

TEXAS INSTRUMENTS
Calculator Products Division

Submission Abstract

Program Title <u>DUEL</u>	Rev.
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Abstract of Program
The user duels with the TI-59 on an old western road. But don't wait too long to fire or the TI-59 could shoot you dead. The TI-59 has the same odds at killing the user as the user has at killing the TI-59.

User Benefits:
Entertainment. Interesting program for the beginner to trace.

Category Number <u>91</u>	Required Progs. _____	Prog. Steps <u>371</u>	PC-100A Needed <input checked="" type="checkbox"/> Library Module ID <u>1</u> <input checked="" type="checkbox"/>
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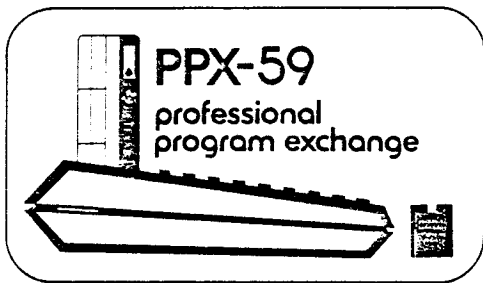
Submission Checklist

- Recorded Magnetic Cards
- Submission Abstract
- Program Description
- User Instructions
- Sample Problem
- Listing
- Continuation Sheet
- _____ Sheet

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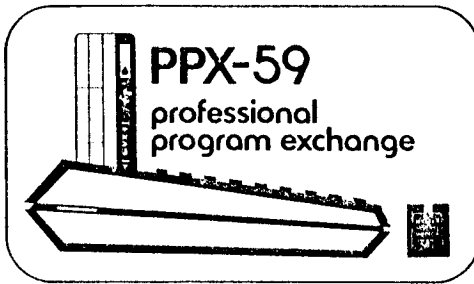
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Program Description

Program Title: DUEL	Rev.
Method, Equations, Sketches, Limitations, References, Error Recovery:	
THIS PROGRAM REQUIRES THE MASTER LIBRARY MODULE!!!	
Please make sure that this module is in the 59. Duel is an interesting program in that the 59 has the same odds as the user. This is because the program uses the randomnumber generater in ML-15(SBR D.MS). Since DUEL uses alpha-numeric on the printer tape, you must store some numbers in the data memories and record these on BANK # 4 (MAG CARD).	
For the gun to fire, the random number produced must be less than (.5) and also less than (.42). The latter is the final test to see if the gun fired.	
The game can carry on to 0 or 20 yards. This is dependant on the random numbers produced. If the game should carry on to 0 yards, then the TI-59 will automaticly kill you and get five points to boot! Everytime the 59 kills you, it will get five points. However, depending on how long you wait to fire, the points for the "kill" grow to 40.	
100 yards = 2 pts. 80 " = 5 pts. 60 " = 15 pts. 40 " = 30 pts. 20 " = 40 pts.	
<input type="checkbox"/> See Continuation Sheet	



User Instructions

Program Title		Duel	479.59
			Init
Response		Score	

Partition (OP 17)	479.59	Parenteses Levels	
Angular Mode (if applicable)		SBR Levels	1
Library Module ID	Master (1)	t Register	<input checked="" type="checkbox"/>
		Absolute Addresses	<input checked="" type="checkbox"/>
		Disturbs Pending Operations	<input checked="" type="checkbox"/>

INV	INZ	CE	CLR	ST	ST
√	√	√ STO	RCL	SUM	√
EE	√	√	√	GTO	X
SBR	-	RST	+	R/S	.
+/-	≡	CLR	INV	√	EEP
↑	Prm	P-R	Sm	Pa	CM
Exc	Prd	√	Eng	Pr	√
Dea	Pause	√	√	Op	Rad
Lib	√	√	√	Grad	St Up
File	DMS	√	√	Write	√
Adv	Pr	√			

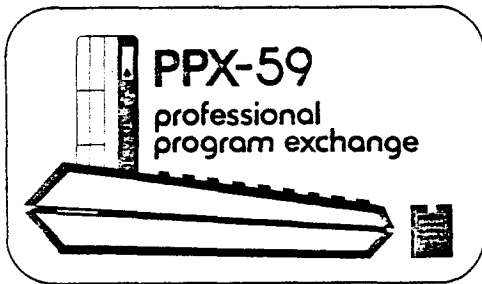
USER DEFINED KEYS	
A	Response
B	
C	
D	Score (Points)
E	
A'	
B'	
C'	
D'	
E'	Initiate

