



Steroids in the MLB

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Summary

- ▶ Correlation between known steroid users and non-steroid users.
- ▶ Span of 10 years.
- ▶ Greatest MLB players of all time.
- ▶ Hits/ RBI/ Runs/ HR/ Pitching
- ▶ Finding Slope

Data and Background

- ▶ Sean Lahman Award Winning database journalist
- ▶ Author
- ▶ Creator of Sean Lahman Database
- ▶ Largest free to use collection of MLB stats
- ▶ Baseballreference.com

Approach

- ▶ Most Well known steroid users in MLB history
- ▶ Mitchell Report

Implicated in the BALCO Scandal

- ▶ Marvin Benard
- ▶ Berry Bonds
- ▶ Bobby Estalella
- ▶ Jason Giambi
- ▶ Armando Rios
- ▶ Benito Santiago
- ▶ Gary Sheffield
- ▶ Randy Velarde.

Identified as clients of Kirk Radomski

- ▶ Chad Allen, Mike Bell, Gary Bennett, Larry Bigbie, Kevin Brown, Mark Carreon, Jason Christiansen, Howie Clark,
- ▶ Roger Clemens, Jack Cust, Brendan Donnelly, Chris Donnels, Lenny Dykstra, Matt Franco, Ryan Franklin
- ▶ Eric Gagne, Jason Grimsley, Jerry Hairston, Jr., Matt Herges, Phil Hiatt, Glenallen Hill
- ▶ Todd Hundley, David Justice, Chuck Knoblauch, Tim Laker, Mike Lansing, Paul Lo Duca, Nook Logan
- ▶ Josias Manzanillo, Cody McKay, Kent Mercker, Bart Miadich, Hal Morris, Denny Neagle, Jim Parque,
- ▶ Andy Pettitte, Adam Piatt, Todd Pratt, Stephen Randolph, Adam Riggs, Brian Roberts, F.P. Santangelo,
- ▶ David Sequi, Mike Stanton, Miguel Tejada, Mo Vaughn, Ron Villone, Fernando Vina, Rondell White, Jeff Williams, Todd Williams, Kevin Young, Gregg Zaun.

Mentioned in Connection to Signature Pharmacy

- ▶ Rick Ankiel, David Bell, Paul Byrd
- ▶ Jose Canseco, Jay Gibbons, Troy Glaus, Jason Grimsley
- ▶ Jose Guillen, Jerry Hairston, Jr., Derren Holmes
- ▶ Gary Matthews, John Rocker
- ▶ Scott Schoenweis, Ismael Valdez
- ▶ Matt Williams, Steve Woodard.

Second Data Set

- ▶ Babe Ruth, Willie Mays, Barry Bonds, Ted Williams
- ▶ Hank Aaron, Ty Cobb, Roger Clemens, Stan Musial
- ▶ Mickey Mantle, Honus Wager, Lou Gehrig, Walter Johnson
- ▶ Greg Maddux, Rickey Henderson, Rogers Hornsby, Mike Schmidt,
- ▶ Cy Young, Joe Morgan, Joe DiMaggio, Frank Robinson

