9,0,"D:TRANSACT"
1020 CODE$="CODE1"
1030 GRAPHICS 0:? " TYPE 0 FOR CHECK NUM
BER AND PUSH"
1032 ? "RETURN TO RETURN TO MENU."
1035 ? "CHECK NUMBER?"
1040 GOSUB VALUE
1050 CNUM=NUMBER
1055 IF CNUM=0 THEN CLOSE #2:GOTO 100
1060 ? " DATE:MO,DA,YR   (EXAMPLE:12,31,
80)?"
1070 GOSUB TAG
1100 ? " WHO WAS CHECK WRITTEN TO?"
1110 GOSUB WORDS
1120 WHO$=MMM$
1150 ? " WHAT WAS IT FOR?"
1160 GOSUB WORDS
1170 THING$=MMM$
1200 ? " HOW MANY DOLLARS?"
1210 GOSUB MONEY
1220 DOLLARS=-DOLLARS
1250 ? " IS THIS TAX DEDUCTIBLE? (Y / N)
";
1260 GET #1,A:IF A<>89 AND A<>78 THEN 12
60
1270 TD$=CHR$(A):? TD$
1280 ? " IS ALL OF THIS INFORMATION CORR
ECT?"
1290 GET #1,A:IF A<>89 AND A<>78 THEN 12
90
1300 IF A=78 THEN 1030
1310 GOSUB WRITE
1320 GOTO 1030
2000 REM --MAKE A DEPOSIT--
2010 CODE$="CODE2"
2020 GRAPHICS 0:? "      DATE OF DEPOSIT
  (EXAMPLE:12,31,80)?"
2030 GOSUB TAG
2100 ? " HOW MANY DOLLARS DEPOSITED?"
2110 GOSUB MONEY
2150 ? " IS ALL OF THIS INFORMATION CORR
ECT?"
2160 GET #1,A:IF A<>89 AND A<>78 THEN 21
60
2170 A$=CHR$(A):IF A$="N" THEN 2020
2180 OPEN #2,9,0,"D:TRANSACT":GOSUB WRIT
E
2190 CLOSE #2:GOTO 100
3000 REM --SERVICE CHARGE OR ADJUSTMENT-
```

52

