

## Rule of Twenty versus Counting Short suits

52 choose 13  
635,013,559,600

							Rule 20		13pts rule		same?	
spades	hearts	diamonds	clubs	# hands given suits	suit permutations	# hands	probability	sum 2 longest	hcp needed	dist pts		hcp needed
4	4	3	2	11,404,407,300	12	136,852,887,600	21.55%	8	12	1	12	TRUE
5	3	3	2	8,211,173,256	12	98,534,079,072	15.52%	8	12	1	12	TRUE
5	4	3	1	3,421,322,190	24	82,111,732,560	12.93%	9	11	2	11	TRUE
5	4	2	2	5,598,527,220	12	67,182,326,640	10.58%	9	11	2	11	TRUE
4	3	3	3	16,726,464,040	4	66,905,856,160	10.54%	7	13	0	13	TRUE
6	3	2	2	2,985,881,184	12	35,830,574,208	5.64%	9	11	2	11	TRUE
6	4	2	1	1,244,117,160	24	29,858,811,840	4.70%	10	10	3	10	TRUE
6	3	3	1	1,824,705,168	12	21,896,462,016	3.45%	9	11	2	11	TRUE
5	5	2	1	1,679,558,166	12	20,154,697,992	3.17%	10	10	3	10	TRUE
7	3	2	1	497,646,864	24	11,943,524,736	1.88%	10	10	3	10	TRUE
6	4	3	0	350,904,840	24	8,421,716,160	1.33%	10	10	3	10	TRUE
5	5	3	0	473,721,534	12	5,684,658,408	0.90%	10	10	3	10	TRUE
6	5	1	1	373,235,148	12	4,478,821,776	0.71%	11	9	4	9	TRUE
6	5	2	0	172,262,376	24	4,134,297,024	0.65%	11	9	4	9	TRUE
7	2	2	2	814,331,232	4	3,257,324,928	0.51%	9	11	2	11	TRUE
7	4	1	1	207,352,860	12	2,488,234,320	0.39%	11	9	4	9	TRUE
7	4	2	0	95,701,320	24	2,296,831,680	0.36%	11	9	4	9	TRUE
7	3	3	0	140,361,936	12	1,684,343,232	0.27%	10	10	3	10	TRUE
8	2	2	1	101,791,404	12	1,221,496,848	0.19%	10	10	3	10	TRUE
8	3	1	1	62,205,858	12	746,470,296	0.12%	11	9	4	9	TRUE
7	5	1	0	28,710,396	24	689,049,504	0.11%	12	8	5	8	TRUE
8	3	2	0	28,710,396	24	689,049,504	0.11%	11	9	4	9	TRUE
6	6	1	0	38,280,528	12	459,366,336	0.07%	12	8	5	8	TRUE
8	4	1	0	11,962,665	24	287,103,960	0.05%	12	8	5	8	TRUE
7	6	0	0	2,944,656	12	35,335,872	0.01%	13	7	6	7	TRUE
8	5	0	0	1,656,369	12	19,876,428	0.00%	13	7	6	7	TRUE
4	4	4	1	4,751,836,375	4	19,007,345,500	2.99%	8	12	2	11	FALSE
5	4	4	0	657,946,575	12	7,895,358,900	1.24%	9	11	3	10	FALSE

**total false**      4.24%  
hands considered      99.96%