FLAGS	0	Used	1	2	3	4	5	6	7	8	9
-------	---	------	---	---	---	---	---	---	---	---	---

STEP	PROCEDURE	ENTER	PRESS	OUTPUT/MODE (see legend below)	DATA REGISTERS (INV) (ST)
1	Store the constants which are listed on the continuation sheet. Then load these on a blank card (bank #4).				0 See Step
2	Enter seed $0 < X < 199017$	Seed	2nd E'		1 One of the
3	Follow the directions -				2 Instructions
4	1 - Shoot ; 2 - Don't shoot				3
5	3 - Quit.				4 00 → 29 are
6	Enter the command you wish	command	A	Depending on which command you choose -	5 used
7	To print the score at any time		D	1 = Bang! You got me! Nuts* or missed!!!*	6
8	The distance decreases by 20 yards each time as described in the program description.			2 = My chance!* either missed* or Bang! You're Dead!!!*	7
9	Program re-initiates automatically			3 = Prints the score Your Score TI-59 Score	8

Modes: n* -- Printed only (n) -- Displayed Briefly (Pause)
 (n)* -- Printed and displayed

See Continuation Sheet

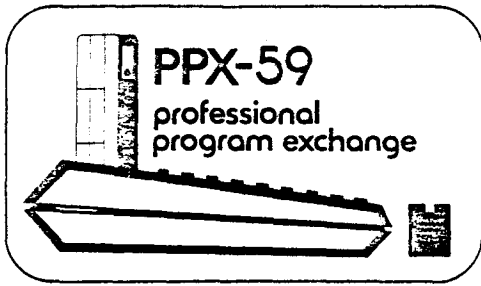


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Continuation Sheet

Continued From: Program Description User Instructions Stmt. of Example

Program Title: <i>Duel</i>		Rev.
<i>Store these constants in the data memory number which is to the right of the number. The alphanumeric characters are beneath the number</i>		
		1532303013. 10
		COMMA
		3116365502. 11
		NDS(1
-51000000.	00	2045173662. 12
*		-YES!
5100.	01	320313256. 13
*		2-NO)
11200000.	02	3623323237. 14
8-		SHOOT
201100.	03	71000000. 15
-8		?
6500650000.	04	45351636. 16
.		YRDS
650065.	05	33373640. 17
.		PTS.
1651415117.	06	3024363617. 18
D*U*E		MISSE
0.	07	1673737373. 19
		D???
5127000000.	08	3045001523. 20
*L		MY CH
0.	09	1331151773. 21
		ANCE!
		1413312273. 22
		BANG!
		4532416535. 23
		YOU'R
		1700161713. 24
		E DEA
		420344124. 25
		3-QUI
		0. 26
		3740000000. 27
		T.
		0. 28
		0. 29



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Sample Problem

Statement of Example *In this example, we will use a seed of 1599. This example will show how to use the program as well as the varied output.*

See Continuation Sheet

ENTER	PRESS	OUTPUT/MODE (see legend below)	COMMENT
1599	*E'	* 8- D*U*E*L -8 : : COMMANDS (1-YES; 2-NO) 3-QUIT.	} Instructions
2	A	100. YRDS SHOOT ?	Don't shoot
1	A	MY CHANCE? MISSED???? 80. YRDS SHOOT ?	TI-59's Chance - missed
1	A	BANG*YOU GOT ME*NUIS 5. PTS. 100. YRDS SHOOT ? MISSED????	You got him!! 5 points
2	A	MY CHANCE? MISSED???? 80. YRDS SHOOT ?	

* - Denotes 2nd

PPX-59 Professional Program
Exchange
Sample Problem (cont'd)

