# NBA Salary Data 2019:

## Mean or Median?

## Background

A measure of central tendency is a single value that attempts to describe the central position within that set of data.

The mean (average) of a data set is found by adding all numbers in the data set and then dividing by the number of values in the set. The median is the middle value when a data set is ordered from least to greatest.

In some situations it may be preferable to describe a dataset with a mean. In other situations the median might be more informative. Explore the differences between mean and median in this activity using NBA salary data.

## Dataset

These data were found at Basketball-Reference.com

The dataset contains information on the salaries for 476 professional basketball players signed to NBA contracts in the 2019-2020 season. Each row in the dataset is an individual player and each column is a different variable.

**Variables:**

**Salary Rank**- This numeric variable is the ranking of a player's 2019-2020 salary from highest paid (1) to lowest paid (476).

**Player-** This info variable is the name of the player. This is just information and will not be used in a graph or analysis.

**Team-** This categorical variable has values that are the  three letter abbreviation for the player's 2019 team city.

**Salary**- This numeric variable iis the amount in millions ($) that the player was scheduled to be paid for the 2019-2020 season.

## Activity

**You will need to make two graphs in order to complete this activity. Click this link to see a short tutorial on how to graph in DataClassroom.**

1) Try graphing *Salary* on the Y-axis of a dot plot. Do not place any variable on the X-axis. Add descriptive stats showing both the mean (dot and error) and the median (box and whiskers) by checking the box that appears in the control panel to the right of your graph. Use the camera 📷 button to copy and paste your graph in with your answer.

How do the mean and median salaries compare to each other? Is mean or median a better measure of salary in the NBA and why? Explain your answer.

2) What is the relationship between Salary Rank and Salary? If a player moves up in the ranks, how can he expect his salary to increase? Which player would you expect to see a bigger increase in salary on his next contract, a player that improves from being the 400th best player in the league to being in the top 100 players, or a top 100 player that improves to a top 10 player?

Hint: Graph *Salary* on Y and *Salary Rank* on X.