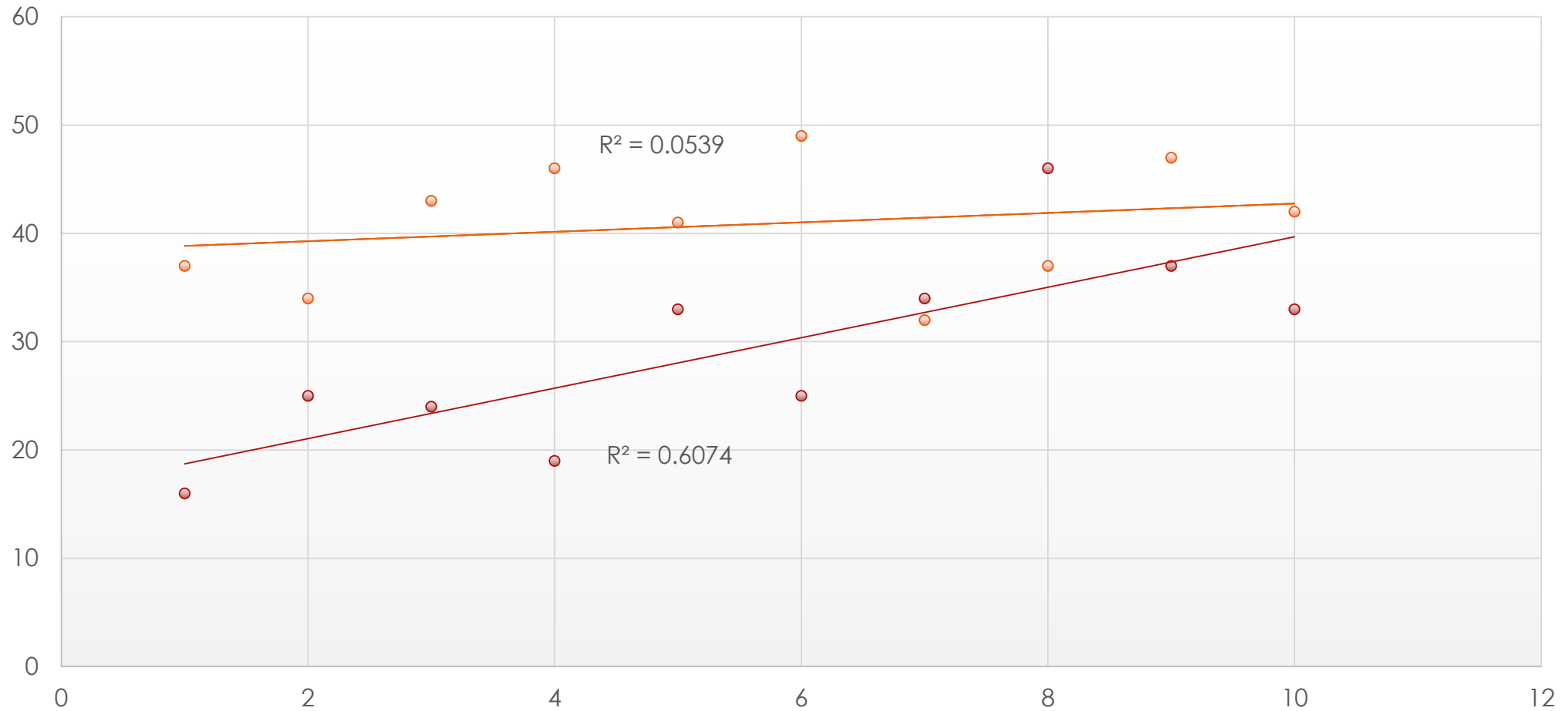
Process of analyzation

- ▶ Lahman Database + Baseballreference.com
- ▶ Graphing iconic stats
- ▶ Comparing stats of steroid and non steroid users in MLB
- ▶ First 10 years of play

Important Mentions

- ▶ Major increased stats after first 2 years
- ▶ Major decrease/ increased stats throughout
- ▶ Similar stats compared to number of games
- ▶ 3 comparable stats
- ▶ 1st Year
- ▶ Similar N.O.G / highest stat per game
- ▶ 10th year

