

# THE CAVES

By

James R. Surber

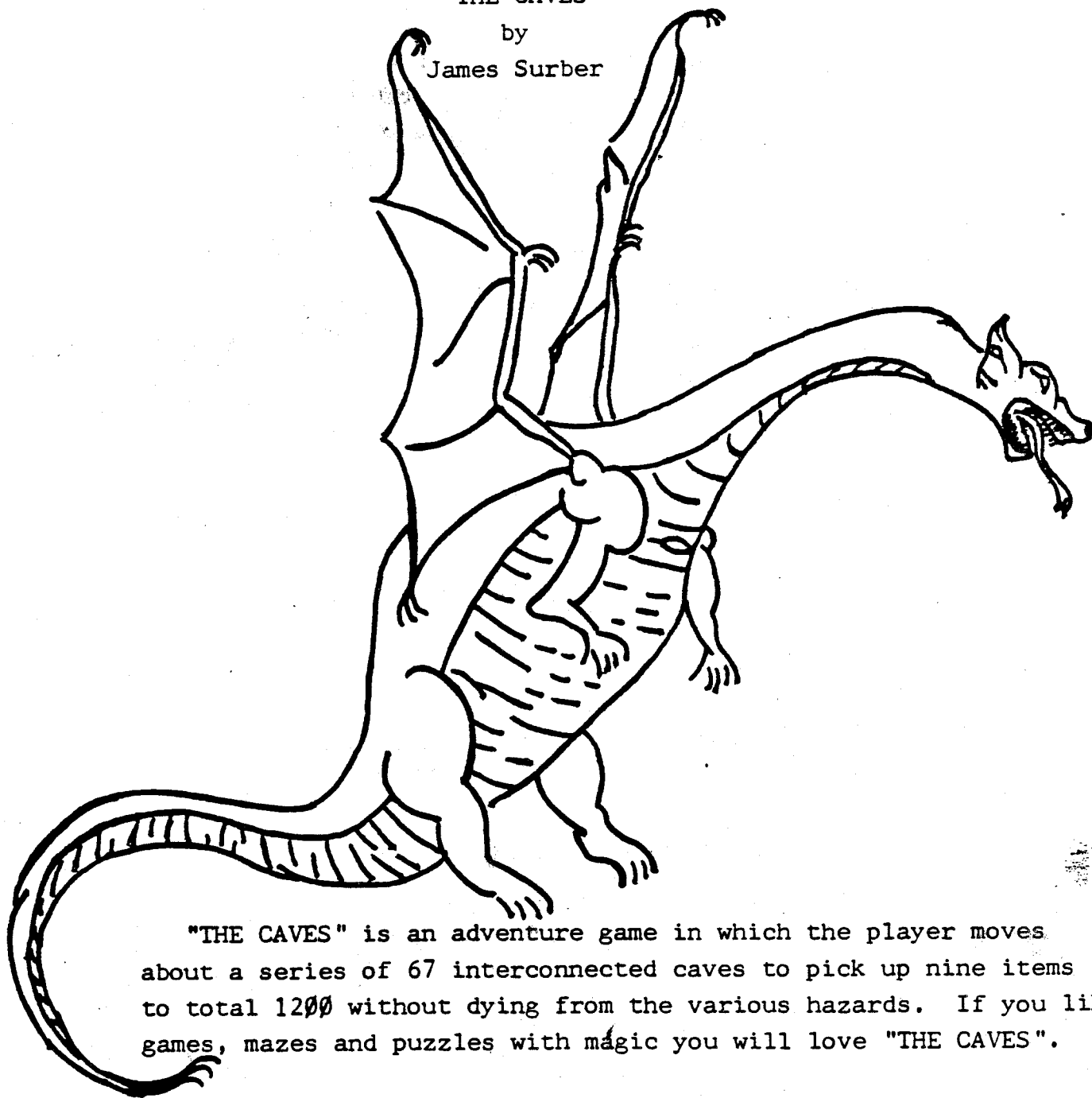
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## "THE CAVES"

by  
James Surber



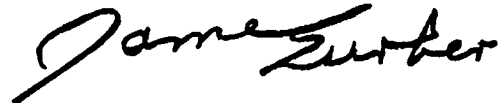
"THE CAVES" is an adventure game in which the player moves about a series of 67 interconnected caves to pick up nine items to total 1200 without dying from the various hazards. If you like games, mazes and puzzles with magic you will love "THE CAVES".

This is a full memory capacity program but because of the size it may be totally entered by the card reader or the wand, even if your system has individual memory modules. The fourth module must be in place to start the game. The printer is optional and uses flag 13 in the program. This causes the warnings and 'wizards' words to be in lower case print. "Auto off" is used if death occurs.

The game is simple to operate in that it prompts or gives you all information needed on the display or on the overlay. The board is easily imaged in the mind, or a list of 1 - 67 caves on paper is all that is needed to help remember hazardous caves.

The game has chance, skill and goal orientation in it to keep the player interested and active. Hazards and valuables are interconnected to the equipment present and the movement through the caves for skill. Loss of equipment and non-warned hazards with random selection of caves without warnings play the role of chance in "THE CAVES". Goal orientation is just getting through alive and scoring.

Some ideas and parts of the program were taken from the "Games Solution Book" by HP. I would also like to thank Scott Sowders for his help in the game "THE CAVES".



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Welcome to "THE CAVES". The Caves is an adventure game in which the player (a wizard) moves about a series of 67 caves to pick up nine items to total 1200 points without dying from the hazards. The construction of the caves is a single stranded helix with interconnecting tunnels. The even numbered caves have a tunnel going up seven caves, while the odd numbered caves have a tunnel going down seven caves. These tunnels and the tunnels going to the two immediate caves on either side make each cave connected to three adjacent caves.

Upon entering the caves you will begin at caves number 0 which will always be empty and "SAFE". Five pieces of equipment will be given to you before starting and three more pieces may be picked up while going through the game. All of these are to help you get through the hazards and pick up valuables. You will be given at the start of the game the following:

Keys, Water, Knife, Gloves, and a Lamp.

Only these five original pieces of equipment can be "SNATCHED" (taken) by the bats. These are coded to flags 0 - 4 and will show "set" on the display if present. The three pieces that are picked up along the way are immune to the bats due to a magical spell over them. These pieces are:

Wand, Magic Word, and a Cape.

If you lose any of the five original pieces of equipment the Wand will magically (PRESTO) return all lost pieces in one Wand usage. The Wand will work only twice after each visit to the Wand cave (not accumulative). The Magic Word "ABRAKADABRA" will take you out of the game "THE CAVES" at any time or place you wish to use it. The Cape will render

you invisible to any dragon you may find in a cave. If the Cape is lost along the way it may be gotten again by revisiting the Cape cave.