ENTER	PRESS	OUTPUT/MODE (see legend below)	COMMENT
2	A	MY CHANCE? MISSED???? 60. YRDS SHOOT ?	MY CHANCE? BANG*YOU'RE DEAD???? 5. PTS.
			100. YRDS SHOOT ?
1	A	MY CHANCE? BANG*YOU'RE DEAD???? 5. PTS.	20. PTS. 15. PTS.
		100. YRDS SHOOT ? MISSED????	
2	A	MY CHANCE? MISSED???? 80. YRDS SHOOT ?	<p style="text-align: center;">↓</p> <p>Final Score</p> <p>20 - you</p> <p>15 - TI-59</p> <p>you're the winner!</p>
2	A	MY CHANCE? MISSED???? 60. YRDS SHOOT ?	
2	A	MY CHANCE? BANG*YOU'RE DEAD???? 5. PTS.	
2	A	100. YRDS SHOOT ?	
2	A	MY CHANCE? MISSED???? 80. YRDS SHOOT ?	
1	A	MY CHANCE? MISSED???? 60. YRDS SHOOT ?	
		BANG*YOU GOT ME*NUTS 15. PTS. 100. YRDS SHOOT ?	15 points !!
1	A	20. PTS. 10. PTS.	Score 20 - you 10 - TI-59
3	A	MISSED????	

Modes: n* - Printed only (n) - Printed and displayed

Quit

LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS
000	76	LBL	Imit seed	051	69	DP	Direction ↓	101	04	04	
001	10	E*		052	05	05		102	43	RCL	
002	42	STD		053	43	RCL		103	26	26	
003	09	09		054	10	10		104	69	DP	
004	25	CLR		055	69	DP		105	06	06	
005	42	STD		056	01	01		106	69	DP	
006	28	28		057	43	RCL		107	00	00	
007	42	STD		058	11	11		108	43	RCL	
008	29	29		059	69	DP		109	14	14	
009	43	RCL		060	02	02		110	69	DP	
010	00	00	061	43	RCL	111	02	02			
011	69	DP	062	12	12	112	43	RCL			
012	01	01	063	69	DP	113	15	15			
013	43	RCL	064	03	03	114	69	DP			
014	01	01	065	43	RCL	115	03	03			
015	69	DP	066	13	13	116	69	DP			
016	04	04	067	69	DP	117	05	05			
017	69	DP	068	04	04	118	91	R/S			
018	05	05	069	69	DP	119	76	LBL			
019	43	RCL	070	05	05	120	11	A			
020	02	02	071	69	DP	121	32	X/T			
021	69	DP	072	00	00	122	01	1			
022	01	01	073	43	RCL	123	67	EQ			
023	43	RCL	074	25	25	124	67	EQ			
024	03	03	075	69	DP	125	02	2			
025	69	DP	076	03	03	126	67	EQ			
026	04	04	077	43	RCL	127	97	DSZ			
027	43	RCL	078	27	27	128	76	LBL			
028	06	06	079	69	DP	129	14	D			
029	69	DP	080	04	04	130	69	DP			
030	02	02	081	69	DP	131	00	00			
031	43	RCL	082	05	05	132	98	ADV			
032	08	08	083	69	DP	133	43	RCL			
033	69	DP	084	00	00	134	17	17			
034	03	03	085	98	ADV	135	69	DP			
035	69	DP	086	76	LBL	136	04	04			
036	05	05	087	50	I×I	137	43	RCL			
037	69	DP	088	01	1	138	28	28			
038	00	00	089	00	0	139	69	DP			
039	43	RCL	090	00	0	140	06	06			
040	04	04	091	42	STD	141	43	RCL			
041	69	DP	092	26	26	142	29	29			
042	01	01	093	76	LBL	143	69	DP			
043	43	RCL	094	59	INT	144	06	06			
044	05	05	095	22	INV	145	92	RTN			
045	69	DP	096	86	STP	146	76	LBL			
046	04	04	097	01	01	147	67	EQ			
047	69	DP	098	43	RCL	148	71	SBR			
048	05	05	099	16	16	149	96	MRT			
049	69	DP	100	69	DP						
050	00	00									

Directions
↓

100
YARDS

Response

Tests

↓

Score

-- pts.

-- pts.