Barry Bonds (Red)/ Albert Pujols (Orange)HR Scored/Allowed



Year 1 : BB – 16 HR , AP – 37 HR

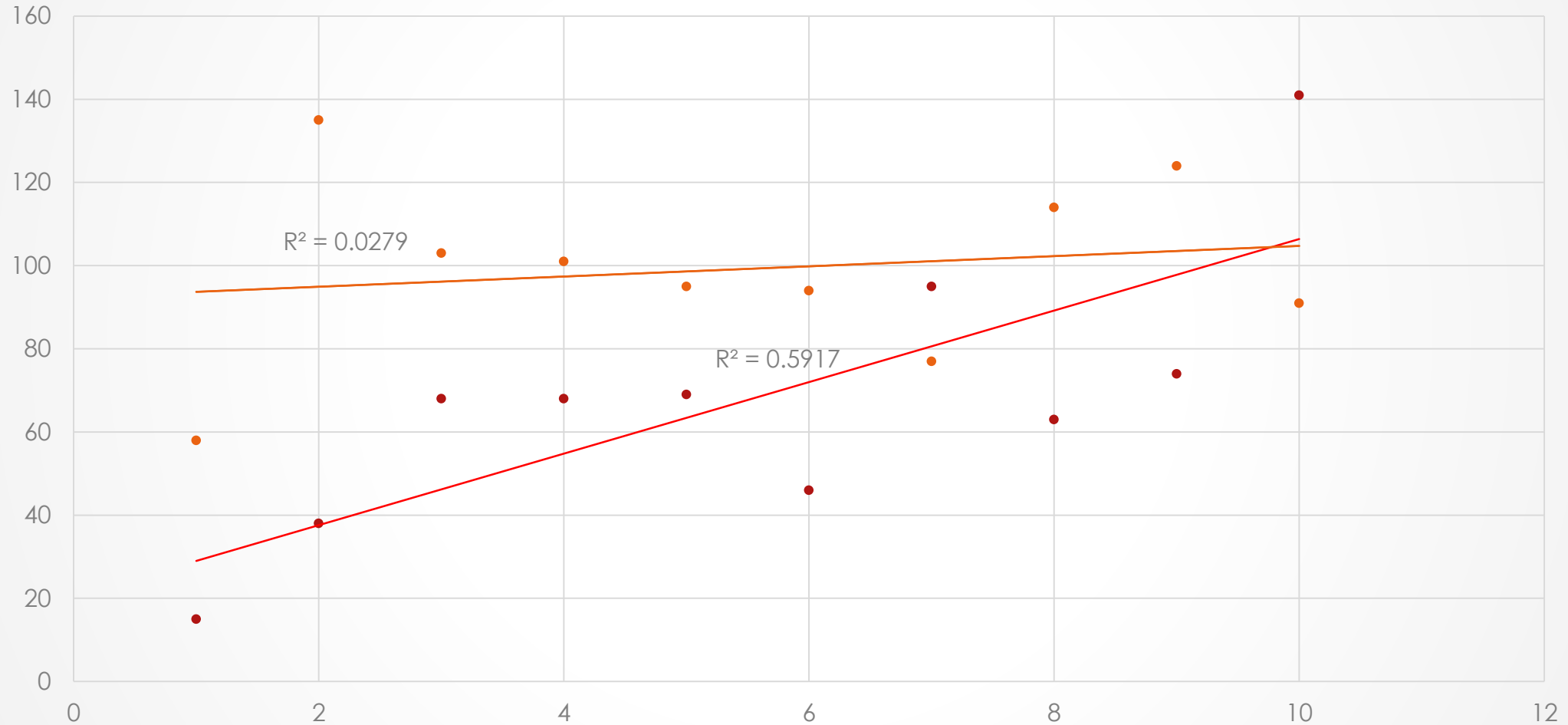
Games : BB - 158 G, 42 HR , AP 158 G, 32 HR