You will be given warnings of some of the hazards in the adjacent caves after you enter a new cave and have encountered any hazards present. These warnings appear after the word "SAFE" and do not have tones associated with them. Below is a list of the warnings and their hazards.

"FEEL DRAFT" a bottomless pit - the end of the game  
(no score) HP shuts off  
"YEEEEIIII THE PITS"

"SMELL DRAGON" if no Cape the dragon will eat you -  
the end of the game (no score) HP shuts off  
"CHOMP"

"HEAR SPLASH" cave is full of water and you will  
drown - end of the game (no score) HP shuts off  
"ALL WASHED UP"

"DARK CAVE" if no lamp is present you will fall  
into a bottomless pit - the end of the game -  
(no score) HP shuts off  
"OOPS NO LAMP"  
"YEEEEIIII THE PITS"

"HEAR SQUEEKS" bats will "SNATCH" one piece of your  
equipment  
"SNATCH"  
"BATS TOOK ()"

"HEAR VOICE" a "WIZARD" will tell you all that occupies the six closest caves (usually the three on either side). He does not see Stairs or Forks.

"SEE LIGHT" a tunnel out of "THE CAVES" will take you out - the end of the game (with score)  
"END GAME".  
"SCORE = ()"

There will be other surprises lurking in "THE CAVES" without warnings. These will only be inconvenient or lethal if there is equipment "SNATCHED".

There are caves with Stairs and Forks in them. The Stairs will display "UP OR DOWN ?". This will randomly place you either above (higher number) or below (lower number) the cave the Stairs are in presently. Once placed in a new cave you will suffer any new hazards and be given new warnings and adjacent caves. The Fork will randomly select two caves and display them with no warnings. You must choose between them and there suffer any new hazards and be given new warnings and adjacent caves. At each reentry into a cave with Stairs or Forks you will be given new random caves. You never know what you might find at the end of your tunnel.

At any time you may go "BACK" and return to the last cave you were in. Using this function you may save key strokes to return whence you came. This function will also work with Stairs and Forks.

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A list of all valuables and their points is given below. After you have placed a valuable "IN PACK" it is removed from the cave and that cave will be empty upon reentry. When all valuables are found the HP - 41C will "beep" to tune you into the fact that you have finished.

DIAMONDS	100
IVORY	100
MING VASE	100
PEARLS	100
CRYSTAL (in one of the two "small caves")	100
RUBIES (in a locked chest)	150
SILK (in a locked chest)	150
AG (silver- too hot, use gloves)	200
AU (gold- too cold, use gloves)	200

Enter "THE CAVES" for an adventure into the Magical World  
and  
HAVE FUN!



## WARNINGS, LIMITATIONS AND OPTIONS

The initialization of this program is done during the time the display is showing "THE CAVES". This process takes time to randomize the caves for your own personal game. Please be patient while the HP -41C is "thinking". The same seed will give you the same game each time you play.

Due to the size of the program the user assigned keys (A through J) may take a little time (for label searching) to start running.

After you have encountered a deadly hazard the HP - 41C will automatically shut off (use of the "off" function in the program). To restart a new game turn the HP -41C on and press the R/S button.

Flag 11 is used at one brief point in the program. If the HP -41C is shut off manually during the running of the program flag 11 may be set and will automatically start the game upon turning on. As long as you shut off during a prompt for a move flag 11 will not be a problem when bringing your system up (turning on) the next time.

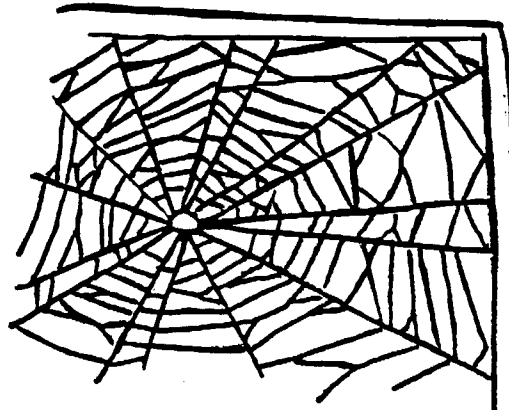
. If the optional printer is used all warnings and the wizards' wise words will be in lower case print.

This game is also available in "basic" computer language with graphics. Please notify the Author (Grand Wizard) for further details.



## THE STORY OF THE CAVES (an example)

Once upon a time there was a wizard who set out to make his name in the wonderful world of wizardry and earn a fabulous fortune. The titillating trail that awaited him was the awesome task of traveling through the world of "THE CAVES". As he traveled down through this magically made maze he increased his strength to a new and higher order by receiving magical powers (the Wand, Magic word, and the Cape). With each power he gained his order was increased by one (thus he had three orders to achieve). His fortune was found by placing the nine valuables of the caves in his pack. These powers and valuables could make him the world's wealthiest wizard. To start his journey he planted a magical seed ( a fractional number) to form his own personal puzzle. At this time he was given his equipment (Keys, Water, Knife, Gloves, and a Lamp). Three of his wise wizard friends entered to help him along his winding world of wonderment. The number he choose under considerable consultation and consideration from the "GRAND WIZARD" of "THE CAVES" was  $0.741$ . The following is the telling of the treacherous trek he took.



## KEYSTROKES:

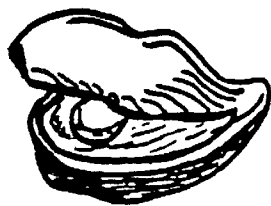
[XEQ] [ALPHA] SIZE [ALPHA] 076

[XEQ] [ALPHA] CAVES [ALPHA]

.741 [R/S]

1 [R/S]

2 [R/S]



3 [R/S]

## DISPLAY:

SEED ?

THE CAVES

SAFE

NO WARNING

0\* 1, 3, 5

MOVING TO 1

SMALL CAVE

CRYSTAL

CRYSTAL IN PACK

SCORE = 100

SAFE

NO WARNING

1\* 0, 2, 0

MOVING TO 2

PEARLS

PEARLS IN PACK

SCORE = 200

SAFE

NO WARNING

2\* 1, 3, 9

MOVING TO 3

SAFE

NO WARNING

3\* 2, 4, 0

## KEYSTROKES:

4 [R/S]



5 [R/S]

[I](RT)



9 [R/S]

8 [R/S]

## DISPLAY:

MOVING TO 4

AU

TOO COLD

USE GLOVES

IN PACK

SCORE = 400

SAFE

NO WARNING

4\* 3, 5, 11

MOVING TO 5

FORK

5\* LT/RT, 45, 10

MOVING TO 10

HEAR SQUEEKS

SNATCH

BATS TOOK KNIFE

SAFE

HEAR SPLASH

10\* 9, 11, 17

MOVING TO 9

SAFE

HEAR SQUEEKS

9\* 8, 10, 2

MOVING TO 8

SAFE

SEE LIGHT

8\* 7, 9, 15

## KEYSTROKES:

15 [R/S]

16 [R/S]

