

Program Title GUESS THE NUMBER

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Program Description, Equations, Variables This program uses a random number generator subroutine to store the "secret" number. The subsequent number guesses by both players are compared to this number and the number of guesses is incremented and stored by use of the statistical function Σ . If the guess is low the computer will display a "zero", if guess is high, a "one." Upon guessing correctly the computer will display the number of guesses it took and then the correct number. Different numbers are used for each player and in each different set of games. The number of games played is displayed before player one commences. "1111." signifies player one's turn and "2222." is the cue for player two. If any player presses the wrong key (e) player one presses player two's key, the computer will assign the guess to the correct player anyway. The status or "score" is displayed upon pressing the status key — remember, the lowest average wins! The numbers are always between 1 and 1000 and the seed is between one and zero exclusive.

Operating Limits and Warnings ON USING THE STATUS KEY:

Always after player two finishes otherwise "2222." will display telling you he/she must finish his set.

SEQUENCE OF EVENTS DISPLAYED:

- ① NUMBER OF GAMES ② 1111. (PLAYER ONE'S)
- ③ AVG. FOR PLAYER ONE ④ 2222. (PLAYER TWO'S)
- ⑤ AVG FOR PLAYER TWO.

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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04199D PROGRAM DESCRIPTION II

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Sample Problem (Sketch if Desired)

LOAD SIDES ONE & TWO.

(SEED) 0.258 E → 11111. (means it's player one's turn)

(GUESS) 500 A → 1 (too high)

(GUESS) 250 A → 0 (TOO LOW)

(GUESS) 375 A → 1 (too high)

(GUESS) 254 A → 4 (flashing, means it took 4 turns)
254 (correct number)

22222. (NOW IS PLAYER'S TWO TURN)

ETC.

SOLUTION:

Input	Function	Display	Comments
.123456789	E	11111.	PLAYER ONE'S TURN
500	A	1.	TOO HIGH
250	A	1.	TOO HIGH
125	A	1.	TOO HIGH
75	A	0.	TOO LOW
100	A	(.)	TRIES FOR GUESSING
		100	CORRECT NUMBER
		22222.	PLAYER TWO TURN
500	B	1	TOO HIGH
250	B	1	TOO HIGH
125	B	1	TOO HIGH
100	B	1	TOO HIGH
50	B	0	TOO LOW
75	B	0	TOO LOW
85	B	0	TOO LOW
95	B	1	TOO HIGH
90	B	0	TOO LOW
93	B	0	TOO LOW
94	B	(11)	11 TRIES TO GUESS #
		94	CORRECT NUMBER
		11111.	PLAYER ONE'S TURN
(OPTIONAL):	C	1.	GAMES PLAYED
		11111.	PLAYER ONE
		5.0	AVG.
		22222.0	PLAYER TWO
		11.0	AVG.
		11111.	PLAYER ONE'S TURN
			(RESUME PLAY)

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	g LBL a	32 25 11			GTO 7	22 07	
	RCL 0	34 00			LBL P	31 25 14	
	9	09			SF 1	35 51 01	stores
	9	09		060	1	01	player
	7	07			1	01	identity
	.	83			1	01	
	1	01			1	01	
	0	00			1	01	
	5	05			STO 4	33 04	
010	X	71			2	02	
	9 FRAC	32 83			2	02	
	STO 0	33 00			2	02	
	1	01	Rnd #		2	02	
	0	00			2	02	
	0	00		070	2	02	
	0	00			STO 5	33 05	
	X	71			1	01	
	1	01			RTN	35 22	
	+	61			LBL E	31 25 15	initialize
020	F INT	31 83			DSP 0	23 00	seed
	STO 1	33 01			F P S	31 42	storage
	RTN	35 22			CL REG	31 43	
	LBL 1	31 25 01			F P S	31 42	
	RCL 2	34 02		080	STO 0	33 00	
	RCL 1	34 01	check		CFO	35 61 00	
	g X = y	32 51	if high		g GSB a	32 22 11	
	g X > y	32 81	or low		g GSB D	31 22 14	
	GTO 3	22 03			RCL 4	34 04	
	GTO 2	22 02			RTN	35 22	
030	1	01			LBL C	31 25 13	score
	R/S	84			F? 0	35 71 00	(status)
	F? 0	35 71 00			GTO 09	22 09	display
	GTO B	22 12			F X	31 21	
	GTO A	22 11			STO 8	33 08	
	LBL 2	31 25 02		090	R+	35 53	
	0	00			STO 9	33 09	
	R/S	84			F P S	31 42	
	F? 0	35 71 00			RCL 9	34 09	
	GTO B	22 12			F - X -	31 84	
040	GTO A	22 11			F P S	31 42	
	LBL 3	31 25 03			RCL 4	34 04	
	F? 0	35 71 00	right guess		h pause	35 72	
	GTO 4	22 04	displays #		RCL 8	34 08	
	RCL 3	34 03	7 guesses		DSP 1	23 01	
	F - X -	31 84		100	h pause	35 72	
	RCL 2	34 02			RCL 5	34 05	
	h pause	35 72			h pause	35 72	
	g GSB a	32 22 11			RCL 9	34 09	
	GTO B	22 08			h pause	35 72	
050	LBL 4	31 25 04			DSP 0	23 00	
	RCL 6	34 06			g GSB a	32 22 11	
	F - X -	31 84			RCL 4	34 04	
	RCL 2	34 02			R/S	84	
	h pause	35 72			LBL A	31 25 11	Player 1
	g GSB a	32 22 11		110	F? 0	35 71 00	turn
	CFO	35 61 00			GTO B	22 12	
					GSB 5	31 22 05	

REGISTERS									
0 seed	1 Rnd. #	2 player's current guess	3 # of guesses For Player 1	4 1111.	5 2222.	6 # of guesses For Player 2	7	8 Player 1 Avg	9 Player 2 Avg
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
				ΣX	ΣX ²	Σy	Σy ²	Σxy	# of games
A	B	C	D	E	I				

