Poker Cards Analysis – September 2026

The Directors
Entain Plc

This is to confirm that iTech Labs has examined the game logs for Poker games for the period **September 01, 2026,** to **September 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	6.06	0.73382
2	9	7.26	0.61023
3	9	5.78	0.76136
4	9	14.09	0.11909
5	9	10.38	0.32094
6	9	1.74	0.99490
7	9	14.94	0.09269
8	9	12.05	0.21036
9	9	6.45	0.69375
10	9	16.86	0.05098
11	9	12.92	0.16603
12	9	6.80	0.65809
13	9	6.02	0.73814

Test No.	DOF	ChiSqr	P-Value
14	9	7.32	0.60366
15	9	14.41	0.10832
16	9	10.12	0.34111
17	9	19.29	0.02284
18	9	5.93	0.74650
19	9	5.43	0.79500
20	9	5.28	0.80887
21	9	7.65	0.56941
22	9	8.90	0.44644
23	9	12.92	0.16639
24	9	2.89	0.96845
25	9	5.62	0.77704
26	9	15.39	0.08083
27	9	5.41	0.79733
28	9	7.39	0.59663
29	9	10.08	0.34416
30	9	14.46	0.10692
31	9	11.57	0.23854
32	9	9.51	0.39176
33	9	8.45	0.48959
34	9	10.64	0.30140
35	9	7.99	0.53558
36	9	16.57	0.05587
37	9	8.93	0.44362
38	9	8.03	0.53073
39	9	8.69	0.46605
40	9	11.85	0.22175
41	9	8.36	0.49822
42	9	9.44	0.39745
43	9	8.90	0.44655
44	9	5.35	0.80323

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Test No.	DOF	ChiSqr	P-Value
45	9	5.66	0.77330
46	9	12.68	0.17767
47	9	10.04	0.34693
48	9	5.54	0.78493
49	9	6.51	0.68813
50	9	4.41	0.88266
51	9	5.47	0.79196
52	9	9.17	0.42149
53	9	8.79	0.45648
54	9	11.01	0.27506
55	9	10.87	0.28460
56	9	5.92	0.74830
57	9	10.21	0.33413
58	9	6.10	0.73007
59	9	5.78	0.76132
60	9	8.23	0.51143
61	9	3.74	0.92758
62	9	3.30	0.95129
63	9	7.91	0.54342
64	9	11.37	0.25121
65	9	10.44	0.31631
66	9	3.62	0.93485
67	9	12.20	0.20201
68	9	9.03	0.43429
69	9	3.64	0.93350
70	9	8.36	0.49876
71	9	8.80	0.45555
72	9	9.61	0.38301
73	9	3.97	0.91350
74	9	5.52	0.78667
75	9	6.39	0.70083

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Test No.	DOF	ChiSqr	P-Value
76	9	6.85	0.65247
77	9	7.17	0.61936
78	9	11.20	0.26226
79	9	10.23	0.33256
80	9	12.72	0.17565
81	9	3.12	0.95929
82	9	4.61	0.86711
83	9	21.82	0.00948
84	9	5.35	0.80273
85	9	8.69	0.46677
86	9	6.35	0.70418
87	9	4.60	0.86807
88	9	15.55	0.07697
89	9	11.88	0.22045
90	9	4.30	0.89088
91	9	3.49	0.94176
92	9	2.42	0.98289
93	9	11.41	0.24852
94	9	2.00	0.99147
95	9	5.28	0.80965
96	9	10.29	0.32730
97	9	8.13	0.52138
98	9	5.88	0.75186
99	9	7.95	0.53887
100	9	15.57	0.07636
Combined P-value for all tests (Using KS method)			0.69468

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	76.88	0.69642
2	84	72.21	0.81704
3	84	74.21	0.76885
4	84	72.80	0.80333
5	84	96.26	0.17005
6	84	72.21	0.81694
7	84	93.58	0.22247
8	84	98.26	0.13688
9	84	74.41	0.76362
10	84	87.58	0.37318
11	84	101.79	0.09063
12	84	82.44	0.52762
13	84	83.79	0.48606
14	84	92.04	0.25710
15	84	133.63	0.00047
16	84	91.31	0.27437
17	84	68.39	0.89174
18	84	77.02	0.69221
19	84	76.74	0.70035
20	84	93.66	0.22071
21	84	86.12	0.41531
22	84	81.45	0.55839
23	84	101.28	0.09644

Test No.	DOF	ChiSqr	P-Value
24	84	85.25	0.44141
25	84	99.38	0.12069
26	84	90.80	0.28702
27	84	85.12	0.44525
28	84	82.70	0.51950
29	84	88.98	0.33427
30	84	90.01	0.30700
31	84	66.85	0.91524
32	84	68.59	0.88845
33	84	85.74	0.42663
34	84	89.63	0.31698
35	84	65.27	0.93534
36	84	78.61	0.64541
37	84	76.31	0.71257
38	84	69.81	0.86682
39	84	70.27	0.85786
40	84	102.11	0.08720
41	84	119.90	0.00618
42	84	79.33	0.62390
43	84	65.14	0.93675
44	84	107.88	0.04073
45	84	83.49	0.49530
46	84	83.35	0.49955
47	84	99.11	0.12444
48	84	64.55	0.94327
49	84	111.29	0.02482
50	84	81.29	0.56354
51	84	113.28	0.01833
52	84	92.89	0.23767
53	84	107.82	0.04104