23 [R/S]



24 [R/S]

[J] (BACK)

22 [R/S]

## DISPLAY:

MOVING TO 15  
SAFE  
SEE LIGHT  
15\* 14, 16, 8

MOVING TO 16  
SAFE  
HEAR SPLASH  
16\* 15 17 23

MOVING TO 23  
DIAMONDS  
DIAMONDS IN PACK  
SCORE = 500  
SAFE  
NO WARNING  
23\* 22, 24, 16

MOVING TO 24  
WEB  
BATS TOOK KNIFE  
GO BACK

SAFE  
NO WARNING  
23\* 22, 24, 16

MOVING TO 22  
SAFE  
HEAR VOICE  
HEAR VOICE  
22\* 21, 23, 29

## KEYSTROKES:

29 [R/S]



[E] (EQUIP)

[D] (SCORE)

30 [R/S]

## DISPLAY:

MOVING TO 29  
HEAR VOICE  
WIZARD  
CAVE 26  
LOCKED DOOR  
CAVE 27 EMPTY  
CAVE 28 EMPTY  
CAVE 29  
HEAR VOICE  
CAVE 30  
MAGIC WORD  
CAVE 31  
IVORY  
CAVE 32  
DARK CAVE  
SAFE  
NO WARNING  
29\* 28, 30, 22

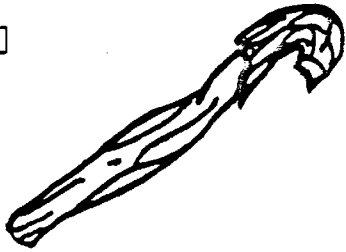
BATS TOOK KNIFE  
SAFE  
NO WARNING  
29\* 28, 30, 22

SCORE = 500  
29\* 28, 30 22

MOVING TO 30  
MAGIC WORD  
SAFE  
HEAR VOICE  
30\* 29, 31, 37

## KEYSTROKES:

37 [R/S]



36 [R/S]

35 [R/S]

## DISPLAY:

MOVING TO 37  
MAGIC WAND  
SAFE  
HEAR VOICE  
37\* 35, 37, 30

MOVING TO 36  
SAFE  
NO WARNING  
36\* 35, 37, 43

MOVING TO 35  
UGLY TROLL  
BATS TOOK KNIFE  
CHOMP  
(HP 41C shuts off)

If this wizard had been wise he would have used his Magic Wand after he got it at cave 37. The Knife would have protected him against the Ugly Troll and he could have continued on to his fame and fortune. To reincarnate the wizard for another chance simply turn the HP-41C on and press R/S for a new prompt for a seed and a new game.

STEP	INSTRUCTIONS	KEYSTROKES	DISPLAY
1	Load program		
2	Assign "MOVE TO" (optional)	[ASN] ↑ [ENTER]	
3	Initialize	[XEQ] CAVES	SEED ?
4	Key in any fractional number (between 1 and 0)	# [R/S]	THE CAVES
5	To move to a new cave (only one of those listed on the display)	# of cave [R/S]	MOVING TO () (hazards or valuables) SAFE (warnings) (new adjacent caves) -* -, -, -
6	If "FORK displayed and "-* LT/RT, -, -	[H] (left) [I] (right)	Same as 5
7	If "STAIRS" displayed and "UP OR DOWN ?"	[F] (up) [G] (down)	Same as 5
8	If after "MAGIC WORD" was found in a cave and you wish to exit "THE CAVES" with a score (partial or total score)	[A] (abra)	ABRAKADABRA END GAME SCORE = ()
	If no "MAGIC WORD" was found		NO MAGIC (cave display)

STEP	INSTRUCTIONS	KEYSTROKES	DISPLAY
9	<p>If you have found the "WAND" and the bats have "SNATCHED" some of your equipment the WAND will return all equipment taken</p> <p>If no "WAND" has been found or if the "WAND" has been used twice since last "WAND CAVE" visit (visits not accumulative)</p>	[B] (wand)	<p>PRESTO SAFE (warnings) (cave display of old caves)</p> <p>"NO WAND" SAFE (warnings) (cave display of old caves)</p>
10	At any time you wish to review the warnings for the adjacent caves (this will not function when a Fork or Stairs is displayed)	[C] (warn)	<p>(warnings) (cave display of old caves)</p>
11	If you wish a review of the score to date	[D] (score)	<p>SCORE = () (cave display of old caves)</p>
12	If you wish a review of the equipment "SNATCHED" by the bats	[E] (equip)	<p>BATS TOOK () (hazards or valuables) SAFE (warnings) (cave display of old caves)</p>



STEP	INSTRUCTIONS	KEYSTROKES	DISPLAY
13	If you wish or were instructed to "GO BACK" to the last cave (this will function with Forks and Stairs)	[J] (back)	Same as 5
14	If at anytime you stop midgame and turn your HP off you may recall your position and the game by simply recalling warnings (user mode on)	[C] (warn)	Same as 10
15	If you lose the game and the HP shuts off a new game may be started by simply turning the HP on and pressing R/S	[ON] [R/S]	SEED ?

