## NEW ECONOMICS SCHOOL MA ENERGY ECONOMICS, 2018 - 2020

## Data Analysis in Python Home Assignment # 1

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## PROBLEM 1.

I used a database from http://www.football-data.co.uk/data.php - football statistics and book-maker odds for English Premier League 2017/18.

(A)

Question: Matches, where Manchester United won with 3 goals difference and both teams earned few yellow cards

Answer: 4: Swansea, Everton, Crystal Palace, Newcastle

(B)

**Question:** Probability, that there would be a red card in a match with Mike Dean as a referee **Answer:** 0,12

(C)

Question: Games, when bookmakers evaluated two teams as nearly equal (were unsure, who would win - odds for both teams are higher that 2,7)

Answer: 10

(D)

**Question:** Top 3 Home Teams by share of shots, which were on target, and by probability of a goal after a shot on target

Answer: Manchester City, Arsenal, Liverpool

Answer: Everton, Manchester United, Manchester City

(E)

Question: Number of cases of possible arbitrage across 7 bookmakers

Answer: 265

Avkhimovich Nikolai 1