



# HOLLINGER ASSIST RATIO

## BREAKDOWN

We know there are many ways a player can contribute to a win outside of just scoring points. The ability to set up a teammate to score a basket is key to a successful outcome, this is where the assist comes in. When a player creates an assist instead of taking a shot or having a turnover, they're setting the precedent for teamwork over individual stats. Who is John Hollinger? A former ESPN Basketball analyst and writer, Hollinger created the assist ratio in attempt to better evaluate a player's passing and decision-making skills. The Hollinger Assist Ratio (HAR) attempts to calculate the percentage of a player's offensive possessions that result in an assist. Below is the equation for HAR.

$$\left( \frac{\text{AST}}{(\text{FGA} + (0.44 \cdot \text{FTA}) + \text{AST} + \text{TO})} \right) \cdot 100$$

**AST:** number of times a player passes the basketball to a teammate, and the teammate scores a basket  
**FGA:** total number of field goals shot (includes both misses and makes)  
**FTA:** total number of free-throws shot (includes both misses and makes)  
**TO:** when a player loses possession of the basketball to the opposing team

The numerator is the simple part of the equation, it is the total number of assists a player creates in an entire game. The denominator may look familiar if you participated in last month's activity. The denominator attempts to calculate the total number of possessions a player is involved in. We hypothesize that a possession can end in four ways: when a field goal is attempted, a free throw is attempted, an assist is made, or when there is a turnover to give the opponent possession of the basketball. Since the box score does not count the number of possessions a player is involved in, this is the best way to estimate total number of possessions. Once we divide the numerator by the denominator we get a quotient. To transform the quotient from a decimal to a percentage we need to multiply it by 100.

*Below is part of a box score from the Thunder's win over the Atlanta Hawks on Oct. 7, 2018.*

| PLAYER          | FGA | FTA | AST | TO |
|-----------------|-----|-----|-----|----|
| Dennis Schröder | 14  | 2   | 6   | 2  |
| Raymond Felton  | 7   | 2   | 3   | 0  |
| Alex Abrines    | 6   | 4   | 2   | 0  |

Dennis Schröder had a HAR of 26.2%, Raymond Felton had a HAR of 27.6%, and Alex Abrines had a HAR of 20.5%.



# HOLLINGER ASSIST RATIO

## LET'S PRACTICE

Let's calculate HAR on our own. Complete the table below by calculating each player's HAR, when simplifying, don't forget to round to the nearest tenth, or the first number to the right of the decimal. Once you've completed the table, answer the questions below.

$$\left( \frac{\text{AST}}{(\text{FGA} + (0.44 \cdot \text{FTA}) + \text{AST} + \text{TO})} \right) \cdot 100$$

|          | FGA | FTA | AST | TO | HAR |
|----------|-----|-----|-----|----|-----|
| Player A | 6   | 2   | 4   | 1  |     |
| Player B | 18  | 3   | 7   | 6  |     |
| Player C | 8   | 5   | 5   | 1  |     |

1. According to the box score, Player B had the greatest number of assists, does this mean they had the highest HAR? Please explain your answer.

