

**METHODOLOGY**


**CALCULATING THE LINEAR REGRESSION EQUATION**



**Scenario:** The following data set includes the WHIP ratio and the number of wins for American League teams during the 2013 MLB season. WHIP corresponds to the number of walks plus hits per inning pitched. The higher a team’s WHIP, the worse the performance of the pitchers. What is the likely WHIP ratio for a team that had only 50 wins during the season?

Team	WHIP	Wins	Team	WHIP	Wins
Baltimore	1.32	85	Minnesota	1.41	66
Boston	1.30	97	NY Yankees	1.31	85
Chicago Sox	1.33	63	Oakland	1.22	96
Cleveland	1.33	92	Seattle	1.33	71
Detroit	1.25	93	Tampa Bay	1.23	92
Houston	1.49	51	Texas	1.28	91
Kansas City	1.27	86	Toronto	1.34	74
LA Angels	1.38	78			

Step	Make it Work!
1. Define $x$ and $y$	
2. Plot the points	
3. Calculate the statistics	
4. Calculate the z-scores	
5. Multiply the z-scores	

Step	 Make it Work!
6. Calculate $r$	
7. Find the strength of correlation  8. Find the slope	
9. Find the y-intercept	
10. Find the linear regression equation	
11. Validate	