

Bridge Statistics!

Everyone loves stats! Column after column of numbers that give insight into the real world, and give the most exciting people in our society (i.e. accountants) pleasure and money. Seriously, this information is not to be learned by anyone except the “cleverest” of characters. Players looking to improve their Bridge might like to gradually learn the practical implications of these stats, which I will outline as we go along. The information has been shamelessly plagiarized from Hank Eng’s bridge pages (Ohio State Univ.) .

High Card Points

(Statistics from "The Official Encyclopaedia of Bridge" (1984))

hcp			
hcp	Probability (%)	hcp	Probability (%)
0	0.36	16	3.31
1	0.79	17	2.36
2	1.36	18	1.61
3	2.46	19	1.04
4	3.85	20	0.64
5	5.19	21	0.38
6	6.55	22	0.21
7	8.03	23	0.11
8	8.89	24	0.056
9	9.36	25	0.026
10	9.41	26	0.012
11	8.94	27	0.0049
12	8.03	28	0.0019
13	6.91	29	0.0007
14	5.69	30	0.0002
15	4.42	31-37	0.0001

As you can see from this table, getting dealt 20+ pts is very unusual, around 1 deal in 80. Also, being dealt 7-12pts accounts for over half of all deals.

Suit Splits

So you would like to know the likelihood of that trump suit splitting evenly? Here are the splits in the commonly occurring situations:

Splits		
Missing Cards	Possible Split	Probability (%)
2	2-0	48
	1-1	52
3	2-1	78
	3-0	22
	3-1	49.7
4	2-2	40.7
	4-0	9.6
	3-2	67.83
5	4-1	28.26
	5-0	3.91
	4-2	48.4
6	3-3	35.5
	5-1	14.5
	6-0	1.5
	4-3	62.2
7	5-2	30.5
	6-1	6.8
	7-0	0.5
	5-3	47.1
8	4-4	32.7
	6-2	17.1
	7-1	2.9
	8-0	0.2

Given the number of contracts, which are played in 8 and 9 card fits, the four and five cards missing sections are especially important here. Notice that, with 5 cards missing, the 4-1 split will occur almost 1/3rd of the time, and so is well worth considering when planning the declarer play. (You were going to plan the play, right?) The “even cards missing - bad break, odd cards missing - good break” rhyme that we all know and love, is only good to a point. With four cards missing there is still over 40% chance of that all-so-important 2-2 break.

What a funny distribution! Or was it? Was that the one in thousand distribution that your bidding methods couldn't cope with, or is a rethink in order? Here follows the probabilities of distributions of hands, up to and including 9 card suit. All other hands come up with less than 0.01%. Incidentally the 13-0-0-0 hand comes up 0.000 000 000 6 % of the time.

Probability of Hand Patterns

(Statistics from "The Official Encyclopaedia of Bridge" (1984))

Hand Patterns			
Pattern (any suit order)	Probability (%)	Pattern (any suit order)	Probability (%)
4432	21.55	6520	0.65
4333	10.54	6610	0.072
4441	2.99	7321	1.88
5332	15.52	7222	0.51
5431	12.93	7411	0.39
5422	10.6	7420	0.36
5521	3.17	7330	0.27
5440	1.24	7510	0.11
5530	0.895	7600	0.0056
6322	5.64	8221	0.19
6421	4.7	8311	0.12
6331	3.45	8410	0.045
6430	1.33	8500	0.0031
6511	0.71	9211	0.018
		9310	0.01

I'll also give the common hand patterns ranked in terms of their frequencies:

Common Hand Patterns

Pattern (any suit order) Probability (%)

4432	21.55
5332	15.52
5431	12.93
5422	10.6
4333	10.54
6322	5.64
6421	4.7
6331	3.45
5521	3.17
4441	2.99
6430	1.33
5440	1.24