

NOTE: All of the following text was copied verbatim from basketball-reference.com.

Calculating Win Shares

What is a Win Share?

1. One win is equivalent to one Win Share.
2. A basketball team that wins 50 games will have about 50 Win Shares, give or take.
3. A player can have negative Win Shares if they play so poorly they hurt their team's chances of winning.

Crediting Offensive Win Shares to Players

A. 1977-78 to present NBA

Offensive Win Shares are credited to players based on Dean Oliver's points produced and offensive possessions. The formulas are quite detailed, so I would point you to Oliver's book [Basketball on Paper](#) for complete details. The process for crediting Offensive Win Shares is outlined below (using [LeBron James](#) of the [2008-09 Cleveland Cavaliers](#) as an example):

1. Calculate points produced for each player. In 2008-09, James had an estimated 2345.9 points produced.
2. Calculate offensive possessions for each player. James had an estimated 1928.1 offensive possessions in 2008-09.
3. Calculate marginal offense for each player. Marginal offense is equal to $(\text{points produced}) - 0.92 * (\text{league points per possession}) * (\text{offensive possessions})$. For James this is $2345.9 - 0.92 * 1.083 * 1928.1 = 424.8$. Note that this formula may produce a negative result for some players.
4. Calculate marginal points per win. Marginal points per win reduces to $0.32 * (\text{league points per game}) * ((\text{team pace}) / (\text{league pace}))$. For the 2008-09 Cavaliers this is $0.32 * 100.0 * (88.7 / 91.7) = 30.95$.
5. Credit Offensive Win Shares to the players. Offensive Win Shares are credited using the following formula: $(\text{marginal offense}) / (\text{marginal points per win})$. James gets credit for $424.8 / 30.95 = 13.73$ Offensive Win Shares.

Crediting Defensive Win Shares to Players

A. 1973-74 to present NBA

Crediting Defensive Win Shares to players is based on Dean Oliver's Defensive Rating. Defensive Rating is an estimate of the player's points allowed per 100 defensive possessions (please see Oliver's book for further details). Here is a description of the process (once again using [LeBron James](#) in 2008-09 as an example):

1. Calculate the Defensive Rating for each player. James's Defensive Rating in 2008-09 was 99.1.
2. Calculate marginal defense for each player. Marginal defense is equal to $(\text{player minutes played} / \text{team minutes played}) * (\text{team defensive possessions}) * (1.08 * (\text{league points per possession}) - ((\text{Defensive Rating}) / 100))$. For James this is $(3054 / 19780) * 7341 * ((1.08 * 1.083) - (99.1 / 100)) = 202.5$. Note that this formula may produce a negative result for some players.

3. Calculate marginal points per win. Marginal points per win reduces to $0.32 * (\text{league points per game}) * ((\text{team pace}) / (\text{league pace}))$. For the 2008-09 Cavaliers this is $0.32 * 100.0 * (88.7 / 91.7) = 30.95$.
4. Credit Defensive Win Shares to the players. Defensive Win Shares are credited using the following formula: $(\text{marginal defense}) / (\text{marginal points per win})$. James gets credit for $202.5 / 30.95 = 6.54$ Defensive Win Shares.

Putting It All Together

The final step of the process is to add Offensive Win Shares to Defensive Win Shares. In our examples, [LeBron James](#) total in 2008-09 is $13.73 + 6.54 = 20.27$ Win Shares and [Oscar Robertson](#) total in 1964-65 is $14.27 + 2.69 = 16.96$ Win Shares.