



Poker Cards Analysis – June 2026

The Directors

Entain Plc

This is to confirm that iTech Labs has examined the game logs for Poker games for the period **June 01, 2026, to June 30, 2026**, as recorded by the respective game servers and analyzed the Poker cards for statistical randomness. The results of the analysis are given below.

For details on the gaming sites serviced by the Entain Plc game servers and used in this audit refer to the [List](#).

1. Poker hand types statistics

These calculations were done for Royal Flush, Straight Flush, Four of a Kind, Full House, Flush, Straight, 3 of a Kind, 2 pairs, 1 Pair, High Card.

The Poker hand types analysis involved creating subsets of data and conducting Chi-square tests on each subset.

The null hypothesis for the chi-square test is that the observed frequencies of each type of hand matches the theoretical values for a deck that has been shuffled using a perfect random number generator. The p-values observed in these multiple tests are expected to follow a uniform distribution for the range 0.0 to 1.0.

The analysis performs a KS Test (Kolmogorov-Smirnov test) for uniform distribution on the observed p-values, and the combined p-value result of this test is taken as the final result of the Poker hand types statistics tests.

1.1 Poker hand types statistics for 52 cards deck:

Test No.	DOF	ChiSqr	P-Value
1	9	7.72	0.56259
2	9	7.63	0.57149
3	9	7.72	0.56290
4	9	8.18	0.51582
5	9	4.64	0.86447
6	9	9.66	0.37887
7	9	12.14	0.20563
8	9	6.84	0.65429
9	9	8.03	0.53148
10	9	5.41	0.79748
11	9	5.25	0.81223
12	9	3.56	0.93782
13	9	10.28	0.32846
14	9	11.39	0.24964

Test No.	DOF	ChiSqr	P-Value
15	9	12.64	0.17979
16	9	10.55	0.30816
17	9	7.08	0.62843
18	9	5.46	0.79234
19	9	3.83	0.92221
20	9	5.21	0.81579
21	9	9.61	0.38325
22	9	8.38	0.49594
23	9	7.30	0.60608
24	9	6.71	0.66701
25	9	4.78	0.85301
26	9	10.28	0.32859
27	9	3.71	0.92960
28	9	4.91	0.84177
29	9	10.28	0.32811
30	9	5.56	0.78324
31	9	12.23	0.20038
32	9	4.64	0.86460
33	9	4.51	0.87439
34	9	10.93	0.28071
35	9	10.44	0.31638
36	9	11.54	0.24068
37	9	9.43	0.39851
38	9	15.38	0.08112
39	9	8.96	0.44096
40	9	8.43	0.49099
41	9	18.14	0.03360
42	9	10.79	0.29053
43	9	15.02	0.09041
44	9	5.99	0.74091
45	9	10.88	0.28377

Test No.	DOF	ChiSqr	P-Value
46	9	3.49	0.94162
47	9	6.04	0.73601
48	9	18.38	0.03105
49	9	7.26	0.60976
50	9	15.24	0.08457
51	9	7.30	0.60541
52	9	9.16	0.42263
53	9	10.43	0.31711
54	9	6.83	0.65499
55	9	12.52	0.18565
56	9	22.84	0.00657
57	9	22.29	0.00799
58	9	13.11	0.15752
59	9	9.15	0.42352
60	9	7.22	0.61376
61	9	9.25	0.41451
62	9	6.45	0.69407
63	9	11.65	0.23387
64	9	16.25	0.06177
65	9	14.75	0.09796
66	9	11.56	0.23931
67	9	7.52	0.58274
68	9	13.50	0.14135
69	9	4.39	0.88378
70	9	9.77	0.36913
71	9	13.69	0.13375
72	9	3.08	0.96101
73	9	10.28	0.32832
74	9	19.71	0.01978
75	9	9.80	0.36706
76	9	6.97	0.64053

