Complementary Solutions to Hermite's Problem

HAPD Algorithm

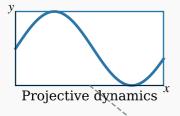
Non-subtractive approach

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

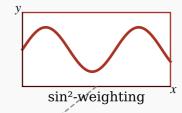
Modified sin² Algorithm

Subtractive approach

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



complementary methods



Common Properties

Periodic precisely for cubic irrationals

• Handle complex conjugate roots