Year 10 : BB – 158 G , 42 HR , AP – 147 G , 37 HR

Highest : BB – 158 G , 42 HR , AP – 167 G , 47 HR

Slope: BB – 0.6074 + AP – 0.0539 +

Bret Boone (Red) / Eddie Mathews (Orange) RBI's



Year 1 : BB – 15 RBI , EM – 58 RBI

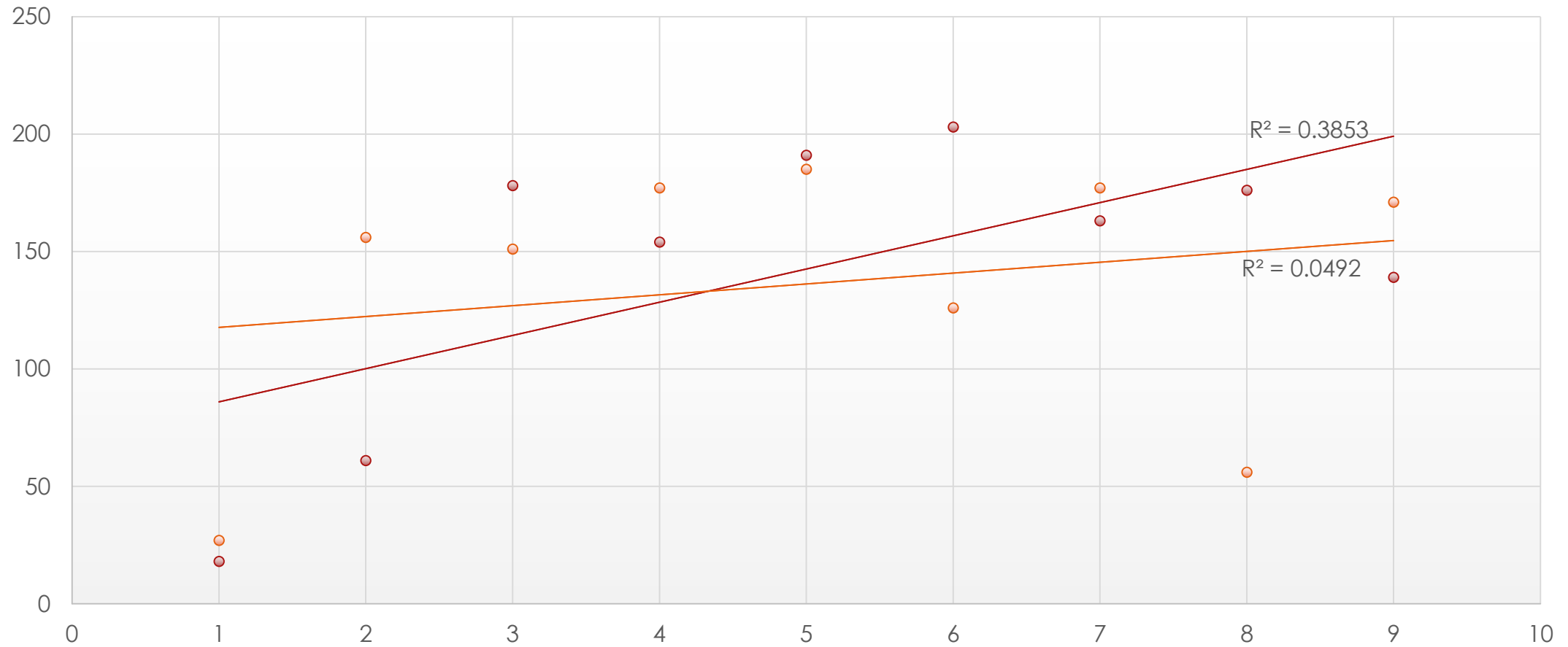
Games : BB - 157 G, 95 RBI , EM 157 G, RBI

