

1. Comparison

We have implemented a prototype implementation in Maple 17 of Algorithms ?? and ?. In this section, we compare the performance of these where the second column indicates the CPU time in hours (h), minutes (m) and seconds (s). The third column represents the amount of used memory in gigabytes. The symbol “–” indicates that the computation did not finish within 48 hours and we stopped it.

Our experiments show that the proposed strategy to compute a minimal basis for the syzygy module leads to dramatic decrease in the number of zero reductions.

Sendra	Dimension	time	memory	redz	poly
Alg ??	0	6s	0.38	2	4
Alg ??		13s	0.85	24	5

Conform1	Dimension	time	memory	redz	poly
Alg ??	0	19s	0.98	9	10
Alg ??		42s	2.65	102	15

Arnborg-Lazard	Dimension	time	memory	redz	poly
Alg ??	0	4m-10s	12.73	24	28
Alg ??		>48h	-	-	-

Noon	Dimension	time	memory	redz	poly
Alg ??	0	2h-7m-40s	196.4	15	7
Alg ??		8h-5m	2006.63	467	7