

2012-2013

### AIA Seedings powered by MaxPreps

#### **Binary Pair Comparison**

The AIA Seedings powered by MaxPreps relies upon a statistical method known as "Binary Pair Comparison", whereby the number of data points used for a team's ranking is compensated for within the equation and only a team's win-loss-tie record is required. The algorithm is iterative and converges rapidly to the final result using a mid-level performance PC.

The algorithm is derived utilizing statistical mathematics presented in a research paper titled: "A Solution to the Unequal Strength of Schedule Problem" by Roy Bethel in 2005. While MaxPreps has made minor adjustments to the algorithm, the foundation of the algorithm is contained in Bethel's paper.

## **Strengths**

- Tested and Proven
  - o Ran across multiple sports at various levels
  - o Compared to multiple RPIs and various algorithms
- More data = a higher degree of accuracy
  - All teams are connected by utilizing data from all games within the MaxPreps database. For example, leverages data from over 80,000 contests for Varsity Football.
  - Not geographically limited based on the state association member schools
- Only data
  - o All teams start with a level playing field
  - o No values are given for division, enrollment, returning starters, etc

### **Games that Count toward a Schools Seeding**

- All regular season games count toward an AIA member school seeding, excluding invitational tournament games.
- The minimum number of games a school must play to constitute a full schedule in each sport to qualify for post season play is:

Badminton: 10 gamesBaseball: 14 games

o Basketball: 14 games

o Football (D-I to D-V): 8 games

o Football (D-VI): 6 games

Soccer: 10 gamesSoftball: 14 games

Tennis (Team): 10 gamesVolleyball: 14 games



2012-2013

## Team Sports Using AIA Seedings powered by MaxPreps and What Week of Competition they Display:

Season	Sport	When Are They Displayed
Fall	Football	Sept. 12, 2012
Fall	Soccer Division IV	Sept. 14, 2012
Fall	Volleyball (Girls)	Sept. 14, 2012
Winter	Basketball	Dec. 18, 2012
Winter	Soccer Division I, II, III	Dec. 18, 2012
Spring	Baseball	March 12, 2013
Spring	Softball	March 12, 2013
Spring	Tennis	March 12, 2013
Spring	Volleyball (Boys)	March 12, 2013

### AIA Seedings powered by MaxPreps Website Display:

Rank, School, W-L, Strength of Schedule, Rating Value

- W-L is win-loss record
- Strength of Schedule: The schools strength of schedule
- Rating Value: The schools rating

### **Team Sports using the current AIA Power Rankings System until Fall 2013:**

Badminton

### **AIA Power Rankings Website Display for Badminton:**

Rank, School, W-L, PR W-L, VP, OPVP, OPOPVP, Weighted Total Pts, # of PR Games, Power Points

- W-L is win-loss record
- PR W-L is the schools power ranking win-loss record
- VP stands for Victory Points of School
- OPVP stands for Opponent Victory Points
- OPOPVP stands for Opponent's Opponent Victory Points
- Weighted Total Pts is based on the formula they receive for VP, OPVP, and OPOPVP
- # of PR Games is number of power ranked games for the school
- Power Points is their power points



2012-2013

#### **State Tournament Qualifying**

The following outlines how the state tournament will be created for each sport:

### **Badminton (AIA Power Rankings System):**

Division I (16 team bracket): The top three (3) power ranked teams from each of the three sections for a total of nine (9) teams will earn an automatic bid to the state tournament. The final seven (7) spots will be based on overall power ranking. The bracket will be seeded according to overall seeding of the 16 teams.

• The tournament will consist of four rounds and will be single elimination

#### **Baseball:**

Division I & II (24 team brackets): The top four (4) seeded teams from each of the three sections for a total of 12 teams will earn an automatic bid to the state tournament. The final 12 spots will be based on overall seeding. The bracket will be seeded according to overall seeding of the 24 teams.

- Teams seeded #1 to #8 will get a first round bye
- The first two rounds of the tournament will be single elimination to get to the final eight (8) teams
- The final eight (8) teams will then play a double elimination tournament
- There will be only one game for the championship

Division III & IV (24 team bracket): The top four (4) seeded teams from each of the three sections for a total of 12 teams will earn an automatic bid to the state tournament. The final 12 spots will be based on overall seeding. The bracket will be seeded according to overall seeding of the 24 teams.

