Social Data Science: Machine Learning & Econometrics

Exercise class 8

April 20, 2020

Todays quick warmup

A Pythagorean triple is a tuple $(a, b, c) \in \mathbb{N}^3$ such that $a^2 + b^2 = c^2$. For example the triple $(3, 4, 5)$ is a Pythagorean triple.

$\mathbf{Q}_1$: show that if (a, b, c) is a Pythagorean triple, so is (qa, qb, qc), $q \in \mathbb{N}$.

$\mathbf{Q}_2$: Plot in (a, b) space all Pythagorean triples with $a, b < 10.000$.