MERGED CODES

62	Prm	Ind	72	STD	Ind	83	GTO	Ind
63	Exc	Ind	73	RCL	Ind	84	Op	Ind
64	Prp	Ind	74	SUM	Ind	92	INV	SBR

LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS
150	76	LBL		202	69	DP	my	251	01	01	
151	88	DMS		203	05	05	Chance.	252	04	4	
152	69	DP		204	86	STF		253	05	5	
153	00	00	Random	205	01	01		254	03	3	
154	36	PCM	#	206	61	GTO		255	02	2	
155	15	15		207	88	DMS		256	04	4	
156	71	SBR		208	76	LBL		257	01	1	
157	88	DMS		209	28	LOG		258	00	0	
158	32	XIT	Test	210	43	RCL	Bang	259	00	0	
159	93	.		211	22	22	you're	260	02	2	
160	05	5		212	69	DP	Dead	261	02	2	
161	77	GE		213	01	01		262	69	DP	
162	77	GE		214	43	RCL		263	02	02	
163	61	GTO		215	23	23		264	03	3	
164	99	PRT		216	69	DP		265	02	2	
165	76	LBL		217	02	02		266	03	3	
166	77	GE		218	43	RCL		267	07	7	
167	93	.		219	24	24		268	00	0	
168	04	4		220	69	DP		269	00	0	
169	02	2		221	03	03		270	03	3	
170	77	GE		222	43	RCL		271	00	0	
171	35	1/X	Fire.	223	19	19		272	01	1	
172	76	LBL		224	69	DP		273	07	7	
173	99	PRT		225	04	04		274	69	DP	
174	43	RCL		226	69	DP		275	03	03	
175	18	18		227	05	05		276	07	7	
176	69	DP		228	22	INV		277	03	3	
177	02	02		229	86	STF		278	03	3	
178	43	RCL		230	01	01		279	01	1	
179	19	19		231	43	RCL		280	04	4	
180	69	DP		232	17	17		281	01	1	
181	03	03		233	69	DP		282	03	3	
182	69	DP	missed!	234	04	04		283	07	7	
183	05	05		235	05	5		284	03	3	
184	69	DP		236	69	DP	-- pts	285	06	6	
185	00	00		237	06	06		286	69	DP	
186	87	IFF		238	44	SUM		287	04	04	
187	01	01		239	29	29		288	69	DP	
188	52	EE		240	98	ADV		289	05	05	
189	76	LBL		241	61	GTO		290	69	DP	
190	97	DSZ		242	50	IXI		291	00	00	
191	98	ADV		243	76	LBL	Fires	292	43	RCL	
192	71	SBR		244	35	1/X		293	26	26	
193	96	WRT		245	87	IFF		294	32	XIT	
194	43	RCL		246	01	01		295	02	2	
195	20	20		247	28	LOG		296	00	0	
196	69	DP		248	43	RCL		297	22	INV	
197	01	01		249	22	22		298	44	SUM	
198	43	RCL		250	69	DP		299	26	26	
199	21	21						300	01	1	
200	69	DP									
201	02	02									

MEHGED CODES
 62 Pgm Ind 72 STO Ind 83 GTO Ind
 63 Trc Ind 73 RCL Ind 84 Op Ind
 64 Pp Ind 74 SUM Ind 92 INV SBR

Decrease yards by 20.

PPX-59 Professional Program Exchange

LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS
301	00	0		351	76	LBL					
302	00	0		352	52	EE					
303	67	EQ		353	02	2					
304	03	03		354	00	0					
305	25	25		355	22	INV					
306	08	8	yards	356	44	SUM					
307	00	0		357	26	26					
308	67	EQ		358	61	GTO					
309	03	03		359	59	INT					
310	28	28		360	76	LBL					
311	06	6	yards	361	96	WRT					
312	00	0		362	69	OP					
313	67	EQ		363	00	00					
314	03	03		364	43	RCL					
315	31	31	yards	365	26	26					Zero
316	04	4		366	32	XIT					test.
317	00	0		367	00	0					
318	67	EQ		368	67	EQ					
319	03	03		369	28	LOG					
320	35	35		370	92	RTH					
321	04	4	pts.	371	00	0					
322	00	0									
323	61	GTO	↓								
324	44	SUM									
325	02	2									
326	61	GTO									
327	44	SUM									
328	05	5									
329	61	GTO									
330	44	SUM									
331	01	1									
332	05	5									
333	61	GTO									
334	44	SUM									
335	03	3									
336	00	0									
337	76	LBL	sums								
338	44	SUM	pts								
339	44	SUM									
340	28	28									
341	32	XIT									
342	43	RCL									
343	17	17									
344	69	OP									
345	04	04									
346	32	XIT									
347	69	OP									
348	06	06									
349	61	GTO									
350	50	IXI									

MERGED CODES

62	Pgm	Ind	72	STO	Ind	83	GTO	Ind
63	Exc	Ind	73	RCL	Ind	84	Op	Ind
64	Prd	Ind	74	SUM	Ind	92	INV	SBR