

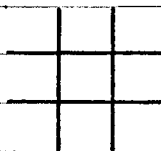
Program Title NOUGHTS AND CROSSESContributor's Name Zvi Schreiber

Address _____

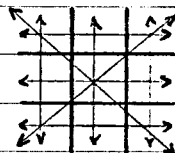
City _____ State Israel Zip Code _____

Program Description, Equations, Variables _____

The game Noughts and Crosses is played with two players; one writes Noughts, the other Crosses. Normally you draw on some paper nine squares like this:



Player one and two take it in turns to write a Nought or Cross in any of the nine squares. The intention of the game is to get a line of Noughts or Crosses. There are eight lines possible to fill in any of the following ways:



There are names for each one (on this program) which are the same as

~~Operating Limits and Warnings~~ the keyboard below. For example Player One puts a Cross in the middle by pressing 5 B.

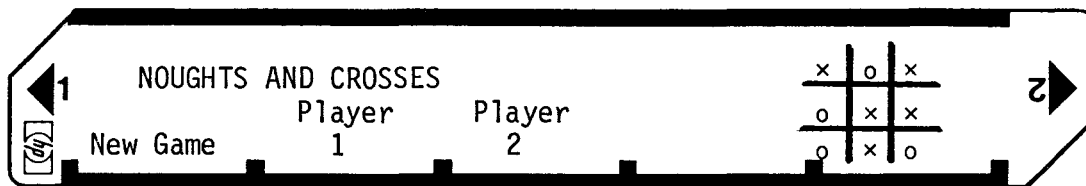
7	8	9
4	5	6
1	2	3

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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01884D User Instructions

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STEP	INSTRUCTIONS	INPUT DATA/UNITS	KEYS	OUTPUT DATA/UNITS
1	Load side 1 and 2			
2	INITIALIZE (A must be pressed in between two games).		A	0.000
3	Player 1 puts in the place he wants to put his Cross (1-9).	space name	B	
4	Player 2 puts in the place he wants to put his Nought (1-9).	space name	C	
	(Then Player 1; then Player 2 exit)			
	WARNINGS:			
	If Player 1 or 2 tries to put a Nought or Cross in a space less than 1 or more than 9 ERROR is shown.			
	If it's not your go 0.000 will flash (or if Player 2 starts).			
	If you try to put a Nought or Cross in a space with a Nought or Cross in it the number you put in will flash.			
	AFTER ALL OF THESE PRESS R/S AND START YOUR TURN AGAIN			
5	If some time after pressing B or C the program stops showing 1.??? or 2.??? then someone has won. If it's 1.??? Player 1 has won! If you see 2.??? Player 2 has won! If for instance it stops with 2.852 in the display Player 2 has won and he has a Nought in place 8,5 and 2.			

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	001 *LBL6	21 06		057	4	04	
	002 0	00	Show "ERROR"	058	STOI	35 45	
	003 ÷	-24		059 *LBL0	21 00		
	004 *LBL5	21 05	Prepare for a 0	060 RCL7	36 07		RCL a row
	005 CLX	-51	Flashing ERROR	061 RCL4	36 04		Put it in x, y, z,
	006 XZY	-41		062 RCL1	36 01		
	007 CLX	-51		063 .	-62		
	008 *LBL3	21 03	Prepare for flashing	064 7	07		STO the row
	009 R4	-31	ERROR (0-9)	065 4	04		name in R ₀
010	010 *LBL4	21 04		066 1	01		
	011 PSE	16 51	Flashing ERROR	067 ST00	35 00		Add up the row
	012 GT04	22 04		068 R4	-31		
	013 *LBLA	21 11	CL Reg	069 +	-55		
	014 CF0	16 22 00	CL Stack	070 +	-55		
	015 SF1	16 21 01	CF 0	071 1	01		GT0 1 if it makes
	016 CLRG	16 53	SF 1	072 2	02		12
	017 CLX	-51		073 XZY	-41		GT0 2 if it makes
	018 ENT1	-21		074 X=Y?	16 33		3
	019 ENT1	-21		075 GT01	22 01		
020	020 ENT1	-31		076 3	03		
	021 RTN	24		077 X=Y?	16 33		
	022 *LBLB	21 12	If your number is	078 GT02	22 02		
	023 9	09	more than 9 (GT0)	079 RCL8	36 08		The comments here
	024 XZY	-41	ERROR	080 RCL5	36 05		are the same as
	025 XZY?	16 34		081 RCL2	36 02		above.
	026 GT06	22 06		082 .	-62		
	027 STOI	35 46	If somebody has used	083 8	08		
	028 RCL1	36 45	that place GT0	084 5	05		
	029 X#0?	16 42	flashing ERROR	085 2	02		
030	030 GT03	22 03		086 ST00	35 00		All this could be
	031 R4	-31	If you put in 0	087 R4	-31		done with a sub-
	032 X=0?	16 43	stop showing ERROR	088 +	-55		routine but this
	033 ÷	-24		089 +	-55		way is quicker.
	034 F0?	16 23 00		090 1	01		
	035 GT05	22 05	If it's not your	091 2	02		
	036 SF0	16 21 00	turn GT0 to 0 flashing	092 X=Y?	16 33		
	037 CF1	16 22 01	Tell the flags that	093 GT01	22 01		
	038 1	01	you have had a go	094 XZY	-41		
	039 STOI	35 45		095 3	03		
040	040 GT00	22 00	Check who wins	096 X=Y?	16 33		
	041 *LBLC	21 13		097 GT02	22 02		
	042 9	09	If your number is	098 RCL9	36 09		
	043 XZY	-41	more than 9 (GT0)	099 RCL6	36 06		
	044 XZY?	16 34	ERROR	100 RCL3	36 03		
	045 GT06	22 06		101 .	-62		
	046 STOI	35 46	If somebody has used	102 9	09		
	047 RCL1	36 45	that place GT0	103 6	06		
	048 X#0?	16 42	flashing ERROR	104 3	03		
	049 GT03	22 03		105 ST00	35 00		
050	050 R4	-31	If you put in 0 stop	106 R4	-31		
	051 X=0?	16 43	showing ERROR	107 +	-55		
	052 ÷	-24		108 +	-55		
	053 F1?	16 23 01	If it's not your	109 1	01		
	054 GT05	22 05	turn GT0 0 flashing	110 2	02		
	055 SF1	16 21 01	Tell the flags that	111 X=Y?	16 33		
	056 CF0	16 22 00	you have had a go	112 GT01	22 01		

REGISTERS

0 last row	1 used	2 used	3 used	4 used	5 used	6 used	7 used	8 used	9 used
S0 tested?	S1	S2	S3	S4	S5	S6	S7	S8	S9

A

B

C

D

E

I temporary stores

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Stop showing 0.000

GTO 2 with 2 in
display

GTO 7 with 1 in
display

Add the winner
number with the
row he won and
stop
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