

APPENDIX: THE BASIS B

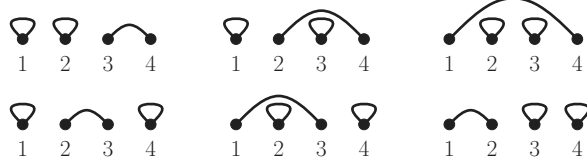
Below is the complete equivariant Gröbner basis of Theorem 3.1 of [1]. To distinguish the diagonal entries y_{ii} from the off-diagonal entries, we have denoted them a_i . We precede the polynomials by graphs representing their leading monomials; here the variable y_{ij} is depicted as an undirected edge between i and j . For larger indices, the edges have been given different shades; this is only to make the pictures more readable. Ideally, one would hope to prove Theorem 3.1 by hand by giving a bijection between the standard monomials relative to B and the known standard monomials relative to the Gröbner basis of [2], but we have not yet found such a bijection so far.

Largest index 3.



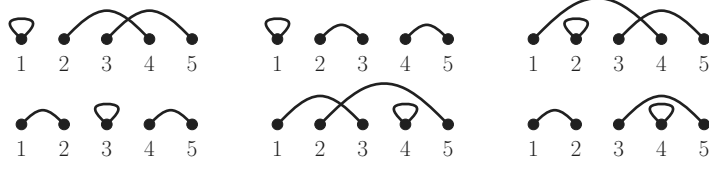
$$a_3 * a_2 * a_1 - a_3 * y_{21}^2 - a_2 * y_{31}^2 - a_1 * y_{32}^2 + 2 * y_{32} * y_{31} * y_{21}$$

Largest index 4.



$$\begin{aligned} & a_2 * a_1 * y_{43} - a_2 * y_{41} * y_{31} - a_1 * y_{42} * y_{32} - y_{43} * y_{21}^2 + y_{42} * y_{31} * y_{21} + y_{41} * y_{32} * y_{21} \\ & a_3 * a_1 * y_{42} - a_3 * y_{41} * y_{21} - a_1 * y_{43} * y_{32} + y_{43} * y_{31} * y_{21} - y_{42} * y_{31}^2 + y_{41} * y_{32} * y_{31} \\ & a_3 * a_2 * y_{41} - a_3 * y_{42} * y_{21} - a_2 * y_{43} * y_{31} + y_{43} * y_{32} * y_{21} + y_{42} * y_{32} * y_{31} - y_{41} * y_{32}^2 \\ & a_4 * a_1 * y_{32} - a_4 * y_{31} * y_{21} - a_1 * y_{43} * y_{42} + y_{43} * y_{41} * y_{21} + y_{42} * y_{41} * y_{31} - y_{41}^2 * y_{32} \\ & a_4 * a_2 * y_{31} - a_4 * y_{32} * y_{21} - a_2 * y_{43} * y_{41} + y_{43} * y_{42} * y_{21} - y_{42}^2 * y_{31} + y_{42} * y_{41} * y_{32} \\ & a_4 * a_3 * y_{21} - a_4 * y_{32} * y_{31} - a_3 * y_{42} * y_{41} - y_{43}^2 * y_{21} + y_{43} * y_{42} * y_{31} + y_{43} * y_{41} * y_{32} \end{aligned}$$

Largest index 5, degree 3.