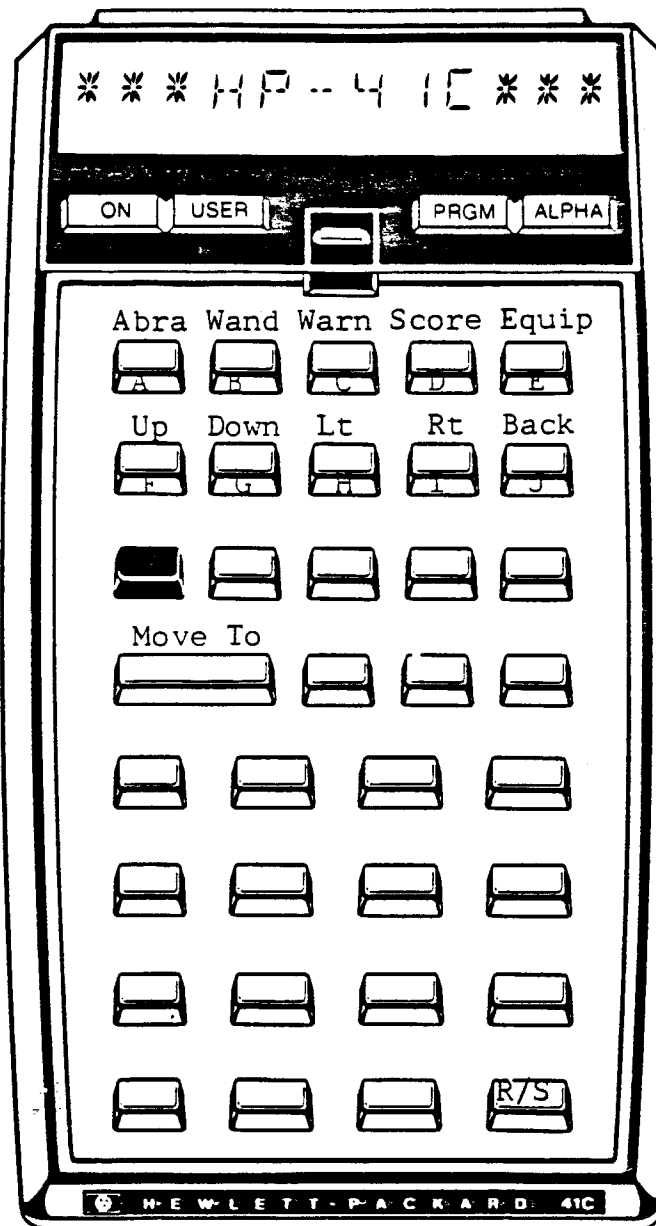
## SAMPLE GAME BOARD

00	36
01	37
02	38
03	39
04	40
05	41
06	42
07	43
08	44
09	45
10	46
11	47
12	48
13	49
14	50
15	51
16	52
17	53
18	54
19	55
20	56
21	57
22	58
23	59
24	60
25	61
26	62
27	63
28	64
29	65
30	66
31	67
32	
33	WAND
34	WORD
35	CAPE

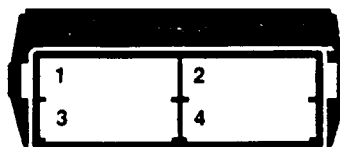
# KEYBOARD CARD LABELING

## KEYBOARD

\* Move To -  
is an optional  
assignment and  
is duplicated  
by the [R/S]  
Function with-  
out assignment.

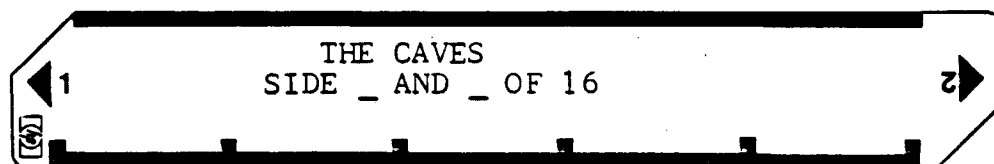


**SYSTEM  
CONFIGURATION**  
equivalent of four  
memory modules



\*the printer  
is optional  
(with quad-  
or HP-41CV)

**CARD**



## LABELS

00	Safe	31	Bad Tones
01	Magic Wand	32	Good Tones
02	Magic Word	33	Aview
03	Cape	34	Store Points
04	Silk	35	Use Gloves
05	Rubies	36	Use Keys
06	Ag	37	Pack
07	Au	38	Cape
08	Crystal		
09	Pearls	42	CHOMP
10	Ming Vase	43	BATS TOOK
11	Ivory	44	Knife Routine
12	Diamonds	45	End Game
13	Ugly Troll	46	GO BACK
14	Web	47	Equipment
15	Fire	48	SCORE = ( )
16	Locked Door		
17	Small Cave	55	New Cave
18	Stairs	56	Test Legality
19	Fork	57	Out
20	Out (see light)	58	Set Flags 0-4
21	Dark Cave	59	Clear Flag 5-13
22	Pits		
23	Water	66	Bottom Cave
24	Dragons	67	Top Cave
25	Bats	68	Adjacent Caves
26	Wizards		
		77	Cave Display
A	Abra	78	Display Warnings
B	Wand		
C	Warnings	84	Move To (from stairs)
D	Score		
E	Equipment	95	EMPTY
F	Up	96	Wizard Loop
G	Down	97	Loop
H	Left	98	Loop
I	Right	99	Random Number Generator
J	Back		
		↑	MOVE TO ( )
		CAVES	Program Label & Start

## FLAGS

00	Keys
01	Lamp
02	Water
03	Knife
04	Gloves
05	Wand
06	Word
07	Cape
08	(used)
09	Bats Took
10	First Wand Usage
11	Chest cave with Silk
12	(not used)
13	Warnings & Wizards

