

Program Description I

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Program Description, Equations, Variables

The player has a triangular board with fourteen pegs and one hole. The player then jumps one peg over another to the open hole and removes the peg that was jumped over. Play continues until there are no more moves or there is only one peg left on the board. The player can then score himself/herself on how many pegs are left on the board. Leave four or more pegs--0 points. Leave three pegs--10 points. Leave two pegs--25 points. Leave one peg--50 points. Advanced versions of the game are to leave a different hole open each time and still get down to one peg, leave the last peg in the exact hole that was initially left open--100 points, and finally to leave eight pegs on the board with no remaining jumps--200 points.

Operating Limits and Warnings All jumps can be made in any direction, but only in straight lines.

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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Reference(s)

I. Q. TESTER



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Program Listing I

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STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	g LBL a	32 25 11	Initialization of registers		h SF 1	35 51 01	
	STO 6	33 06			f LBL B	31 25 12	
	.	83			1	01	
	8	08		060	1	01	
	8	08			g X≤Y	32 71	
	8	08			GTO 0	22 00	
	8	08			h X≥Y	35 52	
	1	01			7	07	
	8	08			g X≤Y	32 71	
010	8	08			GTO 1	22 01	
	8	08			h X≥Y	35 52	Determines which level of board peg is on
	8	08			4	04	
	STO 1	33 01			g X≤Y	32 71	
	.	83		070	GTO 2	22 02	
	0	00			h X≥Y	35 52	
	0	00			2	02	
	0	00			g X≤Y	32 71	
	6	06			GTO 3	22 03	
	3	03			h X≥Y	35 52	
020	7	07			h ST I	35 33	
	-	51			4	04	Inserts or removes peg from appropriate level
	STO 2	33 02			+	61	
	.	83			f LBL 4	31 25 04	
	0	00		080	CHS	42	
	0	00			g 10 ^x	32 53	
	6	06			h F? 0	35 71 00	
	3	03			CHS	42	
	6	06			STO + (1)	33 61 24	
	3	03			h F? 1	35 71 01	
030	7	07			GTO f e	22 31 15	
	-	51			h RTN	35 22	Determines which peg from level 2 is inserted/removed
	STO 3	33 03			f LBL 3	31 25 03	
	.	83			h ST I	35 33	
	0	00		090	h X≥Y	35 52	
	6	06			2	02	
	3	03			x	71	
	6	06			GTO 4	22 04	
	3	03			f LBL 2	31 25 02	
	6	06			3	03	
040	3	03			h ST I	35 33	Determines which peg from level 3 is inserted/removed
	7	07			h R↓	35 53	
	-	51			h R↓	35 53	
	STO 4	33 04			4	04	
	.	83		100	g X=Y	32 51	
	1	01			GTO 5	22 05	
	8	08			h X≥Y	32 52	
	1	01			5	05	
	8	08			g X=Y	32 51	
	1	01			GTO 4	22 04	
050	8	08			h X≥Y	32 52	
	1	01			1	01	
	8	08			+	61	
	1	01			GTO 4	22 04	
	STO 5	33 05		110	f LBL 5	31 25 05	
	RCL 6	34 06			1	01	
	h SF 0	35 51 00			-	51	

REGISTERS

0	1	2	3	4	5	6	7	8	9
	0.798818888	0.888181888	0.881818188	0.818181818	0.181818181	Used	7Peg to be jumped over	8Position to be moved to	
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
A	B	C	D	E	I				

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
	GTO 4	22 04			RCL 1	34 01	
	f LBL 1	31 25 01		170	f -x-	31 84	
	h ST I	35 33			RCL 2	34 02	
	h R↓	35 53			f -x-	31 84	
	f LBL 6	31 25 06			RCL 3	34 03	
	h RC I	35 34			f -x-	31 84	
	g X=Y	32 51			RCL 4	34 04	
120	GTO 7	22 07			f -x-	31 84	
	h XZY	35 52			RCL 5	34 05	
	f ISZ	31 34			f -x-	31 84	
	GTO 6	22 06	Determines which		h RTN	35 22	
	f LBL 7	31 25 07	peg from level 4 is	180			
	2	02	inserted/removed				
	x	71					
	1	01					
	2	02					
	-	51					
130	4	04					
	h ST I	35 33					
	h XZY	35 52					
	GTO 4	22 04					
	f LBL 0	31 25 00		190			
	h ST I	35 33					
	h R↓	35 53					
	f LBL 8	31 25 08					
	h RC I	35 34					
	g X=Y	32 51					
140	GTO 9	22 09					
	h XZY	35 52					
	f ISZ	31 34					
	GTO 8	22 08	Determines which	200			
	f LBL 9	31 25 09	peg from level 5 is				
	2	02	inserted/ removed				
	x	71					
	2	02					
	1	01					
	-	51					
150	5	05					
	h ST I	35 33					
	h XZY	35 52					
	GTO 4	22 04					
	f LBL A	31 25 11		210			
	STO 7	33 07					
	h R↓	35 53					
	STO 8	33 08					
	h R↓	35 53					
	h SF 0	35 51 00					
160	f GSR B	31 22 12					
	RCL 7	34 07	Play				
	f GSB B	31 22 12					
	h CF 0	35 61 00					
	RCL 8	34 08		220			
	f GSB B	31 22 12					
	g LBL e	32 25 15					
	h CF 1	35 61 01					
	h SPACE	35 84					

LABELS					FLAGS	SET STATUS		
A	B	C	D	E	0	FLAGS	TRIG	DISP
Play	Used				Used	ON OFF		
Initialize				Used	Used	0 ☐ ☒	DEG ☒	FIX ☒
Used	Used	Used	Used	Used		1 ☐ ☒	GRAD ☐	SCI ☐
Used	Used	Used	Used	Used		2 ☐ ☒	RAD ☐	ENG ☐
						3 ☐ ☒		n <u>9</u>