

Mathematical Analysis

For
Latrey Ltd.

Of The Following Game:

LATREY

Version 1
Version 2

May 14, 2003

Prepared By:

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Las Vegas, NV



Version 1

Rules

Latrey shall be played with three dice, the player betting on the total of the three dice. There are special payoffs for a three of a kind, called a "Latrey" a total not composed of a three of a kind is called the "easy way".

Table 1 shows the total bets available. The player wins if the total of the three dice equals the bet made. All pays are on a "to one" basis.

Table 1

<i>Bet</i>	<i>Easy way</i>	<i>Latrey way</i>	<i>Win Prob.</i>	<i>House Edge</i>
4	65	0	1.39%	8.33%
5	32	0	2.78%	8.33%
6	18	35	4.63%	4.17%
7	13	0	6.94%	2.78%
8	9	0	9.72%	2.78%
9	6	40	11.57%	3.24%
10	6	0	12.50%	12.50%
11	6	0	12.50%	12.50%
12	6	40	11.57%	3.24%
13	9	0	9.72%	2.78%
14	13	0	6.94%	2.78%
15	18	35	4.63%	4.17%
16	32	0	2.78%	8.33%
17	65	0	1.39%	8.33%

Table 2 shows the Latrey bets available. The player will win if the three dice land on the same face and on the chosen bet. All pays are on a "to one" basis.

Table 2

<i>Bet</i>	<i>Pays</i>	<i>Win Prob.</i>	<i>House Edge</i>
3	200	0.46%	6.94%
6	200	0.46%	6.94%
9	200	0.46%	6.94%
12	200	0.46%	6.94%
15	200	0.46%	6.94%
18	200	0.46%	6.94%
Any Latrey	32	2.78%	8.33%

Table 3 shows the even money bets available. If a Latrey is rolled all even money bets automatically lose. All pays are on a "to one" basis.

Table 3

<i>Bet</i>	<i>Pays</i>	<i>Win Prob.</i>	<i>House Edge</i>
Low	1	48.61%	2.78%
High	1	48.61%	2.78%
Odd	1	48.61%	2.78%
Even	1	48.61%	2.78%

Version 1

Rules

Table 4 shows the line bets available. The player wins according to the total of the dice and the bet made. All pays are on a “to one” basis.

Table 4

<i>Bet</i>	<i>Easy way</i>	<i>Latrey way</i>	<i>Win Prob.</i>	<i>House Edge</i>
3,7,11,15	2	25	24.54%	5.09%
4,8,12,16	2	40	25.46%	6.02%
5,9,13,17	2	40	25.46%	6.02%
6,10,14,18	2	25	24.54%	5.09%
3 to 6	8	20	9.26%	5.56%
7 to 10	1	30	40.74%	5.09%
11 to 14	1	30	40.74%	5.09%
15 to 18	8	20	9.26%	5.56%

Table 5 shows the split pair bets available. The player wins according to the total of the dice and the bet made. All pays are on a “to one” basis.

Table 5

<i>Bet</i>	<i>Lower Number</i>		<i>Higher Number</i>		<i>Win Prob.</i>	<i>House Edge</i>
	<i>Easy way</i>	<i>Latrey way</i>	<i>Easy way</i>	<i>Latrey way</i>		
3,7	0	100	6	0	7.41%	4.63%
4,8	25	0	5	0	11.11%	5.56%
5,9	15	0	3	15	14.35%	3.70%
6,10	6	35	3	0	17.13%	4.17%
11,15	3	0	6	35	17.13%	4.17%
12,16	3	15	15	0	14.35%	3.70%
13,17	5	0	25	0	11.11%	5.56%
14,18	6	0	0	100	7.41%	4.63%

THE AVERAGE HOUSE EDGE OVER ALL BETS FROM TABLES 1 TO 5 IS 5.57%.

Table 6 shows the number of combinations of each dice total.

Table 6

Version 1

In Conclusion

The analysis was conducted using basic probability.

If you or any interested party have any questions about this analysis you may contact me by any of the means below.

E-mail: mail@gamingmath.com

Phone: 702-804-0015

Postal mail: 9200 Sienna Vista Dr., Las Vegas, NV 89117

Thank you for choosing me to analyze Latrey and I wish you success with it.

Regards,

Michael Shackleford, A.S.A.

