



GAME SCORE

BREAKDOWN

It's time for the last StatLab activity for the 2017-2018 season, it's time to put together everything we've learned this season to calculate Game Score (GmSc). Game Score is a statistic that attempts to give a total perspective on a player's statistical performance throughout an entire basketball game. This mean it looks at both offensive and defensive performance and everything in between. It takes every statistic found in a typical box-score. A box-score in basketball is a statistical summary of a game, it includes individual player data and overall team data. Solving for Game Score requires the following variables found in the box-score.

Game Score was created by John Hollinger to give a rough measure of a player's productivity for a single game. A Game Score of 40 would indicate that the player had a fantastic game, while a Game Score of 10 would reflect an average performance by a player.

Below is the equation for Game Score:

$$\text{GmSc} = \text{PTS} + (\text{FGM} \cdot 0.4) + (\text{FGA} \cdot -0.7) + ((\text{FTA} - \text{FTM}) \cdot -0.4) + (\text{ORB} \cdot 0.7) + (\text{DRB} \cdot 0.3) + \text{STL} + (\text{AST} \cdot 0.7) + (\text{BLK} \cdot 0.7) + (\text{PF} \cdot -0.4) - \text{TO}$$

- PTS:** number of points scored (including 2pt, 3pt, and free throws)
- FGA:** total number of field goals attempted, misses and makes (does not include free throws)
- FGM:** total number of field goals made (does not include free throws)
- FTA:** total number of free throws attempted
- FTM:** total number of free throws made
- ORB:** number of rebounds a player collects during their offensive possession
- DRB:** number of rebounds a player collects during their defensive possession
- STL:** number of times a player forces a turnover from an opposing player
- AST:** number of times a player passes the basketball to a teammate, and the teammate scores a basket
- BLK:** number of times a player deflects a shot attempt from an opposing player
- PF:** number of times a player has illegal contact with an opposing player
- TO:** number of times a player loses possession of the basketball to the opposing team

Below is the box score for Paul George, Steven Adams, and Russell Westbrook in the Thunder's win over the New Orleans Pelicans on November 2nd, 2019.

	PTS	FGM	FGA	FTA	FTM	ORB	DRB	STL	AST	BLK	PF	TO
PLAYER A	23	8	14	5	4	1	7	0	4	1	0	1
PLAYER B	16	5	9	2	2	0	4	1	0	0	2	0
PLAYER C	17	5	10	4	4	2	3	0	0	1	0	1

Player A had a Game Score of 21.3, Player B was 13.1, and Player C ended with a 14.0.



OFFENSIVE EFFICIENCY

LET'S PRACTICE

Now it's time to practice calculating Game Score on our own. Below is a box-score for two players, calculate their Game Score. 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 calculations, answer the questions below.

	PTS	FGM	FGA	FTA	FTM	ORB	DRB	STL	AST	BLK	PF	TO
PLAYER A	33	12	17	3	3	0	4	0	6	0	2	5
PLAYER B	24	8	21	11	7	2	9	1	5	0	1	7

$$\text{GmSc} = \text{PTS} + (\text{FGM} \cdot 0.4) + (\text{FGA} \cdot -0.7) + ((\text{FTA} - \text{FTM}) \cdot -0.4) + (\text{ORB} \cdot 0.7) + (\text{DRB} \cdot 0.3) + \text{STL} + (\text{AST} \cdot 0.7) + (\text{BLK} \cdot 0.7) + (\text{PF} \cdot -0.4) - \text{TO}$$

Player A Game Score:

Player B Game Score:

1. Which player had the higher Game Score? Which column of the box-score do you think contributed to having the higher Game Score?