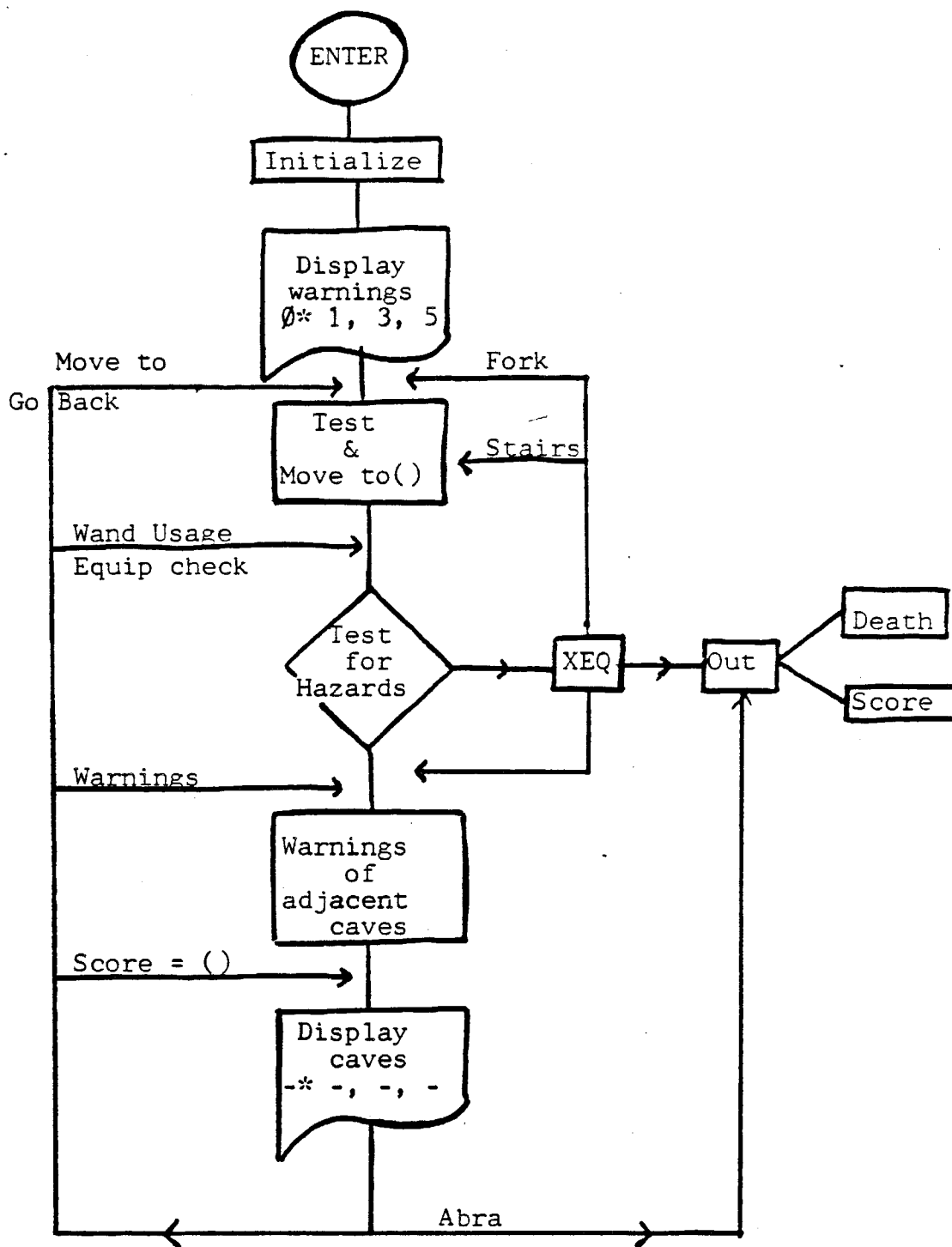
## REGISTERS

00-67	Caves
68	} Adjacent Caves
69	
70	
71	Last Cave
72	Points Total
73	Position
74	Seed
75	Used (loop controls)

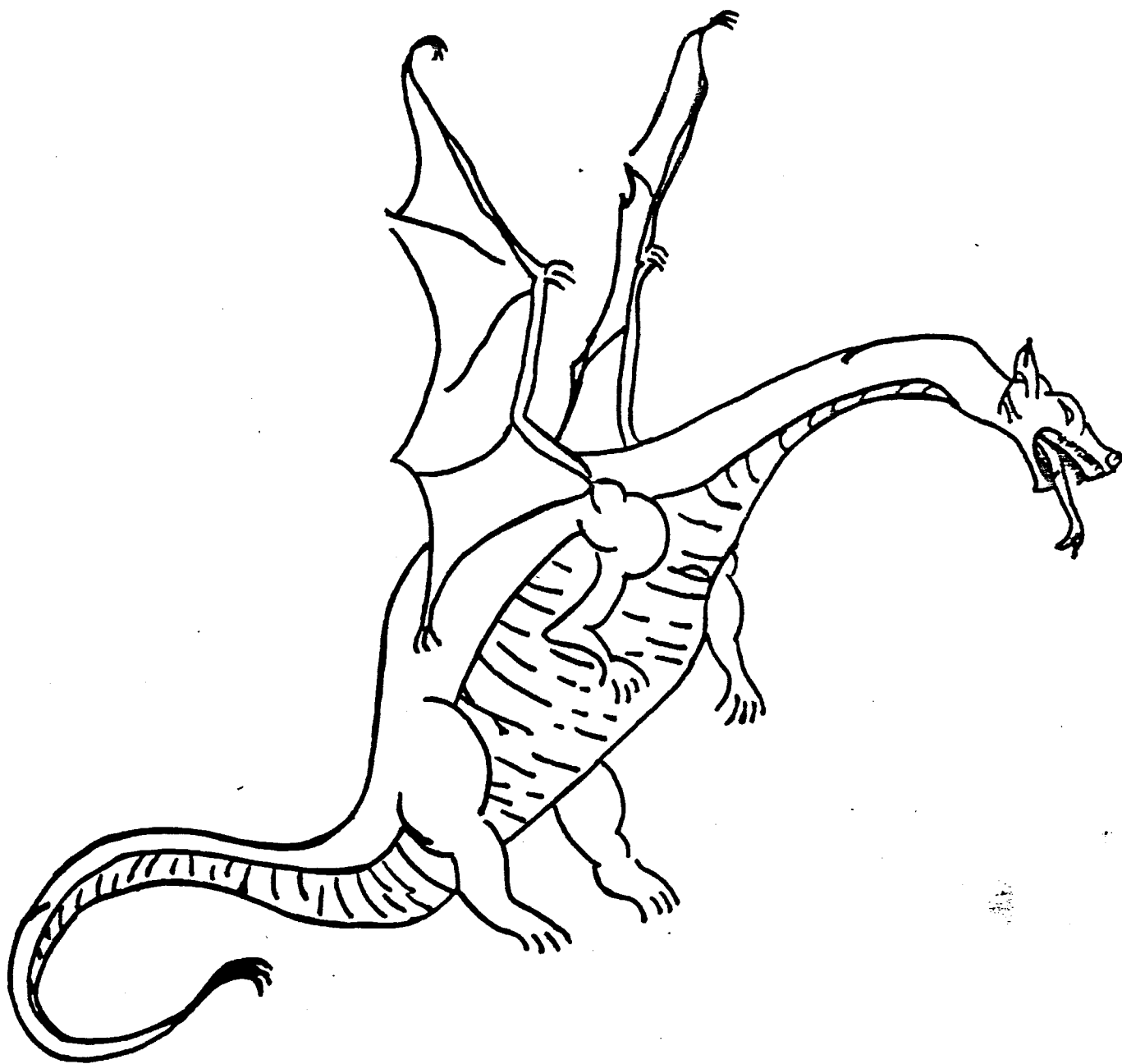
## INFORMATION

70	Labels used
579	Steps
1700	(approx) Bytes
076	Size
319	Register used
14	Flags
16	card sides

00900C



CHOMP



Invisible To Dragon

# REGISTERS, STATUS, FLAGS, ASSIGNMENTS

DATA REGISTERS			STATUS			
00 ↓	CAVES		SIZE 076	TOT. REG. 319	USER MODE	
67			ENG	FIX 0	SCI	ON X OFF
68	} ADJACENT CAVES		DEG	RAD	GRAD	
69			FLAGS			
70						
71	LAST CAVE		#	INIT S/C	SET INDICATES	CLEAR INDICATES
72	POINTS TOTAL		0	S	KEYS PRESENT	KEYS SNATCHED
73	POSITION		1	S	LAMP PRESENT	LAMP SNATCHED
74	SEED		2	s	WATER PRESENT	WATER SNATCHED
75	LOOP CONTROLS		3	S	KNIFE PRESENT	KNIFE SNATCHED
			4	S	GLOVES PRESENT	GLOVES SNATCHED
			5	C	WAND PRESENT	WAND ABSENT
			6	C	WORD PRESENT	WORD ABSENT
			7	C	CAPE PRESENT	CAPE ABSENT
			8	c	USED	
			9	C	BATS TOOK NOTHING	BATS TOOK ( )
			10	C	1 ST WAND USAGE	WAND USAGE USED
			11	C	CHEST WITH SILK	CHEST WITH RUBIES
			12	C	NOT USED	
			13	c	TEST WARNINGS	XEQ HAZARD
			25	S	NORMAL WARNING	FORK WARNINGS
			27	S	USER MODE ON	
			29	C	NO DECIMAL POINT	



