

Notes about Prime Constellations

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1 Basic Definitions

Definition 1. *A Constellation is a function: $\chi : \mathbb{N} \rightarrow \mathcal{P}(\mathbb{N})$*

$$\psi : \mathbb{N} \rightarrow \mathbb{N} \tag{1}$$

$$M_\chi^\psi(0) := \mathbb{N} \tag{2}$$

$$\begin{aligned} M_\chi^\psi(k) &:= M_\chi^\psi(k-1) \setminus \chi(\psi(k) \cdot (\mathbb{N} + 1)) \\ &= M_\chi^\psi(k-1) \setminus \left(M_\chi^\psi(k-1) \cap \chi(\psi(k) \cdot (\mathbb{N} + 1)) \right) \end{aligned} \tag{3}$$

2 Derivation

$$M_\chi^\psi(k-1) \cap \chi(\psi(k) \cdot (\mathbb{N} + 1)) \tag{4}$$

3 Results

Definition 2.

$$\Psi_\chi^\psi = \lim_{k \rightarrow \infty} M_\chi^\psi(k) \tag{5}$$

Lemma 1.

$$\mathbb{P} = \Psi_{id}^{\pi^{-1}} \tag{6}$$