

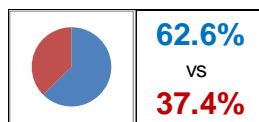
Documentation for TennisCalc

TennisCalc is a dynamic calculator for obtaining the chances of winning and match duration of a game, set and match dependent of the score line. It allows for updating the serving probabilities of each player during the match in progress to account for player form on the day. It has an Interactive and Predictive feature.

The Interactive feature allows the user to adjust the serving probabilities and score line to output the chances of winning and match duration. For example, with player A winning 62% of points on serve and player B winning 60% of points on serve;

Player	Initial Serve
Player A	< █ > 62.0%
Player B	< █ > 60.0%

player A has a 62.6% chance of winning the match from the outset in a best-of-5 all tiebreak sets match.



Player A also has a 77.6% chance of winning the game on serve and a 56.8% chance of winning the set

Player	Point	Game	Set	Match
Player A	62.0%	77.6%	56.8%	62.6%
Player B	38.0%	22.4%	43.2%	37.4%

Player A has a 14.8%, 22.5% and 21.3% chance of winning the game to 0, 15, 30 respectively. Player B has a 2.1%, 5.2% and 8.0% chance of winning the game to 0, 15, 30 respectively. The chances of playing 4, 5 and 6 points are given by the sums of 14.8%+2.1%=16.9%, 22.5%+5.2%=27.7% and 21.3%+8.0%=29.3% respectively. The mean number of points played in such a game is 6.38 with a standard deviation of 2.51. Other measures of risk include the coefficient of variation as 0.39, coefficient of skewness as 2.22 and coefficient of excess kurtosis as 7.33.