- Teams seeded #1 to #8 will get a first round bye
- The tournament will consist of five rounds and will be single elimination

### **Basketball (Boys & Girls):**

Division I, II, III, & IV Sectional Tournament (8 team bracket): The top eight (8) seeded teams from each section will make up the section tournament. The bracket will be seeded according to their seeding within their section, and the seeding will continue to update through sectional tournaments to determine state tournament seeding.

The sectional tournament will consist of three rounds and will be single elimination

Division I, II, III, & IV State Tournament (24 team bracket): Four (4) teams from each of the three sections for a total of 12 teams will earn an automatic bid based on how they finish within their sectional tournament. The final 12 spots will be based on overall seeding. The bracket will be seeded according to overall seeding of the 24 teams.

- Teams seeded #1 to #8 will get a first round bye
- The tournament will consist of five rounds and will be single elimination



2012-2013

## Football:

Division I, II, III, IV, & V (16 team bracket): The top three (3) seeded teams from each of the three sections for a total of nine (9) teams will earn an automatic bid to the state tournament. The final seven (7) spots will be based on overall seeding. The bracket will be seeded according to overall seeding of the 16 teams.

• The tournament will consist of four rounds and will be single elimination

Division VI (12 team bracket): The top three (3) seeded teams from each of the three sections for a total of nine (9) teams will earn an automatic bid to the state tournament. The final three (3) spots will be based on overall seeding. The bracket will be seeded according to overall seeding of the 12 teams.

- Teams seeded #1 to #4 will get a first round bye
- The tournament will consist of four rounds and will be single elimination

## Soccer (Boys & Girls):

Division I, II, & III (16 team bracket): The top three (3) seeded teams from each of the three sections for a total of nine (9) teams will earn an automatic bid to the state tournament. The final seven (7) spots will be based on overall seeding. The bracket will be seeded according to overall seeding of the 16 teams.

The tournament will consist of four rounds and will be single elimination

Division IV Boys (12 team bracket): The top three (3) seeded teams from each of the three sections for a total of nine (9) teams will earn an automatic bid to the state tournament. The final three (3) spots will be based on overall seeding. The bracket will be seeded according to overall seeding of the 12 teams.

- Teams seeded #1 to #4 will get a first round bye
- The tournament will consist of four rounds and will be single elimination

Division IV Girls (8 team bracket): The top two (2) seeded teams from each of the three sections for a total of six (6) teams will earn an automatic bid to the state tournament. The final two (2) spots will be based on overall seeding. The bracket will be seeded according to overall seeding of the 8 teams.

• The tournament will consist of three rounds and will be single elimination

### Softball:

Division I & II (24 team brackets): The top four (4) seeded teams from each of the three sections for a total of 12 teams will earn an automatic bid to the state tournament. The final 12 spots will be based on overall seeding. The bracket will be seeded according to overall seeding of the 24 teams.

- Teams seeded #1 to #8 will get a first round bye
- The first two rounds of the tournament will be single elimination to get to the final eight (8) teams
- The final eight (8) teams will then play a double elimination tournament
- There will be only one game for the championship



2012-2013

Division III & IV (24 team bracket): The top four (4) seeded teams from each of the three sections for a total of 12 teams will earn an automatic bid to the state tournament. The final 12 spots will be based on overall seeding. The bracket will be seeded according to overall seeding of the 24 teams.

- Teams seeded #1 to #8 will get a first round bye
- The tournament will consist of five rounds and will be single elimination

#### **Tennis (Boys & Girls):**

Division I, II, & III (16 team bracket): The top three (3) seeded teams from each of the three sections for a total of nine (9) teams will earn an automatic bid to the state tournament. The final seven (7) spots will be based on overall seeding. The bracket will be seeded according to overall seeding of the 16 teams.

• The tournament will consist of four rounds and will be single elimination

## Volleyball (Boys):

Division I (24 team bracket): The top four (4) seeded teams from each of the three sections for a total of 12 teams will earn an automatic bid to the state tournament. The final 12 spots will be based on overall seeding. The bracket will be seeded according to overall seeding of the 24 teams.

- Teams seeded #1 to #8 will get a first round bye
- The tournament will consist of five rounds and will be single elimination

#### **Volleyball (Girls):**

Division I, II, III, IV, & V (16 team bracket): The top three (3) seeded teams from each of the three sections for a total of nine (9) teams will earn an automatic bid to the state tournament. The final seven (7) spots will be based on overall seeding. The bracket will be seeded according to overall seeding of the 16 teams.

• The tournament will consist of four rounds and will be single elimination