

Overview of Social Ranking Algorithm

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This guide provides an overview to how the SportyHQ ranking algorithm calculates points. The algorithm is quite complex, so please use the following as a general set of principles.

Point Ranges

The point range of the algorithm generally spans from the low hundreds for a beginner player, up to 3000 points for a consummate professional player.

Sports and Scoring Systems Supported

The following is a list of the sports and scoring systems supported by the algorithm:

- Squash, Doubles Squash, Squash 57 (UK Racketball) and US Racquetball.
 - Par 11
 - Best of 5
 - Total of 3 games
 - Total of 5 games
 - Par 15 (singles & doubles)
 - Best of 5
 - Total of 3
 - Total of 5
 - Hi-hi (Point a Serve)
 - Best of 5
 - Time limited points
- Handball
 - Best of 3
- Fives
 - Par 11



- Best of 5
- Best of 3
- Par 15
- Best of 5
- Best of 3

Provisional Ranking

For unranked players, a provisional ranking is assigned. Any results that are provisional are indicated with a red flag next to the results on a player's match history.

The provisional ranking takes 5 ranked and completed matches (i.e. no defaults) against fully ranked opponents before a player is moved out of provisional status.

The provisional ranking can move quickly based on results and the strength of opponents played. The basic principles are:

- For the first match, the provisional player is given their opponent's ranking +/- the points they would gain or lose depending on if they win or lose the match (more details on those calculations are below).
- For the next applicable match and beyond, the following logic is applied:
 - If the provisional player wins against a higher ranked player, the provisional player will earned their opponent's ranking plus the number of points they would gain based on the match result.
 - If the provisional player loses against a lower ranked player and their last match was a loss, they'll be assigned their opponent's ranking, less the points they would normally lose based on the match result.
 - If the provisional player wins against a lower ranked player, or loses against a higher ranked player, no initial adjustment is made to their ranking. They are however assessed the normal +/- points they would earn based on the result.

The opponent of a provisional player will not gain or lose any points. This is because we are still determining where the provisional player's ranking should be set and cannot accurately give or take away points from their opponent.



How points are calculated

Multiplier

Firstly, points vary depending on the multiplier being used. The following are the default multipliers:

- Friendly result: 0.00 meaning match is unranked.
- Challenge result: 0.5x multiplier
- League / Tournament result: 1x multiplier

Governing bodies using the SportyHQ platform have the capability to create additional multipliers ranging from 0.25 to 2.00. Higher multipliers are generally used for higher level events. For example, your regional closed or open championships might be assigned a 2.00 multiplier.

The multiplier generally means that the points awarded by the algorithm will then get multiplied by the multiplier to give the final + or -. There are some exceptions to this, as outlined below.

Points Limiter

Points Limiter (after points have been calculated, if they are greater than the maximums below, it will get adjusted to the maximum)

- If Match Type is Challenge: Maximum points gain: 20
- If Multiplier ≤ 1 : Maximum points gain: 30
- Else Maximum points gain: 50

Step 1: Basic points tables (if higher ranked player wins)

Based on the points difference between the 2 players, the following points are assessed:

Points difference between players	+/- for winner/loser
0 (i.e. they have the same # of points)	5 (i.e. winner +5, loser -5)
1	6
≤ 4	4

≤ 5	5
> 5 and ≤ 10	4
> 10 and ≤ 20	3
> 20 and ≤ 25	2
> 25 and ≤ 31	1
otherwise	0

WHEN HIGHER RANKED PLAYER WINS:

- **If Lower Ranked Player gets exactly 1 game**
 - If ranking difference ≥ 80 , get another 2 points
- **If Lower Ranked Player gets exactly 2 games**
 - If ranking difference ≥ 80 (before 2015-08-17), gets 5 points
 - If ranking difference ≥ 70 (before 2015-08-17), gets 5 points
- **If difference between rankings is ≥ 80**
 - Multiplier for lower ranked player does not get applied (if applicable)

IF HIGHER RANKED PLAYER LOSES:

Points calculation table:

Difference in ranking points	Winner points	Loser points
≤ 5	5	-5
> 5 and ≤ 10	6	-6
> 10 and ≤ 15	7	-7
> 15 and ≤ 20	7	-8
> 20 and ≤ 25	8	-9



> 25 and <= 30	8	-10
> 30 and <= 35	9	-10
> 35 and <= 40	9	-10
> 40 and <= 45	10	-10
> 45 and <= 50	11	-10
> 50 and <= 55	12	-10
> 55 and <= 60	16	-10
> 60 and <= 65	24	-10
> 65 and <= 70	28	-10
> 70 and <= 75	33.5	-10
> 75 and <= 80	39	-10
> 80 and <= 85	40	-10
> 85 and <= 90	44	-10
> 90 and <= 95	48	-10
> 95 and <= 100	49	-10
> 100	50	-10

After the points are calculated here, the ranking multiplier is applied with the restrictions as outlined above.



Check new point values against a maximum + or - applicable. Max is currently 50 (but reference event multiplier).

If all of the above results in 0 points being awarded to both players, and the ranking difference is ≤ 100 and higher ranked player wins:

- +1 point for winner
- -1 point for loser

Additional Rules, Exceptions and Updates

3-0 Jump Rule

If lower ranked players WINS and higher ranked player gets 0 games and the match date is after 2014-04-01 and it's a fully completed match (i.e. not default, injury, etc.) and the loser has played at least 15 matches, then:

Take Ranking difference / 2. If it's greater than the points the winner would otherwise gain, use this as the points + for them. The maximum points limiter above does not apply.