RELEVANT PERCENTAGES FOR BRIDGE PLAYERS

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1) | Percentages of Card Division between two hidden hands | | | | |
| Cards out | |  |  |  |  |
| 2 cd |  |  |  | 1-1 52% | 2-0 48% |
| 3 cd |  |  |  | 2-1 78% | 3-0 22% |
| 4 cd |  |  | 2-2 41% | 3-1 50% | 4-0 10% |
| 5 cd |  |  | 3-2 68% | 4-1 28% | 5-0 4% |
| 6 cd |  | 3-3 35% | 4-2 49% | 5-1 15% | 6-0 2% |
| 7 cd |  | 4-3 62% | 5-2 30% | 6-1 7% | 7-0 0.5% |
| 8 cd | 4-4 33% | 5-3 47% | 6-2 17% | 7-1 3% | 8-0 0.2% |
| 9 cd | 5-4 59% | 6-3 31% | 7-2 9% | 8-1 1% | 9-0 0.1% |

Except for 2 cards /

the general rule is

Even cards probably do not split evenly

Odd cards probably do split as evenly as possible

The percentages for card division presume that there is NO evidence from bidding or play to alter the probabilities. Eg a hand which has pre-empted showing a 7 card club suit has only 6 'vacant spaces' for other cards while if declarer and dummy together have 4 clubs the other defender has 2 clubs leaving 11 vacant spaces in that hand. If there are 4 cards in another suit (hearts) in those hands the probability of them splitting 2-2 drops from over 40% to under 35% while the hand with more vacant spaces is 5 times as likely than the other to hold 3 or 4 hearts.

2) 3)

Probability of opponents ruffing on - Cards out Probability of Drop of -

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4th rd | d  r  T3  3 | 2nd rd | 1st rd |  | K | Q | J | 10 |
| 100% | 100% | 100% | 48% | 2 cards | 52% | 100% | 100% | 100% |
| 100% | 100% | 100% | 22% | 3 cards | 26% | 78% | 100% | 100% |
| 100% | 100% | 60% | 10% | 4 cards | 12% | 52% | 90% | 100% |
| 100% | 100% | 32% | 4% | 5 cards | 5% | 31% | 73% | 96% |
| 100% | 65% | 17% | 2% | 6 cards | 3% | 19% | 54% | 87% |
| 100% | 38% | 8% | 1% | 7 cards | 1% | 9% | 38% | 71% |

With 2 cards missing go for the drop of the King (52%)

With 4 cards missing go for the drop of the Queen (52%), the cards may be 2-2 (41%) or she may be singleton (12%)

With 6 cards missing go for the drop of the Jack (54%), the cards may be 3-3 (35%) or he may be doubleton (18%) or singleton(2%) With 3, 5 or 7 cards out do NOT expect to drop K, Q or J respectively

4) Probability of High Card Points in a hand 5) Common Hand Patterns

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| HCP | Probability(%) |  | HCP | Probability(%) |  | Pattern (any suit order) | Probability (%) |
| 0 | 0.4 |  | 16 | 3.3 |  | 4432 | 21.6 |
| 1 | 0.8 |  | 17 | 2.4 |  | 4333 | 10.5 |
| 2 | 1.4 |  | 18 | 1.6 |  | 4441 | 3.0 |
| 3 | 2.5 |  | 19 | 1.0 |  | 5332 | 15.5 |
| 4 | 3.9 |  | 20 | 0.64 |  | 5431 | 12.9 |
| 5 | 5.2 |  | 21 | 0.38 |  | 5422 | 10.6 |
| 6 | 6.6 |  | 22 | 0.21 |  | 5521 | 3.2 |
| 7 | 8.0 |  | 23 | 0.11 |  | 5440 | 1.2 |
| 8 | 8.9 |  | 24 | 0.06 |  | 5530 | 0.9 |
| 9 | 9.4 |  | 25 | 0.03 |  | 6322 | 5.6 |
| 10 | 9.4 |  | 26 | 0.01 |  | 6421 | 4.7 |
| 11 | 8.9 |  | 27 | 0.005 |  | 6331 | 3.5 |
| 12 | 8.0 |  | 28 | 0.002 |  | 6430 | 1.3 |
| 13 | 6.9 |  | 29 | 0.0007 |  | 6511 or 6520 | 0.7 |
| 14 | 5.7 |  | 30 | 0.0002 |  | Any with 7 cd | 3.9 |
| 15 | 4.4 |  | 31-37 | 0.0001 |  | Any with 8+ suit | 0.5 |

Being dealt 7-12pts accounts for over half of all hands. Nearly half the hands are balanced

It is unlikely any hand in a 26 board session has over 24HCP In a 26 board session there may be 4 x 7cd suits

A partner who bids 1NT (12-14) probably has 12 or a poor 13HCP 2/3 of hands probably contain a 5 card or longer suit

A partner who bids 2NT (20-22) probably has only 20 HCP 1/3 of all hands probably have a singleton or void

Bear in mind that these are the mathematically determined values, and do not take into account the fact that hands which are imperfectly 'shuffled and dealt' often are more balanced than those randomly generated on a computer.

1. Probabilities of a partnership having a fit (at least 8 cards in a chosen suit) The higher the probability of fit the lower the points needed to open or overcall

Probability of a partnership having a good fit

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Number of cards between two hands | 7 | 8 | 9 | 10 | 11 |
| Percentage of deals | 16% | 46% | 28% | 9% | 2% |

Probability of your partner having a fit with a single suit in your hand

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Cards in your suit | Probability of at least | Total number of cards partner | | held by you and your together | |
|  | 8 card fit | 7 card | 8 card | 9 card | 10 card |
| 4 | 34% | 32% | 21% | 9% | 2% |
| 5 | 54% | 29% | 31% | 17% | 5% |
| 6 | 76% | 19% | 33% | 28% | 12% |
| 7 | 93% | 7% | 26% | 35% | 22% |

Probability of partner having a fit with one of your TWO suits

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Your suits | 4 - 3 | 4 - 4 | 5 - 3 | 5 - 4 | 5 - 5 |
| Probability of fit | 49% | 60% | 66% | 74% | 84% |

1. Miscellaneous Bridge Probabilities

Number of different

hands a player can receive = 635,013,559,600 possible deals = 53,644,737,765,488,792,839,237,440,000

possible auctions = 128,745,650,347,030,683,120,231,926,111,609,371,363,122,697,557

169,066,442 to 1 213 to 1 28 to 1 6 to 1

2 to 1 19 to 1

500 to 1 378 to 1 278 to 1 1827 to 1

Odds against a player being dealt

13 cards in one suit 8 cards in one suit 7 cards in one suit 6 cards in one suit

at least one singleton at least one void

AKQJ10 in a suit four Aces

a hand with no points a Yarborough (no10)

Playing 26 boards twice a week expect

Once every 60 000 years!

Once a month Once a session Four times a night

Once a two board round Once a session

Once every three months Once every two months Once a month Twice a year

8 to 1 288 to 1 11600 to 1

Odds against a partnership being dealt

26+ HCP = 33+ HCP small slam in NT = 37+ HCP grand slam in NT =

Three times a night Once a month Once every two years