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## PROGRAM LISTING

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☐ 67 ☐ 97 ☒ 41C

STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS	STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS
01	LBL "CAV			47	X=0?		
ES"				48	GTO 98		
02	CLRG			49	RCL 75		
03	"SEED ?"		Seed	50	INT		
04	PROMPT			51	STO IND		
05	STO 74			Z			
06	"THE CAV			52	RTN		
ES"				53	LBL 97		
07	AVIEW		INITIALIZATION	54	XEQ 98		CONTROL
08	CF 29		OF	55	ISG 75		LOOP
09	SF 27		REGISTERS	56	GTO 97		
10	XEQ 59		&	57	RTN		
11	FIX 0		FLAGS	58	LBL J		
12	1.026			59	RCL 71		GO BACK
13	STO 75			60	GTO 84		
14	XEQ 97			61	LBL I		GO RIGHT
15	18.026			62	RCL 70		
16	STO 75			63	GTO "↑"		GO LEFT
17	XEQ 97			64	LBL H		
18	24.026			65	RCL 69		
19	STO 75			66	LBL "↑"		
20	XEQ 97			67	"MOVING		
21	TONE 9			TO "			MOVING TO ( )
22	LBL 66			68	ARCL X		
23	1			69	AVIEW		
24	STO 68		STORE	70	XEQ 56		
25	3		ADJACENT CAVES	71	LBL 84		
26	STO 69		TO 0	72	X<> 73		STORE LAST
27	5			73	STO 71		CAVE
28	STO 70			74	RCL 73		
29	GTO 55			75	X=0?		
30	LBL 99			76	GTO 66		
31	RCL 74			77	67		
32	9821		RANDOM	78	X=Y?		
33	*			79	GTO 67		
34	.21137		NUMBER	80	RCL 73		
35	+		GENERATOR	81	1		FIND
36	FRC			82	-		
37	STO 74			83	STO 68		ADJACENT
38	*			84	2		CAVES
39	INT			85	+		
40	RTN			86	STO 69		
41	LBL 98			87	2		ODD OR
42	66			88	MOD		EVEN
43	XEQ 99		STORAGE	89	X=0?		
44	X=0?		LOOP	90	GTO 68		
45	GTO 98			91	RCL 73		
46	RCL IND			92	7		

Note: Refer to "HP-41C OWNER'S HANDBOOK AND PROGRAMMING GUIDE" for specific information on keystrokes. The Function Index is found at the very back of the Handbook. Refer to Appendix E in 67 or 97 "OWNER'S HANDBOOK AND PROGRAMMING GUIDE" for exact keystrokes.

☐ 67   ☐ 97   ☒ 41C

STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS	STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS
93	-		ODD	138	LBL C		
94	0		LOWER CAVE	139	SF 13		FIND
95	X<Y?			140	RCL 68		WARNINGS
96	X<>Y			141	XEQ 78		
97	STO 70			142	RCL 69		
98	GTO 55			143	XEQ 78		
99	LBL 68			144	RCL 70		
100	RCL 73			145	XEQ 78		
101	7		EVEN	146	CF 13		
102	+		UPPER CAVE	147	"NO WARN		NO WARNINGS
103	67			148	FC?C 08		
104	X>Y?			149	AVIEW		
105	X<>Y			150	PSE		
106	STO 70			151	LBL 77		
107	GTO 55			152	CLA		DISPLAY
108	LBL 67			153	ARCL 73		CAVES
109	62			154	"I* "		
110	STO 68		STORE	155	ARCL 68		
111	64		ADJACENT	156	"I, "		
112	STO 69		CAVES TO 67	157	ARCL 69		
113	66			158	"I, "		
114	STO 70			159	ARCL 70		
115	GTO 55			160	PROMPT		
116	LBL 56			161	GTO "↑"		
117	RCL 68			162	LBL 78		
118	X=Y?		TEST	163	SF 25		DISPLAY
119	RTN		IF	164	RCL IND		WARNINGS
120	X<>Y		LEGAL	X			
121	RCL 69		MOVE	165	FC? 25		
122	X=Y?			166	GTO 77		
123	RTN			167	20		
124	X<>Y			168	X>Y?		
125	RCL 70			169	RTN		
126	X=Y?			170	SF 08		
127	RTN			171	XEQ IND		
128	"ILLEGAL CAVE"			Y			
129	XEQ 33			172	RTN		
130	RCL 73			173	LBL 01		
131	GTO 00			174	"MAGIC W		MAGIC WAND
132	LBL 55		XEQ HAZARDS	175	FS? 13		
133	RCL IND		& VALUABLES	176	GTO 33		
73				177	XEQ 32		
134	GTO IND			178	SF 05		
X				179	SF 10		
135	LBL 00			180	GTO 00		
136	"SAFE"		SAFE	181	LBL B		
137	XEQ 33						

## PROGRAM LISTING

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STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS	STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS
182	FC? 05			226	FS? 13		
183	"NO WAND		USE MAGIC W	227	GTO 33		CAPE
"			WAND	228	XEQ 32		
184	FS? 05			229	"INVISIB		
185	"PRESTO"			LE TO"			
186	XEQ 32			230	"- DRAGO		
187	FC? 05			N"			
188	GTO E			231	XEQ 33		
189	FC?C 10			232	SF 07		
190	CF 05			233	GTO 00		
191	XEQ 58			234	LBL 04		
192	GTO 00			235	SF 11		SILK
193	LBL 59			236	LBL 05		RUBIES
194	CF 13			237	"LOCKED		
195	CF 10		INITIALIZE	CHEST"			
196	CF 08		&	238	XEQ 33		LOCKED CHEST
197	CF 07		RESET FLAGS	239	FS? 13		ROUTINE
198	CF 06			240	CF 11		
199	CF 05			241	FS? 13		
200	LBL 58			242	RTN		
201	SF 04		RESET FLAGS	243	SF 08		
202	SF 03		FOR	244	XEQ 36		
203	SF 02		WAND & GAME	245	CF 08		
204	SF 01			246	FC? 00		
205	SF 00			247	GTO 00		
206	CF 09			248	FC? 11		
207	RTN			249	"RUBIES"		
208	LBL 02			250	FS?C 11		
209	"MAGIC W		MAGIC WORD	251	"SILK"		
ORD"				252	XEQ 33		
210	FS? 13			253	150		
211	GTO 33			254	GTO 34		
212	XEQ 32			255	LBL 06		
213	SF 06			256	"AG"		
214	GTO 00			257	XEQ 33		AG (SILVER)
215	LBL A			258	FS? 13		
216	FC? 06			259	RTN		
217	"NO MAGI			260	"TOO HOT		
C"			USE MAGIC	"			
218	FS? 06		WORD	261	GTO 35		
219	"ABRAKAD			262	LBL 07		
ABRA"				263	"AU"		AU (GOLD)
220	XEQ 33			264	XEQ 33		
221	FC? 06			265	FS? 13		
222	GTO 77			266	RTN		
223	GTO 57			267	"TOO COL		
224	LBL 03			D"			
225	"CAPE"			268	LBL 35		

