My talk will introduce a new extension to my prior research on the concept of predicting a team’s actual winning percentage (Y = W%) using X = RS-RA in baseball and (PS-PA) in the NBA and NFL. The first major result was Bill James’ Pythagorean Formula of Baseball which states W% = (RS)2 / ((RS)2 + (RA)2). Other researchers found the exponents 2.37 and 13.91 work for the NFL and NBA. Using linear regression I developed the Linear Formula for Baseball W% = .000673*(RS –RA) +1/2. Wanting to extend my linear formula to the other professional leagues led me to create a new General Linear Theorem. As a corollary to my Linear Theorem, new linear equations for the MLB, NBA, and NFL were established. I showed these three equations were accurate for the MLB since 1901 and for the other leagues after their mergers. Using prediction intervals from these linear equations, at any point in a season, we can identify under-performing and over-performing teams. Finally, my newest theorem shows, that after normalizing both the X and Y above, the slopes of the new linear equations for any league for any year are the correlation coefficients from the original linear equations for X and Y. The results of this new theorem are then used to examine which sports league has the most parity. (Received July 25, 2017)