FIBA World Ranking Boys, How it works

Games factored in the new FIBA World Ranking Boys
Games played by Boys' U16 – U19 national teams in the most recent two occurrences of the following competitions:

- FIBA U19 Basketball World Cup
- FIBA U17 Basketball World Cup
- FIBA U18 AfroBasket
- FIBA U16 AfroBasket
- FIBA U18 AmeriCup
- FIBA U16 AmeriCup
- FIBA U18 Asia Cup
- FIBA U16 Asia Cup
- FIBA U18 EuroBasket (Divisions A, B and C)
- FIBA U16 EuroBasket (Divisions A, B and C)
- FIBA U17 Oceania Cup

METHOD
To calculate the FIBA World Ranking Boys, we require two stages:
1. Calculate the rating points (RP) for each game for each team; and
2. Calculate the ranking according to the weighted average rating points of each team, over all games contributing to the ranking.

METHOD Stage 1 - Calculate each team's rating points allocated from each game.

Basis points
1,000 basis points (BP) are awarded in each game according to the following principles:

- Win by a margin of 1-9 points-> receive 600 basis points
- Win by a margin of 10-19 points-> receive 700 basis points
- Win by a margin of 20 or more points-> receive 800 basis points
- Lose by a margin of 1-9 points-> receive 400 basis points
- Lose by a margin of 10-19 points-> receive 300 basis points
- Lose by a margin of 20 or more points-> receive 200 basis points
- In the event of a game being forfeited, the winning team receives 800 points (for a victory by a margin of 20 points) and the losing team gets 0 basis points

Strength of opposition factored in
A win by a team against an opponent that is higher in the FIBA World Ranking Boys, means the result will be worth more points for the winners.

The opposition ranking points (ORP) are given by:
ORP = 1.5 x (AVG ALL TEAM PRE-GAME RANKING – OPPONENT PRE-GAME RANKING)
The ranking rewards teams for facing opponents ranked higher than them. The higher the opposition is ranked, the more points the team stands to get. As the best teams are naturally ranked high, playing strong opponents means their ranking will be lower numerically than the average all-team pre-game ranking. Therefore, this contribution will be positive. Conversely, the weaker teams have higher than average rankings so this contribution will be negative. For more information, see these **detailed examples**.

Scaling for Oceania and Divisions B and C
The FIBA U16 EuroBasket and FIBA U18 EuroBasket are played across 3 divisions: Division A, Division B and Division C. The FIBA U17 Oceania Cup is a qualifying tournament for the FIBA U18 Asia Cup. For all other games in other Championships there is only one level.

To reflect the different levels of Oceania, Division B and Division C games, we apply a scaling factor **(SF)** to the rating points. Oceania and Division B games have a scaling factor of 0.5 and Division C have a scaling factor of 0.33. Division A games, and all games from other Championships have a scaling factor of 1.0.

The final rating points (RP) for the game for a team are given by the following formula:
RP= SF x (BP + ORP)

RP: rating points
BP: basis points
ORP: opposition ranking points

METHOD Stage 2 - Updating the FIBA World Ranking Boys, at any time
To calculate the ranking at any particular time, we have to calculate the ratings for all teams at that time and then rank them.

We calculate the ratings by taking a penalised weighted average of rating points from their previous games. To calculate the weighted average, we need to calculate the weight (**W**) for each game.

The weight is made up of the following factors:

Factor	Description
Recency of game	Games are weighted depending on if they were in the most recent occurrence of a Championship or the previous occurrence.
Region of competition teams	Weights are given to the region of the competition to ensure competitive balance.
Division	Weights are given according to the Division of the game
Round	Weights are given to the round of the game, with games in later rounds more highly weighted.

Time decay using Championship recency (TD)
A Championship recency factor is implemented to reward teams for most recent performances and to prevent all games over the whole rating period from carrying the same weight and receiving the exact same value.

Championship Recency (TD)	Weight
Most recent occurrence of Championship	1
Second most recent occurrence of Championship	0.5
Previous occurrences of Championship	0 (not taken into consideration)

The reason for this is to add a form factor that rewards teams slightly more for better results in recent history.

Competition and region weights (C)
Weights are given to different competitions to reflect the prestige of the tournaments and to ensure that ratings are comparable across regions.

Competition/Region (C)	Weight
FIBA Basketball World Cup (U17, U19)	2.5
Africa (U16, U18)	0.35
Americas (U16, U18)	0.8
Asia (U16, U18)	0.45
Europe (U16, U18)	1
Oceania (U17)	0.1

Division weight (D)
Games in the FIBA Oceania Cup and Division B and Division C in the FIBA EuroBasket are given lower weight. All other games are given weight 1.

Division factor D	Weight
FIBA EuroBasket Division B and FIBA Oceania Cup	0.5
FIBA EuroBasket Division C	0.33
All other games	1

Round weight (R)
The new FIBA World Ranking Boys, introduces a weighting that works on a round basis, with results of the winning team receiving greater weighting the further through a Championship a team progresses. This does not apply to Division B and C Championships, or for results of the losing team, where all rounds in receive the same weight (1).

Round (R)	Weight
1	1
2	2
3	4
4	6
5	6

The final weighting W of a particular game in the penalized weighted average is given by the formula: **W** = **TD** x **C** x **D** x **R**

W: Final game rating
TD: Time decay using Championship recency
C: Competition and region weight
D: Division weight
R: Round weight

Click **here** to view detailed examples of how the FIBA World Ranking Boys, presented by Nike, is calculated.

FIBA will continuously evaluate the implementation of the new ranking and may make necessary adjustments.