Polynomial Identity Testing

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Brief Overview

1 Motivation

2 Arithmetic circuits

3 The Schwartz-Zippel lemma

4 Probabilistic algorithm for PIT

5 PIT $\in$ BPP

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Class BPP

$$BPP = \bigcup \{L \mid \text{there exists an expected polynomial time probabilistic TM that decides L with bounded error}\}$$

PIT ∈ BPP