Test No.	DOF	ChiSqr	P-Value
77	9	9.21	0.41793
78	9	4.14	0.90189
79	9	5.47	0.79149
80	9	12.78	0.17267
81	9	8.15	0.51899
82	9	5.61	0.77808
83	9	6.82	0.65557
84	9	1.76	0.99471
85	9	7.29	0.60657
86	9	22.68	0.00695
87	9	5.12	0.82416
88	9	6.06	0.73356
89	9	12.10	0.20794
90	9	5.40	0.79835
91	9	7.07	0.63019
92	9	6.65	0.67361
93	9	11.60	0.23691
94	9	10.46	0.31431
95	9	6.63	0.67568
96	9	13.89	0.12622
97	9	4.36	0.88588
98	9	10.45	0.31560
99	9	15.17	0.08637
100	9	7.24	0.61222
Combined P-value for all tests (Using KS method)			0.94908

Notes:

- 1) The P-values are observed probabilities from the Chi-Square tests. The last row shows the result of the KS Test performed on the p-values for all Chi-Square tests, where there are sufficient data.

2. Poker rank statistics

The Poker rank analysis aims to establish that the rank of the cards in each position was equally distributed in one of the 13 possible ranks (2, 3, 4, 5, 6, 7, 8, 9, 10, J, Q, K, A) for a 52 card deck.

The Poker rank analysis involved creating subsets of data and conducting Chi-square tests on each subset. The analysis performs a KS Test (Kolmogorov-Smirnov test) for uniform distribution on the observed p-values, and the combined p-value result of this test is taken as the final result of the Ranks statistics tests.

2.1 Poker rank statistics for 52 cards deck:

Test No.	DOF	ChiSqr	P-Value
1	84	65.35	0.93439
2	84	83.35	0.49959
3	84	73.58	0.78454
4	84	72.51	0.81022
5	84	72.56	0.80897
6	84	83.48	0.49563
7	84	68.41	0.89139
8	84	74.57	0.75955
9	84	117.68	0.00902
10	84	96.81	0.16045
11	84	80.22	0.59655
12	84	90.27	0.30047
13	84	105.08	0.05966
14	84	89.62	0.31729
15	84	78.35	0.65319
16	84	99.01	0.12587
17	84	78.32	0.65419
18	84	82.75	0.51811
19	84	86.27	0.41112
20	84	105.13	0.05926
21	84	86.79	0.39587
22	84	77.46	0.67960
23	84	83.72	0.48800
24	84	74.28	0.76693
25	84	75.89	0.72412
26	84	74.70	0.75620
27	84	88.95	0.33517
28	84	95.71	0.18000

Test No.	DOF	ChiSqr	P-Value
29	84	94.31	0.20721
30	84	90.22	0.30154
31	84	101.27	0.09657
32	84	84.62	0.46065
33	84	92.64	0.24320
34	84	83.86	0.48376
35	84	100.37	0.10749
36	84	95.26	0.18846
37	84	68.62	0.88789
38	84	84.70	0.45800
39	84	58.97	0.98269
40	84	72.12	0.81904
41	84	80.82	0.57789
42	84	75.89	0.72414
43	84	89.29	0.32605
44	84	80.90	0.57554
45	84	92.65	0.24308
46	84	94.68	0.19985
47	84	95.44	0.18498
48	84	106.44	0.04972
49	84	80.51	0.58768
50	84	74.52	0.76094
51	84	74.78	0.75409
52	84	88.17	0.35647
53	84	74.79	0.75373
54	84	93.30	0.22846
55	84	57.27	0.98872
56	84	61.17	0.97128
57	84	71.32	0.83645
58	84	75.11	0.74517
59	84	100.63	0.10432

