

FIBS Ratings Calculator
Calculations

n = the length of the match.

P1 = the rating of Player 1.

P2 = the rating of Player 2.

E1 = Player 1 Experience right before finishing the match.

E2 = Player 2 Experience right before finishing the match.

PE1 = experience factor for Player 1

PE2 = experience factor for Player 2

D = the difference between the two ratings

F = the probability of the favorite winning the match

U = the probability of the underdog winning the match

D = absolute value of P1-P2

$U = 1/(10^{(D*\text{SQRT}(n)/2000)+1})$

F = 1-U

PE1 = maximum(1, 5-((E1+n)/100))

PE2 = maximum(1, 5-((E2+n)/100))

If Player 1 is higher rated and wins, P1's rating increases by

$4*PE1*\text{SQRT}(n)*U$

If Player 1 is higher rated and loses, P1's rating decreases by

$4*PE1*\text{SQRT}(n)*F$

If Player 1 is lower rated and wins, P1's rating increases by

$4*PE1*\text{SQRT}(n)*F$

If Player 1 is lower rated and loses, P1's rating decreases by

$4*PE1*\text{SQRT}(n)*U$

If Player 2 is higher rated and wins, P2's rating increases by

$4*PE2*\text{SQRT}(n)*U$

If Player 2 is higher rated and loses, P2's rating decreases by

$4*PE2*\text{SQRT}(n)*F$

If Player 2 is lower rated and wins, P2's rating increases by

$4*PE2*\text{SQRT}(n)*F$

If Player 2 is lower rated and loses, P2's rating decreases by

Input

Values Rating Point Gain or Loss

5 Win Lose

1700 3.34562028 5.59865163

1500 5.59865163 3.34562028

400

400

1

1

200

0.6259

0.3741

$4*PE2*SQRT(n)*U$

Cell modification password is "FIBS"