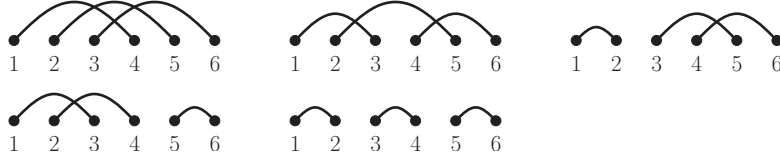
$$\begin{aligned}
& a_1 * y_{53} * y_{42} - a_1 * y_{52} * y_{43} - y_{53} * y_{41} * y_{21} + y_{52} * y_{41} * y_{31} + y_{51} * y_{43} * y_{21} - y_{51} * y_{42} * y_{31} \\
& a_1 * y_{54} * y_{32} - a_1 * y_{52} * y_{43} - y_{54} * y_{31} * y_{21} + y_{52} * y_{41} * y_{31} + y_{51} * y_{43} * y_{21} - y_{51} * y_{41} * y_{32} \\
& a_2 * y_{53} * y_{41} - a_2 * y_{51} * y_{43} - y_{53} * y_{42} * y_{21} + y_{52} * y_{43} * y_{21} - y_{52} * y_{41} * y_{32} + y_{51} * y_{42} * y_{32} \\
& a_2 * y_{54} * y_{31} - a_2 * y_{51} * y_{43} - y_{54} * y_{32} * y_{21} + y_{52} * y_{43} * y_{21} - y_{52} * y_{42} * y_{31} + y_{51} * y_{42} * y_{32} \\
& a_3 * y_{52} * y_{41} - a_3 * y_{51} * y_{42} + y_{53} * y_{42} * y_{31} - y_{53} * y_{41} * y_{32} - y_{52} * y_{43} * y_{31} + y_{51} * y_{43} * y_{32} \\
& a_3 * y_{54} * y_{21} - a_3 * y_{51} * y_{42} - y_{54} * y_{32} * y_{31} - y_{53} * y_{43} * y_{21} + y_{53} * y_{42} * y_{31} + y_{51} * y_{43} * y_{32} \\
& a_4 * y_{52} * y_{31} - a_4 * y_{51} * y_{32} - y_{54} * y_{42} * y_{31} + y_{54} * y_{41} * y_{32} - y_{52} * y_{43} * y_{41} + y_{51} * y_{43} * y_{42} \\
& a_4 * y_{53} * y_{21} - a_4 * y_{51} * y_{32} - y_{54} * y_{43} * y_{21} + y_{54} * y_{41} * y_{32} - y_{53} * y_{42} * y_{41} + y_{51} * y_{43} * y_{42} \\
& a_5 * y_{42} * y_{31} - a_5 * y_{41} * y_{32} - y_{54} * y_{52} * y_{31} + y_{54} * y_{51} * y_{32} + y_{53} * y_{52} * y_{41} - y_{53} * y_{51} * y_{42} \\
& a_5 * y_{43} * y_{21} - a_5 * y_{41} * y_{32} - y_{54} * y_{53} * y_{21} + y_{54} * y_{51} * y_{32} + y_{53} * y_{52} * y_{41} - y_{52} * y_{51} * y_{43}
\end{aligned}$$

Largest index 5, degree 5.



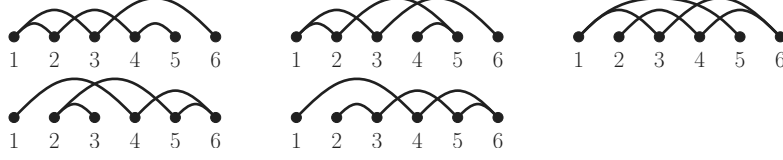
$$\begin{aligned}
& y_{54} * y_{53} * y_{42} * y_{31} * y_{21} - y_{54} * y_{53} * y_{41} * y_{32} * y_{21} - y_{54} * y_{52} * y_{43} * y_{31} * y_{21} \\
& + y_{54} * y_{52} * y_{41} * y_{32} * y_{31} + y_{54} * y_{51} * y_{43} * y_{32} * y_{21} - y_{54} * y_{51} * y_{42} * y_{32} * y_{31} \\
& + y_{53} * y_{52} * y_{43} * y_{41} * y_{21} - y_{53} * y_{52} * y_{42} * y_{41} * y_{31} - y_{53} * y_{51} * y_{43} * y_{42} * y_{21} \\
& + y_{53} * y_{51} * y_{42} * y_{41} * y_{32} + y_{52} * y_{51} * y_{43} * y_{42} * y_{31} - y_{52} * y_{51} * y_{43} * y_{41} * y_{32}
\end{aligned}$$

Largest index 6, degree 3.



