

Program Description I Page 1 of 5

Program Title Roulette Game

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Program Description, Equations, Variables Program generates an integer number between zero and thirty-six, stores it and checks the players bet. If the player wins, the program pays off at the odds previously calculated and adds the winnings to that players account. If the player loses, the program subtracts the bet from the players account.

Bets are allowed on single numbers, ranges such as 1 thru 12, 13 thru 24 or any range the player wishes, and bets on odd or even.

Odds are calculated at the following rates:

Single number - 35 to 1

Range numbers - from the formula : $36 / (\text{HIGH} - \text{LOW} + 1)$ to 1.

Odd or Even - 1 to 1

You can also run the spin-wheel routine and the bet checking routine separately and even have the calculator tell you whether you are high or low before you make your bet.

Operating Limits and Warnings

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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Sketch(es)

Sample Problem(s)

Note - Use a seed of .3148216 for this sample.

A player deposits 150.00 to his account(# 1)

1-He then places a bet of \$20. on numbers 1 thru 12.

The wheel is spun and he loses his \$20. when 24 comes up.

2-He then places a bet of \$15. on numbers 13 thru 24.

The wheel is spun and he wins \$30. when the number 15 comes up.

IMPORTANT - READ THIS CAREFULLY. The program expects user to enter the players account number during a two second pause in the program. You can identify this place as follows - After pressing C the program will pause the actual # spun, then print or flash the win/loss. Then your win/loss will be paused for two seconds. This is when the acct. number must be entered.

Solution(s) keystrokes- .3148216 fA 150 ENTER 1 fD gives 150.

1) 20ENTER 1.12B gives 0. Then press C gives "24"; "-20."; "-20."

Now give account number 1 gives 130. (new balance)

2) 15 ENTER 13.24 B	0.	C	"15" number paused
			"30." winning flashed/printed
			"30." paused for acct #
1			160. new balance

Reference(s)

User Instructions Page 3 of 5

1	Roulette	2
Spin wheel	Bet Check Bet Deposit Total Hi-Low	

STEP	INSTRUCTIONS	INPUT DATA/UNITS	KEYS	OUTPUT DATA/UNITS
1	Load Program		<input type="button" value="f"/> <input type="button" value="A"/>	
2	Store a seed	seed	<input type="button" value="f"/> <input type="button" value="A"/>	seed
3	Enter a deposit to your account	Amount	<input type="button" value="↑"/>	
		Acct #	<input type="button" value="f"/> <input type="button" value="D"/>	
4	Place a bet		<input type="button" value="↑"/>	
	a. Bet amount	Bet Amt	<input type="button" value="↑"/>	
	b. Number or Code as follows ;		<input type="button" value="↑"/>	
	number between 1 and 36	n	<input type="button" value="↑"/>	
	or 1.12 for nbrs between 1 & 12		<input type="button" value="↑"/>	
	or 13.24 for nbrs between 13 & 24		<input type="button" value="↑"/>	
	or 25.36 for nbrs between 25 & 36		<input type="button" value="↑"/>	
	or any other range in the format		<input type="button" value="↑"/>	
	low.high	l.h	<input type="button" value="↑"/>	
	or 0. for odd numbers		<input type="button" value="↑"/>	
	or .2 for even numbers		<input type="button" value="↑"/>	
5	Enter Bet for processing odds etc.		<input type="button" value="B"/>	0.
6	Spin and see if you win		<input type="button" value="C"/>	"number"
	C will both spin the wheel and check		<input type="button" value="C"/>	:win/loss:
	the bet for win or lose. You could		<input type="button" value="C"/>	
	do this separately by pressing A		<input type="button" value="C"/>	
	then pressing f c.		<input type="button" value="C"/>	
7	Enter your account number while the		<input type="button" value="C"/>	
	win/loss is being paused. The pause		<input type="button" value="C"/>	
	immediately follows a flashing or		<input type="button" value="C"/>	
	printing of the win/loss amount.		<input type="button" value="C"/>	
8	To display your account balance at any		<input type="button" value="C"/>	
	time,	Acct. #	<input type="button" value="D"/>	
9	To deposit more money into your acct	Amount	<input type="button" value="↑"/>	
		Acct. #	<input type="button" value="f"/> <input type="button" value="D"/>	
10	To get an advantage (i.e. to cheat)		<input type="button" value="A"/>	
	you may play with the A key and f c		<input type="button" value="A"/>	
	instead of just C and check the bet		<input type="button" value="A"/>	
	for high or low before betting. To do		<input type="button" value="A"/>	
	this : a. Spin the wheel		<input type="button" value="A"/>	
	b. enter a guess number	guess	<input type="button" value="E"/>	0.7 or
	Read display upside-down		<input type="button" value="E"/>	14.
	0.7 = Low 14. = High		<input type="button" value="E"/>	
	Flashing zero = Right On!		<input type="button" value="E"/>	

STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
001	f LBL A	31 25 11			h RTN	35 22	
	RCL 0	34 00			f LBL 0	31 25 00	
	h π	35 73			1	01	
	+	61		060	STO 4	33 04	
	5	05			CLX	44	
	h y'	35 63			h RTN	35 22	
	g FRAC	32 83			f LBL 1	31 25 01	
	STO 0	33 00			3	03	
	EEX	43			5	05	
010	3	03			STO 4	33 04	
	x	71			CLX	44	
	f INT	31 83			h RTN	35 22	
	3	03			f LBL C	31 25 13	
	7	07		070	f GSDA	31 22 11	
	\div	81			g LBL c	32 25 13	
	g FRAC	32 83			DSP 0	23 00	
	3	03			RCL 4	34 04	
	7	07			3	03	
	x	71			5	05	
020	f INT	31 83			g x=y	32 51	
	STO 3	33 03			GTO 2	22 02	
	CLX	44			RCL 1	34 01	
	h RTN	35 22			f INT	31 83	
	f LBL B	31 25 12		080	f x=0	31 51	
	STO 1	33 01			GTO 3	22 03	
	h R+	35 53			RCL 3	34 03	
	STO 2	33 02			h x=y	35 52	
	RCL 1	34 01			g x=y	32 71	
	f x=0	31 51			GTO 4	22 04	
030	GTO 0	22 00			f LBL 9	31 25 09	
	1	01			RCL 3	34 03	
	g x>y	32 81			h PAUSE	35 72	
	GTO 0	22 00			RCL 2	34 02	
	h R+	35 53		090	CHS	42	
	g FRAC	32 83			f -x-	31 84	
	f x=0	31 51			h PAUSE	35 72	
	GTO 1	22 01			h PAUSE	35 72	
	h LSTX	35 82			1	01	
	f INT	31 83			0	00	
040	h x=y	35 52			+	61	
	EEX	43			h STI	35 33	
	2	02			RCL 2	34 02	
	x	71			STO - (i)	33 51 24	
	-	51		100	h RCI	35 34	
	h ABS	35 64			h LSTX	35 82	
	1	01			-	51	
	+	61			GTO D	22 14	
	3	03			f LBL 2	31 25 02	
	6	06			RCL 3	34 03	
050	h x=y	35 52			RCL 1	34 01	
	\div	81			g x=y	32 51	
	f INT	31 83			GTO 8	22 08	
	1	01			GTO 9	22 09	
	-	51		110	f LBL 3	31 25 03	
	STO 4	33 04			h LSTX	35 82	
	CLX	44			.	83	

REGISTERS

0 seed	1 Bet nbr	2 Bet Amount	3 number from wheel	4 Odds	5	6	7	8	9
S0	S1	S2	S3	S4	S5	S6	S7	S8	S9
A	B	C	D	E	I				

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STEP	KEY ENTRY	KEY CODE	COMMENTS	STEP	KEY ENTRY	KEY CODE	COMMENTS
	2	02			1	01	
	h x=y	35 52		170	0	00	
	g x=y	32 61			+	61	
	GTO 0	22 00			h STI	35 33	
	f GSB 7	31 22 07			RCL (i)	34 24	
	h F? 0	35 71 00			h RTN	35 22	
	GTO 9	22 09			f LBL E	31 25 15	
120	f LBL 8	31 25 08			RCL 3	34 03	
	RCL 2	34 02			g x>y	32 81	
	RCL 4	34 04			GTO 7	22 07	
	x	71			g x=y	32 51	
	STO 2	33 02		180	GTO 0	22 00	
	RCL 3	34 03			1	01	
	h PAUSE	35 72			4	04	
	RCL 2	34 02			h RTN	35 22	
	f-x-	31 84			f LBL 7	31 25 07	
	h PAUSE	35 72			.	83	
130	h PAUSE	35 72			7	07	
	1	01			DSP I	23 01	
	0	00			h RTN	35 22	
	+	61			f LBL 0	31 25 00	
	h STI	35 33		190	CLX	44	
	RCL 2	34 02			f-x-	31 84	
	STO+(i)	33 61 24			h RTN	35 22	
	h RCI	35 34			g LBL d	32 25 14	
	h LSTx	35 82			1	01	
	-	51			0	00	
140	GTO D	22 14			+	61	
	f LBL 4	31 25 04			h STI	35 33	
	RCL 1	34 01			h Rf	35 53	
	g FRAC	32 83			STO+(i)	33 61 24	
	EEX	43		200	h RTN	35 22	
	2	02			g LBL a	32 25 11	
	x	71			STO 0	33 00	
	RCL 3	34 03			h RTN	35 22	
	g x≤y	32 71					
	GTO 8	22 08					
150	GTO 9	22 09					
	f LBL 0	31 25 00					
	f GSB 7	31 22 07					
	f F? 0	31 71 00					
	GTO 8	22 08		210			
	GTO 9	22 09					
	f LBL 7	31 25 07					
	RCL 3	34 03					
	2	02					
	÷	81					
160	g FRAC	32 83					
	f x=0	31 51					
	GTO 4	22 04					
	h SF 0	35 51 00					
	h RTN	35 22					
	f LBL 4	31 25 04		220			
	h CF 0	35 61 00					
	h RTN	35 22					
	f LBL D	31 25 14					

LABELS					FLAGS	SET STATUS		
A Spin Wheel	B Bet	C Spin & Check Bet	D Display Balance	E Check for Hi-Low	0 Off = Even On = Odd	FLAGS	TRIG	DISP
a store seed	b	c Check Bet Only	d Deposit to Account	e	1	ON OFF	DEG <input checked="" type="checkbox"/>	FIX <input checked="" type="checkbox"/>
0	1	2	3	4	2	0 <input type="checkbox"/> <input checked="" type="checkbox"/>	GRAD <input type="checkbox"/>	SCI <input type="checkbox"/>
5	6	7	8	9	3	1 <input type="checkbox"/> <input checked="" type="checkbox"/>	RAD <input type="checkbox"/>	ENG <input type="checkbox"/>
						2 <input type="checkbox"/> <input checked="" type="checkbox"/>		n <u>0</u>
						3 <input type="checkbox"/> <input checked="" type="checkbox"/>		