Playing the Odds

Finesses

The odds of a finesse working are 50-50. Unless there's something in the bidding to tell you otherwise, assume you will win a finesse half the time. If the odds of one finesse working are 50-50, then the odds of two finesses both working (or both failing) is 25%. At least one of two finesses will work 75% of the time.

Suit Breaks

The odds of a suit breaking (relatively) evenly vary according to how many cards in that suit you're missing. If you're missing an even number of cards, the odds they'll split evenly are less than 50%. Missing an odd number, the odds they'll split evenly are greater than 50%.

Missing Cards	Most likely split	Next likely split
2	1-1 52%	2-0 48%
3	2-1 78%	3-0 22%
4	3-1 50%	2-2 41%
5	3-2 68%	4-1 28%
6	4-2 48%	3-3 36%
7	4-3 62%	5-2 31%
8	5-3 47%	4-4 33%

It's not as important to memorize the exact percentages as it is to know that an odd number of cards usually break as evenly as possible, while an even number of cards usually don't break evenly.

How Does Knowing the Odds Help?

If you're missing 5 cards in a suit, the odds they'll split 3-2 are 68%. The odds of a finesse working are 50%. So, if you have the choice of taking a finesse or playing for a 3-2 break, play for the break. But, if you are missing 6 cards, the odds of a 3-3 break are less than 50%. So, if you have a choice, take the finesse.

What About the Bidding?

Of course, the basic odds and percentages assume that nothing is known about the opponents' hands. In many cases, the bidding will have revealed information about suit lengths and indicate the likely location of high cards.

If an opponent has doubled or bid (other than preemptively), (s)he's more likely to have missing honors.

If an opponent has bid a long suit, (s)he's more likely to be short in other suits.

The opponent with greater length in a suit is more likely to hold a specific card in that suit.

Eight Ever; Nine Never

The odds-on play with nine cards in a suit missing the queen is to play for the drop. With eight cards in the suit, the odds favor finessing for the queen.

The Law of Restricted Choice

If a card played by an opponent may have been played by choice or necessity, it is more likely to have been played by *necessity*. So if you lead a suit in which you're missing two touching honors and an opponent unexpectedly plays one of the missing cards, the odds are that (s)he doesn't have the other missing card.

Miscellaneous Bridge Probabilities

Probability that either partnership will have enough to bid game, assuming a 26+ point game = 25.29% (1 in 3.95 deals)

Probability that either partnership will have enough to bid a small slam, assuming a 33+ point slam = .70% (1 in 143.5 deals)

Probability that either partnership will have enough to bid a grand slam, assuming a 37+ point grand slam = .02% (1 in 5,848 deals)

Number of possible deals = 52!/(13!)^4
= 53,644,737,765,488,792,839,237,440,000

Odds against being dealt a hand with 37 HCP (4 Aces, 4 Kings, 4 Queens, and 1 Jack) = 158,753,389,899 to 1

Odds against being dealt a perfect hand (13 cards in one suit) = 169,066,442 to 1

Odds against a Yarborough = 1827 to 1

Odds against being dealt a hand with no Aces = 2 to 1

Odds against being dealt four Aces = 378 to 1

Odds against being dealt at least one singleton = 2 to 1

Odds against having at least one void = 19 to 1

Odds that no players will be dealt a singleton or void = 4 to 1

Suit Combinations

Outstanding Cards	Possible Holding	Percentage	Number of Hands	Percent Singleton (Drop or Finesse)	Percent Doubleton	Percent Trebleton
2	1-1 2-0, 0-2	52.0 48.0	2	52.0 Drop any, no finesse	48.0	NA
3	2-1, 1-2 3-0, 0-3	78.0 22.0	6 2	26.0 Finesse K, but not QJ	52.0	22.0
4	3-1, 1-3 2-2 4-0, 0-4	49.7 40.7 9.6	8 6 2	12.4 Finesse K but not QJ	40.7	37.3
5	3-2, 2-3 4-1, 1-4 5-0, 0-5	67.8 28.3 3.9	20 10 2	5.7 Finesse KQ not J	27.1	40.7
6	4-2, 2-4 3-3 5-1, 1-5 6-0, 0-6	48.5 35.5 14.5 1.5	30 20 12 2	2.4 Finesse KQ not J (see note below)	16.2	35.5
7	4-3, 3-4 5-2, 2-5 6-1, 1-6 7-0, 0-7	62.2 30.5 6.8 .5	70 42 14 2	.96	8.8	26.9
8	5-3, 3-5 4-4 6-2, 2-6 7-1, 1-7 8-0, 0-8	47.1 32.7 17.1 2.9 .16	112 70 56 16 2	.36	4.3	17.7