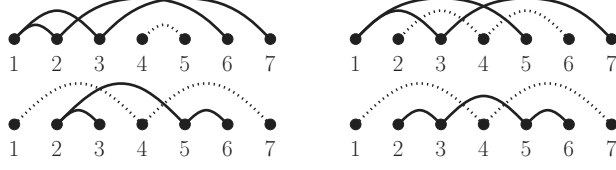
$$\begin{aligned}
& y_{63} * y_{52} * y_{41} - y_{63} * y_{51} * y_{42} - y_{62} * y_{53} * y_{41} + y_{62} * y_{51} * y_{43} + y_{61} * y_{53} * y_{42} - y_{61} * y_{52} * y_{43} \\
& y_{64} * y_{52} * y_{31} - y_{64} * y_{51} * y_{32} - y_{62} * y_{54} * y_{31} + y_{62} * y_{51} * y_{43} + y_{61} * y_{54} * y_{32} - y_{61} * y_{52} * y_{43} \\
& y_{64} * y_{53} * y_{21} - y_{64} * y_{51} * y_{32} - y_{63} * y_{54} * y_{21} + y_{63} * y_{51} * y_{42} + y_{61} * y_{54} * y_{32} - y_{61} * y_{53} * y_{42} \\
& y_{65} * y_{42} * y_{31} - y_{65} * y_{41} * y_{32} - y_{62} * y_{54} * y_{31} + y_{62} * y_{53} * y_{41} + y_{61} * y_{54} * y_{32} - y_{61} * y_{53} * y_{42} \\
& y_{65} * y_{43} * y_{21} - y_{65} * y_{41} * y_{32} - y_{63} * y_{54} * y_{21} + y_{63} * y_{51} * y_{42} + y_{62} * y_{53} * y_{41} - y_{62} * y_{51} * y_{43} \\
& + y_{61} * y_{54} * y_{32} - y_{61} * y_{53} * y_{42}
\end{aligned}$$

Largest index 6, degree 5.



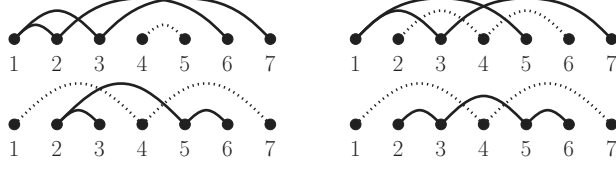
$$\begin{aligned}
& y_{63} * y_{54} * y_{42} * y_{31} * y_{21} - y_{63} * y_{54} * y_{41} * y_{32} * y_{21} - y_{63} * y_{51} * y_{42}^2 * y_{31} \\
& + y_{63} * y_{51} * y_{42} * y_{41} * y_{32} - y_{62} * y_{54} * y_{43} * y_{31} * y_{21} + y_{62} * y_{54} * y_{41} * y_{32} * y_{31} \\
& + y_{62} * y_{53} * y_{43} * y_{41} * y_{21} - y_{62} * y_{53} * y_{42} * y_{41} * y_{31} + y_{62} * y_{51} * y_{43} * y_{42} * y_{31} \\
& - y_{62} * y_{51} * y_{43} * y_{41} * y_{32} + y_{61} * y_{54} * y_{43} * y_{32} * y_{21} - y_{61} * y_{54} * y_{42} * y_{32} * y_{31} \\
& - y_{61} * y_{53} * y_{43} * y_{42} * y_{21} + y_{61} * y_{53} * y_{42}^2 * y_{31} \\
& y_{63} * y_{54} * y_{52} * y_{31} * y_{21} - y_{63} * y_{54} * y_{51} * y_{32} * y_{21} - y_{63} * y_{52} * y_{51} * y_{42} * y_{31} \\
& + y_{63} * y_{51}^2 * y_{42} * y_{32} - y_{62} * y_{54} * y_{53} * y_{31} * y_{21} + y_{62} * y_{54} * y_{51} * y_{32} * y_{31} \\
& + y_{62} * y_{53} * y_{51} * y_{43} * y_{21} - y_{62} * y_{51}^2 * y_{43} * y_{32} + y_{61} * y_{54} * y_{53} * y_{32} * y_{21} \\