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Test No.	DOF	ChiSqr	P-Value
54	84	62.25	0.96385
55	84	72.72	0.80528
56	84	92.18	0.25385
57	84	71.78	0.82658
58	84	86.02	0.41844
59	84	75.42	0.73688
60	84	95.25	0.18871
61	84	83.46	0.49604
62	84	71.36	0.83573
63	84	84.22	0.47262
64	84	87.95	0.36253
65	84	81.13	0.56833
66	84	84.31	0.47004
67	84	68.39	0.89170
68	84	98.95	0.12673
69	84	88.35	0.35160
70	84	94.54	0.20252
71	84	84.97	0.44994
72	84	78.41	0.65163
73	84	96.74	0.16157
74	84	83.44	0.49679
75	84	90.28	0.30009
76	84	91.74	0.26413
77	84	70.04	0.86244
78	84	121.07	0.00505
79	84	82.54	0.52459
80	84	96.07	0.17335
81	84	70.07	0.86183
82	84	84.88	0.45264
83	84	83.47	0.49588

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Test No.	DOF	ChiSqr	P-Value
84	84	81.20	0.56622
85	84	81.40	0.56005
86	84	104.14	0.06742
87	84	87.14	0.38565
88	84	99.98	0.11259
89	84	88.90	0.33636
90	84	82.95	0.51198
91	84	79.89	0.60675
92	84	86.16	0.41431
93	84	88.99	0.33392
94	84	67.81	0.90102
95	84	67.13	0.91114
96	84	78.96	0.63515
97	84	88.17	0.35649
98	84	77.19	0.68749
99	84	61.24	0.97080
100	84	89.13	0.33017
Combined P-value for all tests (Using KS method)			0.50033

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 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	26.88	0.17492
2	7	21	17.33	0.69072
3	7	21	20.25	0.50538
4	7	21	34.20	0.03445
5	7	21	28.62	0.12348
6	7	21	24.70	0.26042
7	7	21	19.77	0.53618
8	7	21	22.01	0.39871
9	7	21	21.52	0.42751
10	7	21	18.45	0.62040
11	7	21	25.11	0.24248
12	7	21	16.51	0.74033
13	7	21	17.84	0.65895
14	7	21	26.29	0.19563
15	7	21	28.51	0.12621
16	7	21	24.61	0.26438
17	7	21	17.74	0.66555
18	7	21	27.02	0.17013
19	7	21	23.12	0.33783
20	7	21	24.21	0.28322
21	7	21	14.62	0.84134
22	7	21	33.76	0.03848
23	7	21	20.60	0.48363

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Test No.	Positions	DOF	ChiSqr	P-Value
24	7	21	15.21	0.81237
25	7	21	23.26	0.33017
26	7	21	35.16	0.02713
27	7	21	19.56	0.54896
28	7	21	15.87	0.77699
29	7	21	22.98	0.34504
30	7	21	22.67	0.36176
31	7	21	14.51	0.84694
32	7	21	34.81	0.02962
33	7	21	24.12	0.28718
34	7	21	13.96	0.87143
35	7	21	11.82	0.94428
36	7	21	24.41	0.27363
37	7	21	26.21	0.19846
38	7	21	25.58	0.22306
39	7	21	14.08	0.86616
40	7	21	25.80	0.21401
41	7	21	9.58	0.98388
42	7	21	15.33	0.80581
43	7	21	11.63	0.94898
44	7	21	26.56	0.18600
45	7	21	17.99	0.64995
46	7	21	33.95	0.03666
47	7	21	34.19	0.03458
48	7	21	16.30	0.75280
49	7	21	15.39	0.80266
50	7	21	14.14	0.86369
51	7	21	22.58	0.36688
52	7	21	21.26	0.44338
53	7	21	23.38	0.32425

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Test No.	Positions	DOF	ChiSqr	P-Value
54	7	21	24.62	0.26404
55	7	21	35.28	0.02630
56	7	21	12.39	0.92855
57	7	21	15.82	0.77961
58	7	21	19.36	0.56235
59	7	21	19.73	0.53827
60	7	21	26.36	0.19309
61	7	21	23.59	0.31330
62	7	21	18.38	0.62455
63	7	21	17.93	0.65324
64	7	21	23.99	0.29341
65	7	21	17.41	0.68621
66	7	21	26.23	0.19789
67	7	21	14.75	0.83505
68	7	21	11.40	0.95440
69	7	21	32.23	0.05549
70	7	21	18.72	0.60318
71	7	21	20.75	0.47404
72	7	21	25.82	0.21327
73	7	21	22.48	0.37225
74	7	21	33.98	0.03642
75	7	21	14.91	0.82744
76	7	21	15.44	0.80044
77	7	21	14.18	0.86184
78	7	21	28.56	0.12488
79	7	21	19.23	0.57029
80	7	21	22.75	0.35746
81	7	21	25.05	0.24490
82	7	21	29.02	0.11359

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Test No.	Positions	DOF	ChiSqr	P-Value
83	7	21	21.82	0.40985
84	7	21	18.43	0.62161
85	7	21	20.74	0.47463
86	7	21	15.40	0.80232
87	7	21	20.36	0.49884
88	7	21	23.85	0.30047
89	7	21	28.55	0.12511
90	7	21	23.95	0.29530
91	7	21	21.08	0.45388
92	7	21	32.14	0.05662
93	7	21	19.24	0.56992
94	7	21	11.88	0.94293
95	7	21	17.58	0.67572
96	7	21	24.45	0.27184
97	7	21	19.90	0.52731
98	7	21	19.90	0.52776
99	7	21	28.15	0.13604
100	7	21	24.95	0.24936
Combined P-value for all tests (Using KS method)				0.28053

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	0.50033	1.00000
Suits Test	0.28053	0.84160
Hand Types Test	0.69468	1.00000
Combined P-Value using Holm's Method		0.84160

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: 06 November 2026