



Power Ratings Explanation

The power ratings is based on goal differentials for all games for all teams within the division. The difference in power ratings between two teams represents the average goal margin of victory if the two teams played on a neutral field. That difference can also be interpreted as the point spread or goal spread.

SOLVING POWER RATINGS BASED ON GAME SCORES

$$\sum_{i=1}^n \sum_{j=1}^m (PR_i - PR_j) = \sum_{i=1}^n \sum_{j=1}^m (score_i - score_j) \mp hfa$$

- n = number of teams (75)
- m = number of games for $team_n$
- PR = power rating
- $i = team_i$
- $j = game_j$
- $score$ = game score
- hfa = home field advantage (~1.5 goals)
- $(PR_i - PR_j)$ = difference in power ratings

We solve 75 simultaneous equations for 75 unknown power ratings by an iterative process.

The solution to these equations is numerically solved on a computer and requires hundreds of iterations and is dictated strictly by the game scores and home field advantage. It is equivalent to solving 75 algebraic equations simultaneously for the unknown variable 75 power ratings. There is a lacrosse seven goal limit on goal differentials and a 14 point limit for college football.