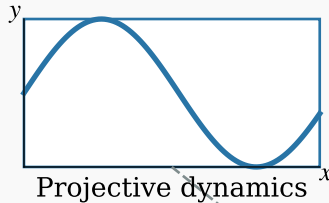


Complementary Solutions to Hermite's Problem

HAPD Algorithm

Non-subtractive approach

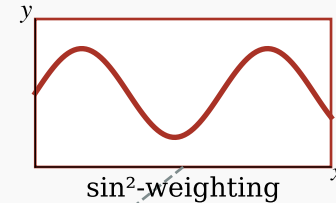
- Projective space \mathbb{P}^2
- Matrix-based approach
- Standard floor function



Modified \sin^2 Algorithm

Subtractive approach

- Complex plane analysis
- Transcendental terms
- Phase-preserving floor



complementary methods



Common Properties

- Periodic precisely for cubic irrationals
 - Handle complex conjugate roots