Year 10 : BB – 158 G , 141 RBI , EM – 152 G , 91 RBI

Highest : BB – 158 G , 141 RBI , EM – 157 G , 135 RBI

Slope: BB – 0.60279 + EM – 0.05917 +

Rafael Palmeiro (Red) / Joey Votto (Orange) Hits Scored/ Allowed



Year 1 : RP – 18 Hits , JV – 27 Hits

Games : RP - 152 G, 178Hits , JV 151 G, Hits

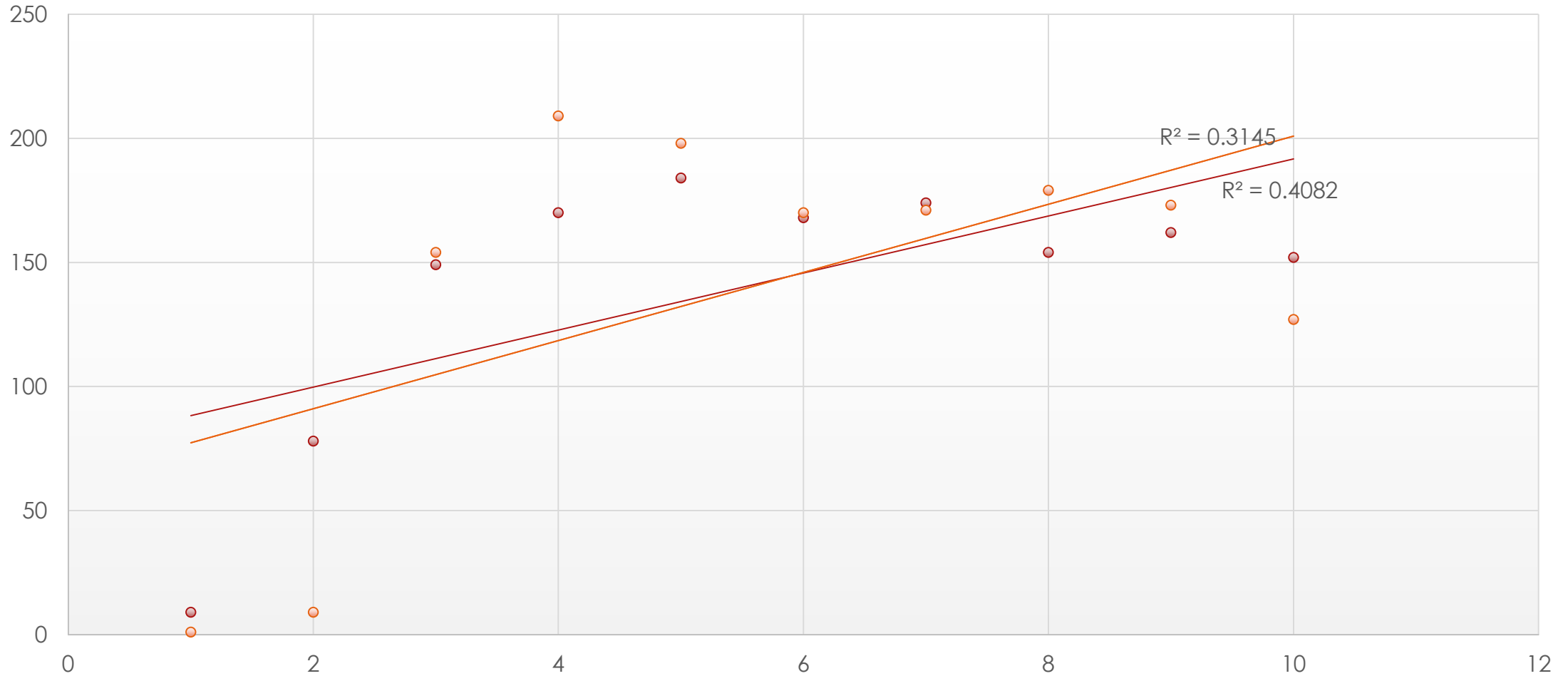
Year 10 : RP – 143 G , 172 Hits , JV – 152 G , 91 Hits

Highest : RP – 154 G , 191 Hits , JV – 161 G , 185 Hits

Slope: RP – 0.3853 + , JV – 0.0492 +

(Joey Votto played only 9 games)

