

Name: _____

Lecture 38, class activity. Paradoxes.

In basketball, there are two ways to score from the field: one can score two points by making a basket that is “close” and three points by making a basket that is “far”. Here we have some statistics from the NBA, involving the players Michael Jordan and LeBron James through the first 11 full seasons of their careers (MJ 1985–1997 (with one year off), LJ 2004–2015):

Lebron	Made	Attempted	Success	Jordan	Made	Attempted	Success
2 pt	7694	14372	.535	2 pt	9556	18249	.524
3 pt	1256	3671	.342	3 pt	525	1544	.340
overall	8950	18043	.496	overall	10081	19793	.509

The way to read these is as follows: the first row represents the number of 2-point shots; first we put the number the player made, then the number they attempted, and then the ratio of these two is the success. For example, Lebron’s 2-point success ratio is

$$\frac{7694}{14372} = .525\dots$$

accurate to three decimal places. The second line is for 3-point shots, and finally the last line is all shots, so for example $8950 = 7694 + 1256$, etc.

When we look at these numbers, we see a shocking fact:

1. Lebron is more accurate than Jordan when taking a 2-point shot,
2. **and** Lebron is more accurate than Jordan when taking a 3-point shot,
3. **but** Jordan is more accurate than Lebron overall.

Explain this... if you can