A handwritten signature in black ink, appearing to read "Michael Shackleford". The signature is written in a cursive, flowing style.

Version 2

Rules

Latrey shall be played with three dice, the player betting on the total of the three dice. There are special payoffs for a three of a kind, called a "Latrey" a total not composed of a three of a kind is called the "easy way".

Table 1 shows the total bets available. The player wins if the total of the three dice equals the bet made. All pays are on a "to one" basis.

Table 1

<i>Bet</i>	<i>Easy way</i>	<i>Latrey way</i>	<i>Win Prob.</i>	<i>House Edge</i>
4	70	0	1.39%	1.39%
5	34	0	2.78%	2.78%
6	18	35	4.63%	4.17%
7	13	0	6.94%	2.78%
8	9	0	9.72%	2.78%
9	6	40	11.57%	3.24%
10	6	0	12.50%	12.50%
11	6	0	12.50%	12.50%
12	6	40	11.57%	3.24%
13	9	0	9.72%	2.78%
14	13	0	6.94%	2.78%
15	18	35	4.63%	4.17%
16	34	0	2.78%	2.78%
17	70	0	1.39%	1.39%

Table 2 shows the Latrey bets available. The player will win if the three dice land on the same face and on the chosen bet. All pays are on a "to one" basis.

Table 2

<i>Bet</i>	<i>Pays</i>	<i>Win Prob.</i>	<i>House Edge</i>
3	210	0.46%	2.31%
6	210	0.46%	2.31%
9	210	0.46%	2.31%
12	210	0.46%	2.31%
15	210	0.46%	2.31%
18	210	0.46%	2.31%
Any Latrey	34	2.78%	2.78%

Table 3 shows the even money bets available. If a Latrey is rolled all even money bets automatically lose. All pays are on a "to one" basis.

Table 3

<i>Bet</i>	<i>Pays</i>	<i>Win Prob.</i>	<i>House Edge</i>
Low	1	48.61%	2.78%
High	1	48.61%	2.78%
Odd	1	48.61%	2.78%
Even	1	48.61%	2.78%

Version 2

Rules

Table 4 shows the line bets available. The player wins according to the total of the dice and the bet made. All pays are on a "to one" basis.

Table 4

<i>Bet</i>	<i>Easy way</i>	<i>Latrey way</i>	<i>Win Prob.</i>	<i>House Edge</i>
3,7,11,15	2	30	24.54%	0.46%
4,8,12,16	2	45	25.46%	3.70%
5,9,13,17	2	45	25.46%	3.70%
6,10,14,18	2	30	24.54%	0.46%
3 to 6	8	25	9.26%	0.93%
7 to 10	1	35	40.74%	2.78%
11 to 14	1	35	40.74%	2.78%
15 to 18	8	25	9.26%	0.93%

Table 5 shows the split pair bets available. The player wins according to the total of the dice and the bet made. All pays are on a "to one" basis.

Table 5

<i>Bet</i>	<i>Lower Number</i>		<i>Higher Number</i>		<i>Win Prob.</i>	<i>House Edge</i>
	<i>Easy way</i>	<i>Latrey way</i>	<i>Easy way</i>	<i>Latrey way</i>		
3,7	0	100	6	0	7.41%	4.63%
4,8	25	0	5	0	11.11%	5.56%
5,9	15	0	3	15	14.35%	3.70%
6,10	6	35	3	0	17.13%	4.17%
11,15	3	0	6	35	17.13%	4.17%
12,16	3	15	15	0	14.35%	3.70%
13,17	5	0	25	0	11.11%	5.56%
14,18	6	0	0	100	7.41%	4.63%

THE AVERAGE HOUSE EDGE OVER ALL BETS FROM TABLES 1 TO 5 IS 3.68%.

Table 6 shows the number of combinations of each dice total.

Table 6

<i>Total</i>	<i>Latrey</i>	<i>Easy way</i>	<i>Total</i>
3	1	0	1
4	0	3	3
5	0	6	6
6	1	9	10
7	0	15	15
8	0	21	21
9	1	24	25
10	0	27	27
11	0	27	27
12	1	24	25
13	0	21	21
14	0	15	15
15	1	9	10
16	0	6	6
17	0	3	3
18	1	0	1
Total	6	210	216

Version 2

In Conclusion

The analysis was conducted using basic probability.

If you or any interested party have any questions about this analysis you may contact me by any of the means below.

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