Manny Ramirez (Red)/ Alfonso Soriano (Orange) Hits Scored/ Allowed



Year 1 : MR – 9 Hits , AS – 1 Hits

Games : MR - 147 G, 174 Hits , AS 145 G, 170 Hits

Year 10 : MR – 120 G , 152 Hits , AS – 109 G , 127 Hits

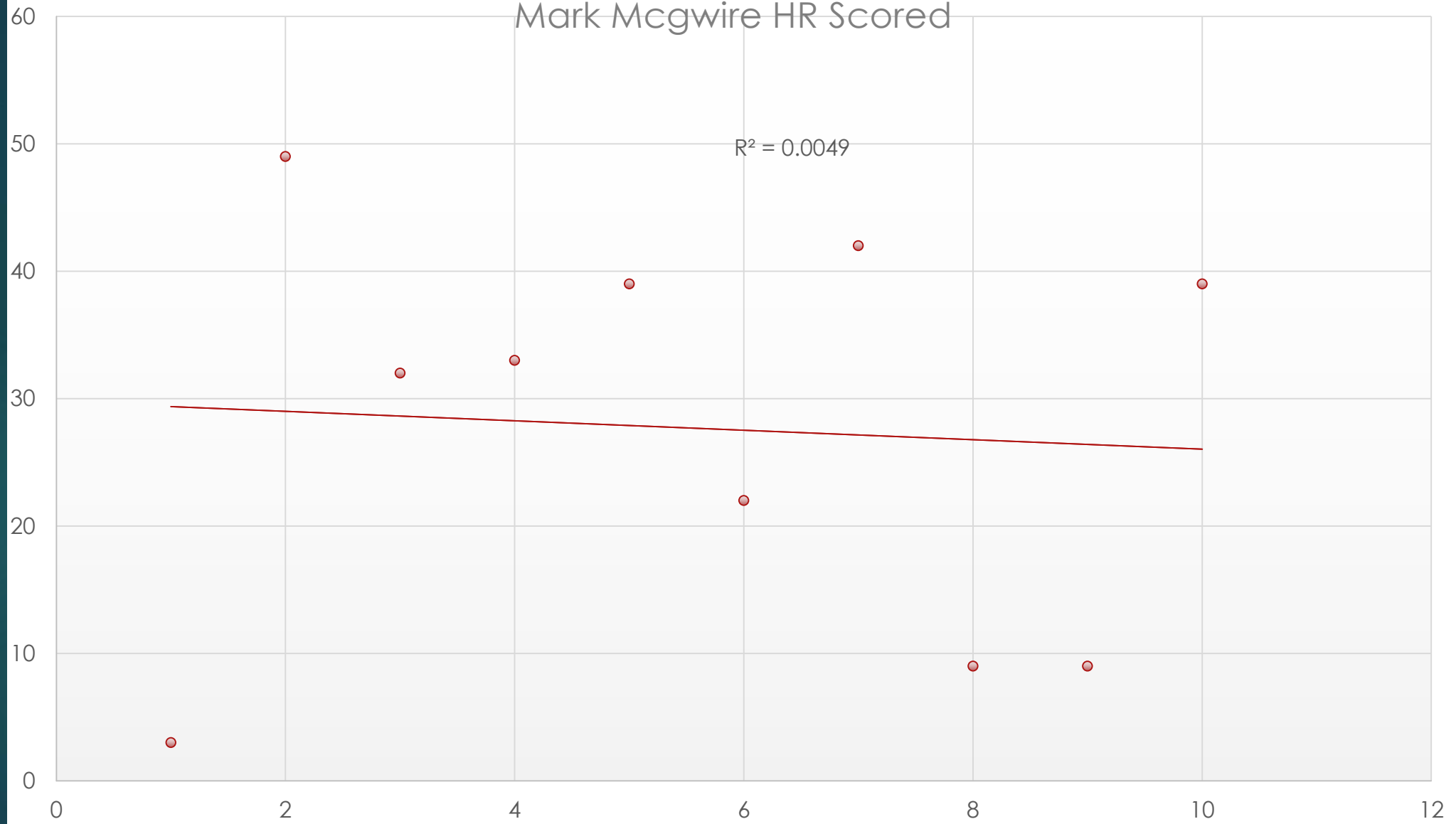
Highest : MR – 154 G , 191 Hits , AS – 156 G , 209 Hits

Slope: MR – 0.4082 + , AS – 0.3145 +

Trends and Causes

- ▶ Similar sets between players
- ▶ New improvement to nutrition and supplements
- ▶ New Technology
- ▶ Age
- ▶ New workout methods

Mark McGwire HR Scored



Conclusion

Sources

- ▶ <http://www.baseball-reference.com/>
- ▶ http://espn.go.com/mlb/feature/video/_/id/8652210/espn-hall-100-ranking-all-greatest-mlb-players
- ▶ <http://mlb.mlb.com/mlb/news/mitchell/>
- ▶ <http://www.seanlahman.com/baseball-archive/statistics/>

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