Lec 9/17

Monday, September 17, 2018 14:23

Typical (in measure) binary number is normal

Typical (in topology) binary number is not normal.

the density of $\{(n,m) \in \mathbb{N}^2 : (n,m)=1\}$ is $\frac{6}{\pi^2}$.

Suggestion: do this w/ rectangles $F_n = I_n \times J_n$ (assuming $\min\{|I_n|, |J_n|\} \to \infty$).

an example of a Følner Sequence.

"larger & larger sets in a group over which you can average".

Reading for friday: up to "strange numbers" & p 114.

Problems for friday: 7 of the 21 review exercises.

Square-free numbers.

Surprise: $d(S) = \frac{6}{\pi^2} = \frac{1}{\sum_{n=1}^{\infty} \frac{1}{n^2}}$

density d is "additive".

Let $\quad \overline{d}_x(E) = \limsup$ ———

Examples:

(exercises:)