009000

## PROGRAM LISTING

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STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS	STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS
269	XEQ 33			312	TONE 0		
270	FS? 04			313	GTO 33		
271	"USE "		USE GLOVES	314	LBL 32		
272	FC? 04		ROUTINE	315	TONE 1		GOOD TONES
273	XEQ 43			316	TONE 3		
274	"-GLOVES			317	TONE 5		
	"			318	LBL 33		
275	XEQ 33			319	AVIEW		AVIEW
276	FC? 04			320	PSE		
277	GTO 00			321	RTN		
278	CLA			322	LBL 13		
279	200			323	"UGLY TR		
280	GTO 34			OLL"			UGLY
281	LBL 09			324	FS? 13		
282	"PEARLS"		PEARLS	325	GTO 33		TROLL
283	GTO 37			326	XEQ 31		
284	LBL 10			327	XEQ 44		
285	"MING VA		MING VASE	328	FS? 03		
	SE"			329	GTO 00		
286	GTO 37			330	GTO 42		
287	LBL 11			331	LBL 14		
288	"IVORY"			332	"WEB"		
289	GTO 37		IVORY	333	FS? 13		WEB
290	LBL 12			334	GTO 33		
291	"DIAMOND			335	XEQ 31		
	S"		DIAMONDS	336	XEQ 44		
292	LBL 37			337	FS? 03		
293	XEQ 33			338	GTO 00		
294	FS? 13		DISPLAY	339	GTO 46		
295	RTN		VALUABLES	340	LBL 15		
296	100			341	"FIRE"		
297	LBL 34			342	FS? 13		
298	"- IN PA			343	GTO 33		FIRE
	CK"		IN PACK	344	XEQ 31		
299	XEQ 33			345	FS? 02		
300	ST+ 72			346	"USE "		
301	RCL 72			347	FC? 02		
302	1200			348	XEQ 43		
303	X=Y?		BEEP IF	349	"-WATER"		
304	BEEP		1200 POINTS	350	XEQ 33		
305	XEQ 48			351	FS? 02		
306	0			352	GTO 00		
307	STO IND		REMOVE VAL-	353	GTO 46		
	73			354	LBL 16		
308	GTO 00		UABLE FOR CAVE	355	"LOCKED		
309	LBL 31			DOOR"			LOCKED
310	TONE 5		BAD	356	FS? 13		DOOR
311	TONE 3		TONES	357	GTO 33		

## PROGRAM LISTING

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STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS	STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS
358	XEQ 31			401	XEQ 99		
359	♦LBL 36			402	X<Y?		
360	FS? 00			403	GTO F		
361	"USE "		USE KEY	404	GTO 84		
362	FC? 00		ROUTINE	405	♦LBL G		
363	XEQ 43			406	RCL 73		DOWN
364	"HKEY"			407	67		
365	XEQ 33			408	XEQ 99		
366	FS? 08			409	X>Y?		
367	RTN			410	GTO G		
368	FS? 00			411	GTO 84		
369	GTO 00			412	♦LBL 19		
370	♦LBL 46			413	FS? 13		
371	"GO BACK		PROMPT FOR	414	RTN		
"			GO BACK	415	"FORK"		
372	PROMPT			416	XEQ 33		FORK
373	GTO J			417	67		
374	♦LBL 08		CRYSTAL	418	XEQ 99		FIND &
375	SF 08			419	STO 69		STORE THE
376	♦LBL 17			420	67		CAVES FOR
377	"SMALL C			421	XEQ 99		FORK
AVE"			SMALL CAVES	422	STO 70		
378	XEQ 33			423	"LT/RT"		
379	FS? 13			424	ASTO 68		
380	CF 08			425	GTO 77		
381	FS? 13			426	♦LBL 20		
382	RTN			427	"SEE LIG		
383	"DROP BI			HT"			SEE LIGHT
G CAPE"			DROP BIG	428	FS? 13		
384	FS?C 07		CAPE	429	GTO 33		
385	XEQ 31			430	XEQ 32		
386	FC?C 08			431	♦LBL 57		
387	GTO 00			432	"END GAM		
388	"CRYSTAL			E"			END GAME
"				433	XEQ 33		
389	GTO 37			434	XEQ 48		
390	♦LBL 18			435	PROMPT		
391	FS? 13		STAIRS	436	GTO 45		
392	RTN			437	♦LBL D		
393	"STAIRS"			438	XEQ 48		GIVE SCORE
394	XEQ 33			439	GTO 77		
395	"UP OR D			440	♦LBL 48		
OWN ?"				441	"SCORE =		
396	PROMPT			"			SCORE = ( )
397	GTO 18			442	ARCL 72		
398	♦LBL F			443	XEQ 32		
399	RCL 73		UP	444	RTN		
400	67			445	♦LBL 21		

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STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS	STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS
446	"DARK CA VE"			485	XEQ 33		
447	FS? 13			486	TONE 1		END GAME TONES
448	GTO 33		DARK CAVE	487	TONE 0		
449	XEQ 33			488	OFF		
450	CLA			489	GTO "CAV ES"		
451	XEQ 31			490	LBL 44		
452	PSE			491	FS? 03		
453	"USE LAM P"			492	"USE "		
454	FS? 01			493	FC? 03		
455	XEQ 33			494	XEQ 43		KNIFE ROUTINE
456	FS? 01			495	"-KNIFE"		
457	GTO 00			496	XEQ 33		
458	"OOPS NO LAMP"		NO LAMP	497	RTN		
459	XEQ 33			498	LBL 25		
460	LBL 22			499	"HEAR SQ UEEKS"		
461	"FEEL DR AFT"			500	XEQ 33		
462	FS? 13		FEEL DRAFT	501	FS? 13		BATS
463	GTO 33			502	RTN		
464	XEQ 31		PITS	503	TONE 9		
465	"YEEEEII II"			504	TONE 9		
466	"- THE P ITS"			505	4		
467	GTO 45			506	XEQ 99		
468	LBL 23			507	CF IND X		
469	"HEAR SP LASH"			508	SF 09		
470	FS? 13			509	"SNATCH"		
471	GTO 33			510	XEQ 33		
472	XEQ 31			511	LBL E		BATS TOOK ()
473	"ALL WAS HED UP"		WATER	512	XEQ 43		
474	GTO 45			513	LBL 47		
475	LBL 24			514	FC? 00		
476	"SMELL D RAGON"			515	"-KEY "		
477	FS? 13			516	FC? 01		
478	GTO 33			517	"-LAMP "		EQUIPMENT
479	XEQ 31			518	FC? 02		LIST
480	FS? 07			519	"-WATER "		
481	GTO 03			520	FC? 03		
482	LBL 42			521	"-KNIFE "		
483	"CHOMP"		CHOMP	522	FC? 04		
484	LBL 45			523	"-GLOVES "		
				524	FC? 09		
				525	"-NOTHIN G"		
				526	XEQ 33		