& - y_{61} * y_{54} * y_{52} * y_{32} * y_{31} - y_{61} * y_{53} * y_{52} * y_{43} * y_{21} + y_{61} * y_{53} * y_{52} * y_{42} * y_{31} \\
& - y_{61} * y_{53} * y_{51} * y_{42} * y_{32} + y_{61} * y_{52} * y_{51} * y_{43} * y_{32} \\
& y_{64} * y_{63} * y_{51} * y_{42} * y_{31} - y_{64} * y_{63} * y_{51} * y_{41} * y_{32} + y_{64} * y_{62} * y_{53} * y_{41} * y_{31} \\
& - y_{64} * y_{62} * y_{51} * y_{43} * y_{31} - y_{64} * y_{61} * y_{53} * y_{42} * y_{31} + y_{64} * y_{61} * y_{51} * y_{43} * y_{32} \\
& - y_{63} * y_{62} * y_{54} * y_{41} * y_{31} + y_{63} * y_{62} * y_{51} * y_{43} * y_{41} + y_{63} * y_{61} * y_{54} * y_{41} * y_{32} \\
& - y_{63} * y_{61} * y_{51} * y_{43} * y_{42} + y_{62} * y_{61} * y_{54} * y_{43} * y_{31} - y_{62} * y_{61} * y_{53} * y_{43} * y_{41} \\
& - y_{61}^2 * y_{54} * y_{43} * y_{32} + y_{61}^2 * y_{53} * y_{43} * y_{42} \\
& y_{65} * y_{64} * y_{52} * y_{41} * y_{32} - y_{65} * y_{64} * y_{51} * y_{42} * y_{32} - y_{65} * y_{62} * y_{54} * y_{41} * y_{32} \\
& + y_{65} * y_{62} * y_{51} * y_{43} * y_{42} + y_{65} * y_{61} * y_{54} * y_{42} * y_{32} - y_{65} * y_{61} * y_{52} * y_{43} * y_{42} \\
& + y_{64} * y_{62} * y_{54} * y_{51} * y_{32} - y_{64} * y_{62} * y_{53} * y_{52} * y_{41} - y_{64} * y_{61} * y_{54} * y_{52} * y_{32} \\
& + y_{64} * y_{61} * y_{53} * y_{52} * y_{42} + y_{62}^2 * y_{54} * y_{53} * y_{41} - y_{62}^2 * y_{54} * y_{51} * y_{43} \\
& - y_{62} * y_{61} * y_{54} * y_{53} * y_{42} + y_{62} * y_{61} * y_{54} * y_{52} * y_{43} \\
& y_{65} * y_{64} * y_{53} * y_{41} * y_{32} - y_{65} * y_{64} * y_{51} * y_{43} * y_{32} - y_{65} * y_{63} * y_{54} * y_{41} * y_{32} \\
& + y_{65} * y_{63} * y_{51} * y_{43} * y_{42} + y_{65} * y_{61} * y_{54} * y_{43} * y_{32} - y_{65} * y_{61} * y_{53} * y_{43} * y_{42} \\
& + y_{64} * y_{63} * y_{54} * y_{51} * y_{32} - y_{64} * y_{63} * y_{53} * y_{51} * y_{42} - y_{64} * y_{62} * y_{53}^2 * y_{41} \\
& + y_{64} * y_{62} * y_{53} * y_{51} * y_{43} - y_{64} * y_{61} * y_{54} * y_{53} * y_{32} + y_{64} * y_{61} * y_{53}^2 * y_{42} \\
& + y_{63} * y_{62} * y_{54} * y_{53} * y_{41} - y_{63} * y_{62} * y_{54} * y_{51} * y_{43}
\end{aligned}$$