```
3010 CODE$="CODE3"
3020 GRAPHICS 0:? "    DATE OF UPDATE (E
XAMPLE:12,31,80)?"
3030 GOSUB TAG
3100 ? " HOW MANY DOLLARS TO CHANGE?"
3110 GOSUB MONEY
3120 ? " ADD OR SUBTRACT?(A=ADD S=SUBTRA
CT)"
3130 GET #1,A:IF A<>65 AND A<>83 THEN 31
30
3140 IF A=83 THEN DOLLARS=(-1)*DOLLARS
3145 A$=CHR$(A):? A$
3150 ? " REASON FOR ADJUSTMENT?"
3160 GOSUB WORDS
3170 THING$=WW$
3180 ? " TAX DEDUCTIBLE ITEM? (Y/N)"
3190 GET #1,A:IF A<>89 AND A<>78 THEN 31
90
3200 TD$=CHR$(A)
3205 ? TD$
3210 ? " IS ALL OF THIS INFORMATION CORR
ECT?"
3220 GET #1,A:IF A<>89 AND A<>78 THEN 32
20
3230 A$=CHR$(A):IF A$="N" THEN 3020
3240 OPEN #2,9,0,"D:TRANSACT":GOSUB WRIT
E
3250 CLOSE #2:GOTO 100
4000 REM --FIND TAX DEDUCTIONS--
4010 OPEN #2,4,0,"D:TRANSACT"
4020 GOTO 6000
4030 GRAPHICS 0:CLOSE #2:GOTO 100
5000 REM --FIND BALANCE--
5010 OPEN #2,4,0,"D:TRANSACT"
5020 GOTO 5040
5030 GRAPHICS 0:CLOSE #2:GOTO 100
5040 BAL=0
5050 TRAP 5030
5060 INPUT #2,CODE$
5062 INPUT #2,CNUM,MO,DA,YR,WHO$
5064 INPUT #2,THING$
5066 INPUT #2,DOLLARS,TD$
5080 BAL=BAL+DOLLARS
5085 IF CNUM<START THEN 5060
5090 IF CODE$="CODE1" THEN GOSUB 6200
5100 IF CODE$="CODE2" THEN GOSUB 6400
5110 IF CODE$="CODE3" THEN GOSUB 6600
5120 GOTO 5050
6000 REM --INPUT TO PRINT--
6005 BAL=0
6006 TRAP 4030
6010 INPUT #2,CODE$
6012 INPUT #2,CNUM,MO,DA,YR,WHO$
6014 INPUT #2,THING$
6016 INPUT #2,DOLLARS,TD$
6018 BAL=BAL+DOLLARS
6019 IF CODE$="CODE2" THEN 6006
6020 IF TD$="N" THEN 6010
6030 IF CNUM<START THEN 6010
6040 IF CODE$="CODE1" THEN GOSUB 6200
6050 IF CODE$="CODE2" THEN GOSUB 6400
6060 IF CODE$="CODE3" THEN GOSUB 6600
6070 GOTO 6006
6200 REM --PRINT A CHECK--
6210 TRAP 6300
6220 LPRINT :LPRINT "CHECK #","D
ATE","AMOUNT"
6230 LPRINT "_____","____","_____"
6240 LPRINT
6250 LPRINT CNUM,MO;",";DA;",";YR,DOLLAR
S:LPRINT
6260 LPRINT "BALANCE = $";BAL:LPRINT
6270 LPRINT "TAX DEDUCTIBLE? ";TD$:LPRI
NT
6280 LPRINT "TO:  ";WHO$:LPRINT
6290 LPRINT "FOR: ";THING$:LPRINT
6300 GRAPHICS 0:? "    CHECK # ";CNUM
6310 ? " DATE=",MO;",";DA;",";YR
6320 ? " AMOUNT = $";DOLLARS
6330 ? " BALANCE= $";BAL
6340 ? " TAX DEDUCTIBLE? ";TD$
6350 ? " TO:  ";WHO$
6360 ? " FOR: ";THING$
6370 ? "    PRESS SPACE TO GO ON."
6380 GET #1,A
6390 RETURN
6400 REM --PRINT A DEPOSIT--
6410 TRAP 6500
6420 LPRINT :LPRINT :LPRINT "DATE : ";MO
;",";DA;",";YR:LPRINT
6430 LPRINT "AMOUNT DEPOSITED = $";DOLLA
RS:LPRINT
6435 LPRINT "BALANCE = $";BAL
6500 GRAPHICS 0:? " DATE : ";MO;",";DA;
",";YR
6510 ? " AMOUNT DEPOSITED = $";DOLLARS
6515 ? :? "BALANCE = $";BAL
6520 ? "    PRESS SPACE TO GO ON."
6530 GET #1,A
6540 RETURN
6600 REM --PRINT AN ADJUSTMENT--
6610 TRAP 6700
6620 LPRINT :LPRINT :LPRINT "DATE : ";MO
;",";DA;",";YR:LPRINT
6630 LPRINT "AMOUNT OF ADJUSTMENT = $";D
OLLARS:LPRINT
6640 LPRINT "TAX DEDUCTIBLE? ";TD$:LPRI
NT
6650 LPRINT "REASON FOR ADJUSTMENT:"
6660 LPRINT " ",THING$:LPRINT
6670 LPRINT "BALANCE = $";BAL
6700 GRAPHICS 0:? "    DATE : ";MO;",";D
A;",";YR
6710 ? " AMOUNT OF ADJUSTMENT = $";DOLLAR
S
6720 ? " TAX DEDUCTIBLE? ";TD$
6730 ? " REASON FOR ADJUSTMENT:"
6740 ? " ",THING$
6750 ? " BALANCE = $";BAL
6760 ? "    PRESS SPACE TO GO ON."
6770 GET #1,A
6780 RETURN
```

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```
7000 REM --GET STARTING CHECK NUMBER--
7010 GRAPHICS 0:? "      INPUT STARTING
CHECK NUMBER";
7020 INPUT A$
7030 TRAP 7010
7040 START=VAL(A$)
7050 IF START<1 OR START>99999 THEN 7010

7060 RETURN
```

CHECK #	DATE	AMOUNT
101	4,1,80	-45.78

BALANCE = $-45.78

TAX DEDUCTIBLE? N

TO   MA BELL

FOR: LOUSY PHONE SERVICE

CHECK #	DATE	AMOUNT
102	4,2,80	-56.87

BALANCE = $-102.65

TAX DEDUCTIBLE? N

TO: RIPIMOFF POWER & LIGHT

FOR: LIGHTS

CHECK #	DATE	AMOUNT
103	4,4,80	-110.43

BALANCE = $-213.08

TAX DEDUCTIBLE? N

TO: MASTERCHARGE

FOR: EVERYTHING LAST CHRISTMAS

DATE : 4,7,80

AMOUNT DEPOSITED = $1200

BALANCE = $986.92

DATE : 4,7,80

AMOUNT OF ADJUSTMENT = $-15

TAX DEDUCTIBLE? N

REASON FOR ADJUSTMENT:
              OVERDRAWN LAST 3 CHECKS

BALANCE = 971.92