Test No.	DOF	ChiSqr	P-Value
60	84	62.53	0.96166
61	84	81.58	0.55445
62	84	60.24	0.97662
63	84	86.32	0.40966
64	84	94.92	0.19510
65	84	85.93	0.42110
66	84	83.85	0.48406
67	84	77.42	0.68062
68	84	72.37	0.81332
69	84	88.72	0.34130
70	84	100.59	0.10478
71	84	62.69	0.96042
72	84	80.39	0.59121
73	84	61.07	0.97186
74	84	70.26	0.85807
75	84	77.24	0.68587
76	84	93.22	0.23019
77	84	70.58	0.85171
78	84	91.63	0.26663
79	84	75.23	0.74206
80	84	79.49	0.61892
81	84	107.57	0.04253
82	84	69.42	0.87393
83	84	80.70	0.58180
84	84	79.10	0.63094
85	84	106.51	0.04924
86	84	91.26	0.27560
87	84	92.48	0.24674
88	84	91.70	0.26492
89	84	81.42	0.55948
90	84	97.22	0.15341

Test No.	DOF	ChiSqr	P-Value
91	84	76.39	0.71022
92	84	77.77	0.67059
93	84	59.60	0.97986
94	84	95.87	0.17696
95	84	72.76	0.80434
96	84	83.16	0.50549
97	84	64.96	0.93884
98	84	88.72	0.34137
99	84	61.85	0.96673
100	84	83.35	0.49947
Combined P-value for all tests (Using KS method)			0.79828

Notes:

- 1) The P-values are observed probabilities from the Chi-Square tests. The last row shows the result of the KS Test performed on the p-values for all Chi-Square tests, where there are sufficient data.

3. Poker suits statistics

The Poker suits analysis aims to verify that the cards dealt exhibit an equal probability of all 4 suits (Clubs, Diamonds, Hearts and Spades) in all positions.

The Poker suits analysis involved creating subsets of data and conducting Chi-square tests on each subset. The analysis performs a KS Test (Kolmogorov-Smirnov test) for uniform distribution on the observed p-values, and the combined p-value result of this test is taken as the final result of the Suits statistics tests.

3.1 Poker suits statistics for 52 cards deck:

Test No.	Positions	DOF	ChiSqr	P-Value
1	7	21	14.97	0.82424
2	7	21	21.66	0.41947
3	7	21	15.79	0.78130
4	7	21	16.55	0.73810
5	7	21	21.41	0.43430
6	7	21	17.26	0.69501
7	7	21	25.20	0.23842
8	7	21	13.61	0.88590
9	7	21	27.33	0.16017
10	7	21	16.13	0.76258
11	7	21	37.53	0.01463

Test No.	Positions	DOF	ChiSqr	P-Value
12	7	21	23.37	0.32452
13	7	21	12.06	0.93805
14	7	21	25.33	0.23335
15	7	21	20.66	0.47966
16	7	21	18.59	0.61118
17	7	21	27.98	0.14061
18	7	21	19.84	0.53142
19	7	21	21.45	0.43202
20	7	21	14.48	0.84825
21	7	21	15.95	0.77224
22	7	21	25.06	0.24465
23	7	21	31.71	0.06265
24	7	21	14.20	0.86100
25	7	21	16.22	0.75709
26	7	21	20.43	0.49419
27	7	21	23.22	0.33253
28	7	21	7.59	0.99665
29	7	21	24.88	0.25228
30	7	21	29.13	0.11102
31	7	21	18.34	0.62711
32	7	21	26.47	0.18897
33	7	21	22.77	0.35645
34	7	21	9.63	0.98328
35	7	21	21.98	0.40056
36	7	21	19.33	0.56417
37	7	21	27.65	0.15033
38	7	21	23.77	0.30445
39	7	21	31.69	0.06286
40	7	21	19.76	0.53675
41	7	21	16.84	0.72052
42	7	21	13.12	0.90432

