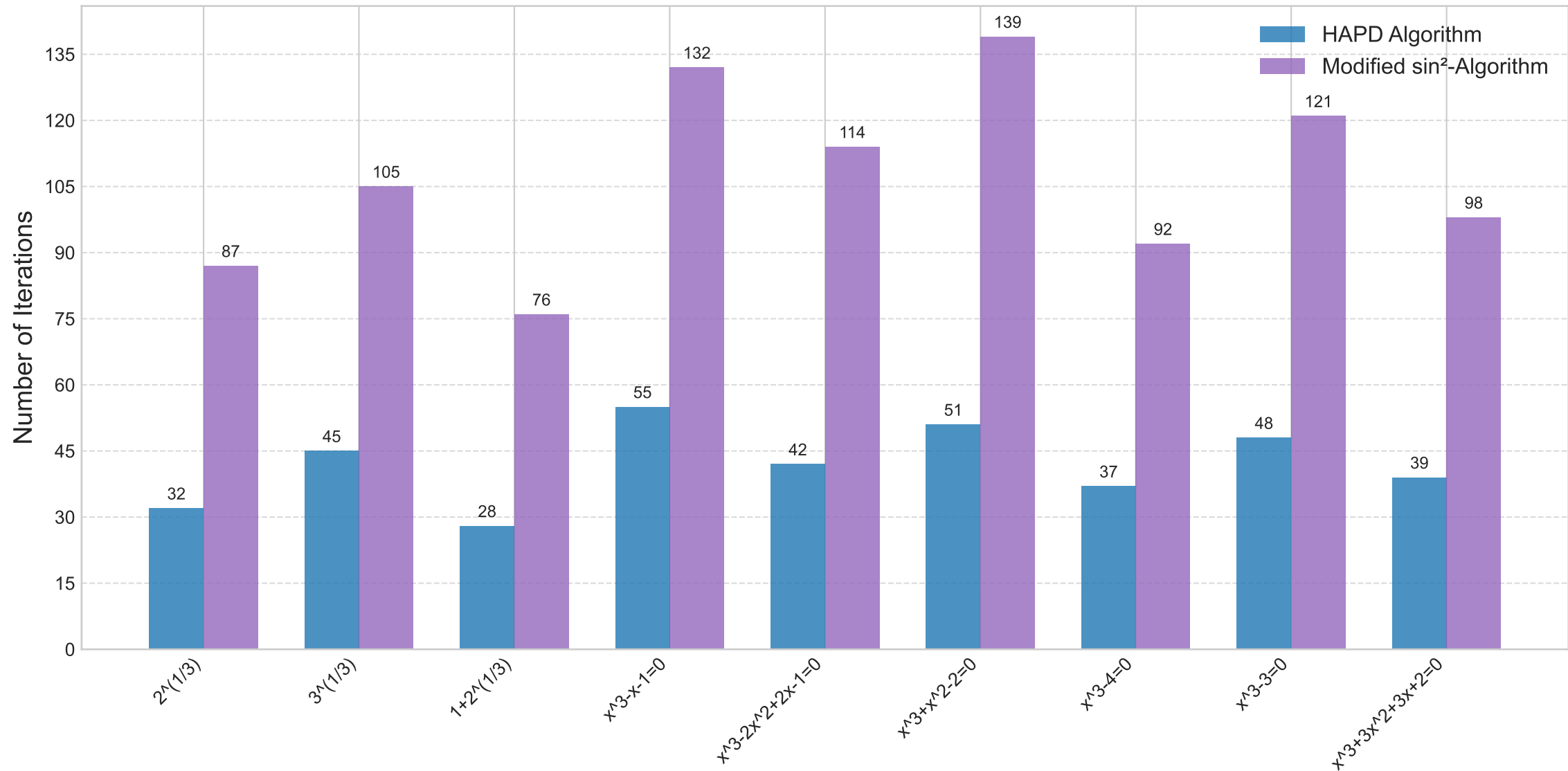


Convergence Analysis: Iterations Required to Detect Periodicity



The HAPD algorithm generally requires fewer iterations to detect periodicity than the modified sin²-algorithm. This efficiency advantage is consistent across different cubic irrationals, including those with complex conjugate roots.