Largest index 7, first half.



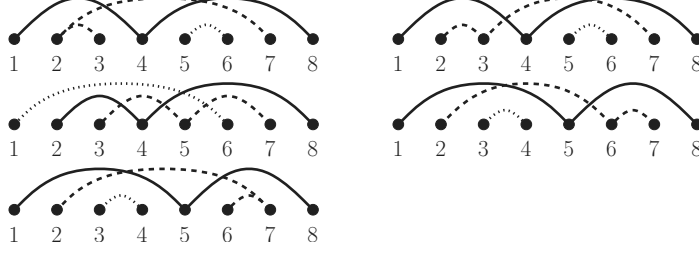
$$\begin{aligned}
& y_{73} * y_{62} * y_{54} * y_{31} * y_{21} - y_{73} * y_{61} * y_{54} * y_{32} * y_{21} - y_{73} * y_{61} * y_{52} * y_{42} * y_{31} \\
& + y_{73} * y_{61} * y_{51} * y_{42} * y_{32} - y_{72} * y_{63} * y_{54} * y_{31} * y_{21} + y_{72} * y_{61} * y_{54} * y_{32} * y_{31} \\
& + y_{72} * y_{61} * y_{53} * y_{43} * y_{21} - y_{72} * y_{61} * y_{51} * y_{43} * y_{32} + y_{71} * y_{63} * y_{54} * y_{32} * y_{21} \\
& + y_{71} * y_{63} * y_{52} * y_{42} * y_{31} - y_{71} * y_{63} * y_{51} * y_{42} * y_{32} - y_{71} * y_{62} * y_{54} * y_{32} * y_{31} \\
& - y_{71} * y_{62} * y_{53} * y_{43} * y_{21} + y_{71} * y_{62} * y_{51} * y_{43} * y_{32} \\
& y_{73} * y_{64} * y_{51} * y_{42} * y_{31} - y_{73} * y_{64} * y_{51} * y_{41} * y_{32} - y_{73} * y_{61} * y_{54} * y_{42} * y_{31} \\
& + y_{73} * y_{61} * y_{54} * y_{41} * y_{32} + y_{72} * y_{64} * y_{53} * y_{41} * y_{31} - y_{72} * y_{64} * y_{51} * y_{43} * y_{31} \\
& - y_{72} * y_{63} * y_{54} * y_{41} * y_{31} + y_{72} * y_{63} * y_{51} * y_{43} * y_{41} + y_{72} * y_{61} * y_{54} * y_{43} * y_{31} \\
& - y_{72} * y_{61} * y_{53} * y_{43} * y_{41} - y_{71} * y_{64} * y_{53} * y_{42} * y_{31} + y_{71} * y_{64} * y_{51} * y_{43} * y_{32} \\
& + y_{71} * y_{63} * y_{54} * y_{42} * y_{31} - y_{71} * y_{63} * y_{51} * y_{43} * y_{42} - y_{71} * y_{61} * y_{54} * y_{43} * y_{32} \\
& + y_{71} * y_{61} * y_{53} * y_{43} * y_{42} \\
& y_{74} * y_{65} * y_{52} * y_{41} * y_{32} - y_{74} * y_{65} * y_{51} * y_{42} * y_{32} - y_{74} * y_{62} * y_{53} * y_{52} * y_{41} \\
& + y_{74} * y_{61} * y_{53} * y_{52} * y_{42} - y_{72} * y_{65} * y_{54} * y_{41} * y_{32} + y_{72} * y_{65} * y_{51} * y_{43} * y_{42} \\
& + y_{72} * y_{64} * y_{54} * y_{51} * y_{32} + y_{72} * y_{62} * y_{54} * y_{53} * y_{41} - y_{72} * y_{62} * y_{54} * y_{51} * y_{43} \\
& - y_{72} * y_{61} * y_{54} * y_{53} * y_{42} + y_{71} * y_{65} * y_{54} * y_{42} * y_{32} - y_{71} * y_{65} * y_{52} * y_{43} * y_{42} \\
& - y_{71} * y_{64} * y_{54} * y_{52} * y_{32} + y_{71} * y_{62} * y_{54} * y_{52} * y_{43} \\
& y_{74} * y_{65} * y_{53} * y_{41} * y_{32} - y_{74} * y_{65} * y_{51} * y_{43} * y_{32} - y_{74} * y_{62} * y_{53}^2 * y_{41} \\
& + y_{74} * y_{61} * y_{53} * y_{52} * y_{43} - y_{73} * y_{65} * y_{54} * y_{41} * y_{32} + y_{73} * y_{65} * y_{51} * y_{43} * y_{42} \\
& + y_{73} * y_{64} * y_{54} * y_{51} * y_{32} - y_{73} * y_{64} * y_{53} * y_{51} * y_{42} + y_{73} * y_{61} * y_{54} * y_{53} * y_{42} \\
& - y_{73} * y_{61} * y_{54} * y_{52} * y_{43} + y_{72} * y_{64} * y_{53} * y_{51} * y_{43} + y_{72} * y_{63} * y_{54} * y_{53} * y_{41} \\
& - y_{72} * y_{63} * y_{54} * y_{51} * y_{43} - y_{72} * y_{61} * y_{54} * y_{53} * y_{43} + y_{71} * y_{65} * y_{54} * y_{43} * y_{32} \\
& - y_{71} * y_{65} * y_{53} * y_{43} * y_{42} - y_{71} * y_{64} * y_{54} * y_{53} * y_{32} + y_{71} * y_{64} * y_{53}^2 * y_{42} \\
& - y_{71} * y_{64} * y_{53} * y_{52} * y_{43} - y_{71} * y_{63} * y_{54} * y_{53} * y_{42} + y_{71} * y_{63} * y_{54} * y_{52} * y_{43} \\
& + y_{71} * y_{62} * y_{54} * y_{53} * y_{43}
\end{aligned}$$

Largest index 7, second half.



