

# Bridge Theory for the Practitioners

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## 5. Probabilities of Hand Shape and High-Card Points

In earlier columns, we have discussed *a priori* probabilities of how a suit breaks. In this column I will discuss what are the most probable hand types and strength (in terms of high card points.)

**Probability of Hand Shapes:** The table below summarizes what kind of hand shapes are most encountered in Bridge.

Pattern	Percentage of time Encountered
4432	21.55
5332	15.52
5431	12.93
5422	10.58
4333	10.54
6322	5.64
6421	4.70
6331	3.45
5521	3.17
4441	2.99
7321	1.88
6430	1.33
5440	1.24
5530	0.90
6511	0.71
6520	0.65
7222	0.51
7411	0.39
7420	0.36
7330	0.27
All other hand types	0.69

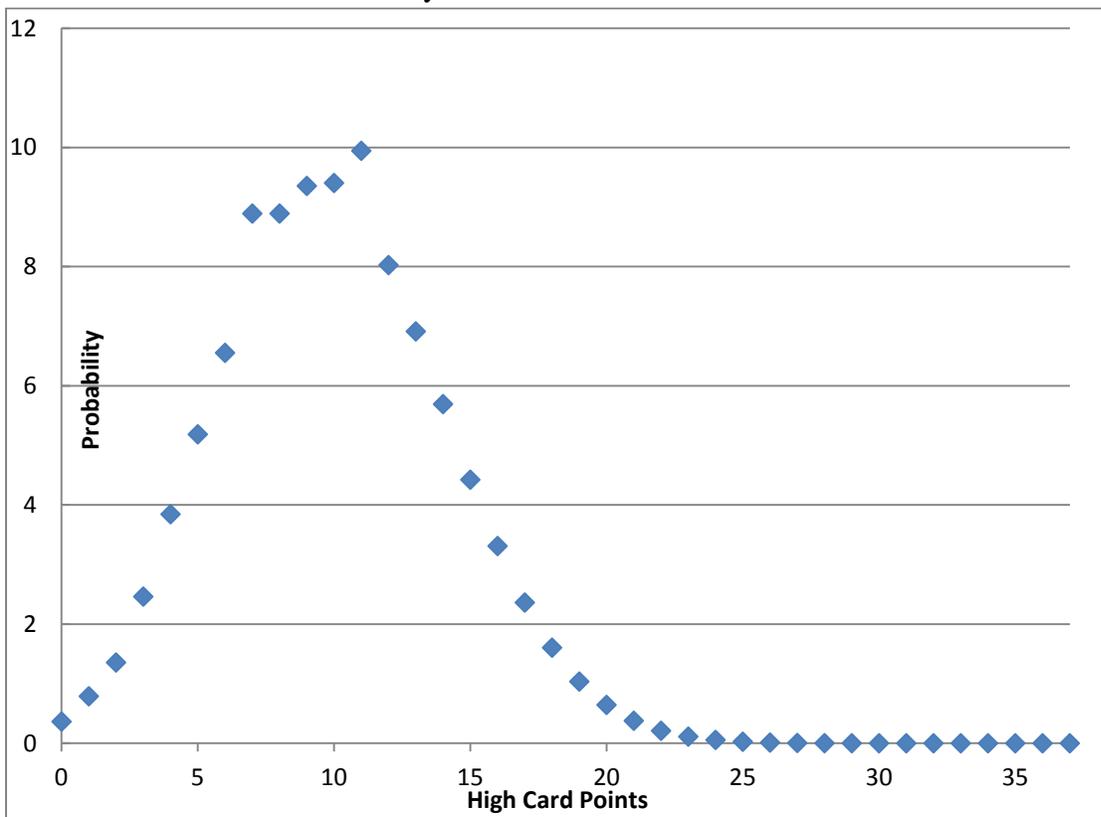
Note that the balanced hands rule the landscape. The 5 most common balanced hands marked in red, carries a weight of about 64%. So a balanced hand would show up about 2/3 of all hands you pick up at the table. This critical information will help you with your card play in various situations. Even when bidding tends to show that there are 3 highly distributional, freak hands at the table, more often than not the 4<sup>th</sup> hand is a balanced hand --- a serene port in the midst of a turbulent sea.

Another set of observations that would be very valuable to you is in estimating the hand shape when they pre-empt. Note that when they pre-empt with a 7-card suit, 7321 hands are most probable and about 4 times more probable than the next hand type 7222.

**Probability of High Card Points:** Rather than including another dry table of numbers, I have included a graph here. The horizontal axis is the high card points and the vertical axis is the percentage. Bridge hands come from 0-37 hcps, but the distribution is skewed which means that the peak is not at the middle. As you can see the peak is at around 10-11 points. Actually hands with 5-15 points show up 83% of the types. Thus any intelligent system development must handle the 10-11 count hands with care. You cannot be silent with these hands.

If you are playing a strong club system, you can open light with 10-11 hcps and avoid getting into trouble. However, it is awkward to open 10-11 count hands playing standard or two-over-one systems. Marty Bergen has developed the so-called “rule of 20” to handle hands like these but often you can end up in bad contracts, just one level too high.

In a future column I will discuss one good way to handle such hands building upon some ideas of ACBL Grand Master Evan Bailey.



**References:** Books by Vivaldi and Kelsey; See my column 3 “Searching for the Elusive Q” for details.