Test No.	Positions	DOF	ChiSqr	P-Value
43	7	21	15.53	0.79556
44	7	21	11.18	0.95920
45	7	21	30.26	0.08690
46	7	21	17.97	0.65078
47	7	21	17.47	0.68220
48	7	21	19.76	0.53664
49	7	21	12.67	0.91979
50	7	21	23.35	0.32583
51	7	21	19.36	0.56225
52	7	21	23.66	0.30994
53	7	21	11.56	0.95071
54	7	21	22.14	0.39138
55	7	21	27.76	0.14701
56	7	21	21.65	0.42007
57	7	21	12.09	0.93709
58	7	21	26.98	0.17140
59	7	21	27.28	0.16178
60	7	21	17.47	0.68240
61	7	21	21.46	0.43126
62	7	21	22.03	0.39751
63	7	21	27.55	0.15352
64	7	21	14.23	0.85942
65	7	21	22.93	0.34764
66	7	21	12.90	0.91223
67	7	21	21.32	0.43976
68	7	21	19.16	0.57479
69	7	21	34.28	0.03383
70	7	21	18.80	0.59776
71	7	21	26.59	0.18479
72	7	21	27.83	0.14501
73	7	21	18.64	0.60823

Test No.	Positions	DOF	ChiSqr	P-Value
74	7	21	10.85	0.96564
75	7	21	16.88	0.71806
76	7	21	21.79	0.41161
77	7	21	17.51	0.67978
78	7	21	20.13	0.51286
79	7	21	21.56	0.42509
80	7	21	15.75	0.78328
81	7	21	24.87	0.25278
82	7	21	7.31	0.99745
83	7	21	30.72	0.07843
84	7	21	21.21	0.44598
85	7	21	26.61	0.18401
86	7	21	14.97	0.82452
87	7	21	13.66	0.88370
88	7	21	27.87	0.14392
89	7	21	18.61	0.60991
90	7	21	22.09	0.39408
91	7	21	9.70	0.98255
92	7	21	14.20	0.86065
93	7	21	16.88	0.71850
94	7	21	21.47	0.43030
95	7	21	22.16	0.39014
96	7	21	16.54	0.73852
97	7	21	15.56	0.79378
98	7	21	19.53	0.55125
99	7	21	23.60	0.31260
100	7	21	16.50	0.74073
Combined P-value for all tests (Using KS method)				0.68559

Notes:

- 1) The P-values are observed probabilities from the Chi-Square tests. The last row shows the result of the KS Test performed on the p-values for all Chi-Square tests, where there are sufficient data.

4. Summary of the analysis

4.1 Summary of the analysis of 52 cards deck:

The analysis of 52 cards completes by combining the result of the KS Test performed in the 3 types of analysis (Hand Types, Ranks and Suits) for 52 card decks using the Holm's method and producing a single Combined P -value.

The combined p-value produced using the Holm's method is used as indication for statistical randomness.

Combination of p-values using Holm's Method		
Test	P-Value	P-Adjusted
Ranks Test	0.79828	1.00000
Suits Test	0.68559	1.00000
Hand Types Test	0.94908	1.00000
Combined P-Value using Holm's Method		1.00000

Notes:

- 1) The combined p-value of all statistical tests using Holm's Method conducted for 52 card decks is greater than the minimum value of 0.05 which indicates that the randomness of the observed data falls within 95% confidence limits.

The final outcome of the analysis of 52 cards deck indicates that the RNG is working correctly.

5. Conclusion

Analysis of actual data from game logs for 'Hand Types', 'Ranks' and 'Suits' for **52-card decks** indicated statistical randomness. Since there is no data in the case of 36 card deck, this report does not contain the details of 36 card deck.

iTech Labs has done limited sanity checks to verify the integrity of the game logs. iTech Labs also maintains a copy of the game logs for verification purposes. There were a large enough number of game records to give the calculations sufficient statistical power.

We conclude that the Random Number Generator (RNG) is working correctly.

Signed:



James Boje
Managing Director EMEA
Executive
Date: 30 07 2026