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STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS	STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS
527	GTO 00			571	GTO 96		
528	LBL 43			572	CF 13		
529	-BATS TO		BATS TOOK	573	GTO 00		
	OK -			574	LBL 95		
530	RTN			575	X<>Y		DISPLAY
531	LBL 26			576	X=Y?		EMPTY
532	-HEAR VO			577	-+ EMPTY		
	ICE-						
533	FS? 13			578	RTN		END
534	GTO 33		WIZARDS	579	.END.		
535	XEQ 33						
536	TONE 4						
537	TONE 5		WIZ. TONES				
538	TONE 6						
539	-WIZARD-						
540	XEQ 33						
541	SF 13						
542	RCL 73						
543	3		SET BOUNDS				
544	-		OF				
545	1		WIZARD				
546	X<Y?						
547	X<>Y						
548	STO 75						
549	6						
550	+						
551	67						
552	X>Y?						
553	X<>Y			80			
554	1000						
555	/						
556	ST+ 75						
557	LBL 96						
558	-CAVE -		TEST				
559	ARCL 75		CAVE CONTENT				
560	RCL IND						
	75						
561	0						
562	XEQ 95			90			
563	18						
564	XEQ 95						
565	19						
566	XEQ 95						
567	XEQ 33						
568	X#0?						
569	XEQ IND						
	X						
570	ISG 75			00			





PROGRAM REGISTERS NEEDED: 244

ROW 1 (1 : 3)



ROW 2 (3 : 6)



ROW 3 (6 : 11)



ROW 4 (11 : 15)



ROW 5 (15 : 18)



ROW 6 (18 : 24)



ROW 7 (24 : 31)



ROW 8 (31 : 35)



ROW 9 (36 : 43)



ROW 10 (44 : 50)



ROW 11 (51 : 56)



ROW 12 (57 : 63)



ROW 13 (63 : 67)



ROW 14 (67 : 70)



ROW 15 (70 : 76)



ROW 16 (76 : 83)



ROW 17 (84 : 92)



ROW 18 (93 : 100)



ROW 19 (101 : 108)



ROW 20 (109 : 115)



ROW 21 (115 : 123)



ROW 22 (124 : 128)



ROW 23 (128 : 132)



ROW 24 (132 : 137)



ROW 25 (137 : 143)



ROW 26 (143 : 147)



ROW 27 (147 : 151)



ROW 28 (152 : 156)



ROW 29 (157 : 162)



ROW 30 (162 : 168)



ROW 31 (169 : 174)



ROW 32 (174 : 177)



ROW 33 (178 : 183)



ROW 34 (183 : 185)



ROW 35 (185 : 190)



ROW 36 (191 : 196)



ROW 37 (197 : 203)



ROW 38 (203 : 209)



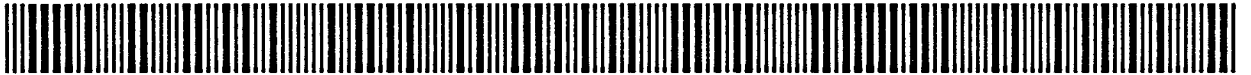
ROW 39 (209 : 212)



ROW 40 (212 : 217)



ROW 41 (217 : 219)



ROW 42 (219 : 222)



ROW 43 (222 : 226)



ROW 44 (227 : 229)



ROW 45 (229 : 230)



ROW 46 (230 : 236)



ROW 47 (237 : 237)



ROW 48 (238 : 244)



ROW 49 (244 : 249)



ROW 50 (249 : 252)



ROW 51 (252 : 257)



ROW 52 (257 : 261)



ROW 53 (261 : 267)



ROW 54 (267 : 269)



ROW 55 (270 : 274)



ROW 56 (274 : 277)



ROW 57 (277 : 282)



ROW 58 (282 : 285)



ROW 59 (285 : 288)



ROW 60 (288 : 291)



ROW 61 (291 : 297)



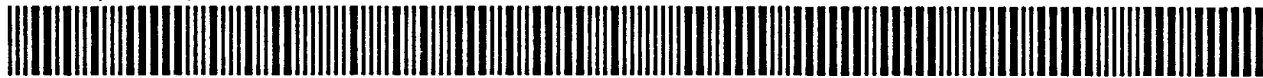
ROW 62 (297 : 299)



ROW 63 (299 : 305)



ROW 64 (305 : 312)



ROW 65 (312 : 318)



ROW 66 (318 : 323)



ROW 67 (323 : 327)



ROW 68 (327 : 332)



ROW 69 (333 : 337)



ROW 70 (338 : 342)



ROW 71 (342 : 346)



ROW 72 (346 : 349)



ROW 73 (350 : 355)



ROW 74 (355 : 356)



ROW 75 (357 : 361)



ROW 76 (361 : 365)



ROW 77 (365 : 371)



ROW 78 (371 : 375)



ROW 79 (376 : 377)



ROW 80 (378 : 383)



ROW 81 (383 : 384)



ROW 82 (385 : 388)



ROW 83 (388 : 393)



ROW 84 (393 : 395)



ROW 85 (395 : 398)



ROW 86 (399 : 404)



ROW 87 (404 : 410)



ROW 88 (410 : 415)



ROW 89 (415 : 420)



ROW 90 (421 : 424)



ROW 91 (425 : 427)



ROW 92 (427 : 432)



ROW 93 (432 : 434)



ROW 94 (434 : 439)



ROW 95 (440 : 442)



ROW 96 (443 : 446)



ROW 97 (446 : 451)



ROW 98 (451 : 454)



ROW 99 (454 : 458)



ROW 100 (458 : 460)



ROW 101 (461 : 462)



ROW 102 (463 : 465)



ROW 103 (465 : 466)



ROW 104 (466 : 469)



ROW 105 (469 : 472)



ROW 106 (473 : 473)



ROW 107 (473 : 476)



ROW 108 (476 : 479)



ROW 109 (479 : 483)



ROW 110 (484 : 489)



ROW 111 (489 : 492)



ROW 112 (493 : 496)



ROW 113 (496 : 499)



ROW 114 (499 : 503)



ROW 115 (504 : 509)



ROW 116 (509 : 513)



ROW 117 (513 : 517)



ROW 118 (517 : 519)



ROW 119 (519 : 522)



ROW 120 (522 : 525)



ROW 121 (525 : 528)



ROW 122 (528 : 530)



ROW 123 (531 : 532)



ROW 124 (533 : 538)



ROW 125 (538 : 541)



ROW 126 (542 : 551)



ROW 127 (552 : 558)



ROW 128 (558 : 563)



ROW 129 (563 : 568)



ROW 130 (569 : 574)



ROW 131 (575 : 579)



ROW 132 (579 : 579)