$$\begin{aligned}
& y_{73} * y_{62} * y_{54} * y_{31} * y_{21} - y_{73} * y_{61} * y_{54} * y_{32} * y_{21} - y_{73} * y_{61} * y_{52} * y_{42} * y_{31} \\
& + y_{73} * y_{61} * y_{51} * y_{42} * y_{32} - y_{72} * y_{63} * y_{54} * y_{31} * y_{21} + y_{72} * y_{61} * y_{54} * y_{32} * y_{31} \\
& + y_{72} * y_{61} * y_{53} * y_{43} * y_{21} - y_{72} * y_{61} * y_{51} * y_{43} * y_{32} + y_{71} * y_{63} * y_{54} * y_{32} * y_{21} \\
& + y_{71} * y_{63} * y_{52} * y_{42} * y_{31} - y_{71} * y_{63} * y_{51} * y_{42} * y_{32} - y_{71} * y_{62} * y_{54} * y_{32} * y_{31} \\
& - y_{71} * y_{62} * y_{53} * y_{43} * y_{21} + y_{71} * y_{62} * y_{51} * y_{43} * y_{32} \\
& y_{73} * y_{64} * y_{51} * y_{42} * y_{31} - y_{73} * y_{64} * y_{51} * y_{41} * y_{32} - y_{73} * y_{61} * y_{54} * y_{42} * y_{31} \\
& + y_{73} * y_{61} * y_{54} * y_{41} * y_{32} + y_{72} * y_{64} * y_{53} * y_{41} * y_{31} - y_{72} * y_{64} * y_{51} * y_{43} * y_{31} \\
& - y_{72} * y_{63} * y_{54} * y_{41} * y_{31} + y_{72} * y_{63} * y_{51} * y_{43} * y_{41} + y_{72} * y_{61} * y_{54} * y_{43} * y_{31} \\
& - y_{72} * y_{61} * y_{53} * y_{43} * y_{41} - y_{71} * y_{64} * y_{53} * y_{42} * y_{31} + y_{71} * y_{64} * y_{51} * y_{43} * y_{32} \\
& + y_{71} * y_{63} * y_{54} * y_{42} * y_{31} - y_{71} * y_{63} * y_{51} * y_{43} * y_{42} - y_{71} * y_{61} * y_{54} * y_{43} * y_{32} \\
& + y_{71} * y_{61} * y_{53} * y_{43} * y_{42} \\
& y_{74} * y_{65} * y_{52} * y_{41} * y_{32} - y_{74} * y_{65} * y_{51} * y_{42} * y_{32} - y_{74} * y_{62} * y_{53} * y_{52} * y_{41} \\
& + y_{74} * y_{61} * y_{53} * y_{52} * y_{42} - y_{72} * y_{65} * y_{54} * y_{41} * y_{32} + y_{72} * y_{65} * y_{51} * y_{43} * y_{42} \\
& + y_{72} * y_{64} * y_{54} * y_{51} * y_{32} + y_{72} * y_{62} * y_{54} * y_{53} * y_{41} - y_{72} * y_{62} * y_{54} * y_{51} * y_{43} \\
& - y_{72} * y_{61} * y_{54} * y_{53} * y_{42} + y_{71} * y_{65} * y_{54} * y_{42} * y_{32} - y_{71} * y_{65} * y_{52} * y_{43} * y_{42} \\
& - y_{71} * y_{64} * y_{54} * y_{52} * y_{32} + y_{71} * y_{62} * y_{54} * y_{52} * y_{43} \\
& y_{74} * y_{65} * y_{53} * y_{41} * y_{32} - y_{74} * y_{65} * y_{51} * y_{43} * y_{32} - y_{74} * y_{62} * y_{53}^2 * y_{41} \\
& + y_{74} * y_{61} * y_{53} * y_{52} * y_{43} - y_{73} * y_{65} * y_{54} * y_{41} * y_{32} + y_{73} * y_{65} * y_{51} * y_{43} * y_{42} \\
& + y_{73} * y_{64} * y_{54} * y_{51} * y_{32} - y_{73} * y_{64} * y_{53} * y_{51} * y_{42} + y_{73} * y_{61} * y_{54} * y_{53} * y_{42} \\
& - y_{73} * y_{61} * y_{54} * y_{52} * y_{43} + y_{72} * y_{64} * y_{53} * y_{51} * y_{43} + y_{72} * y_{63} * y_{54} * y_{53} * y_{41} \\
& - y_{72} * y_{63} * y_{54} * y_{51} * y_{43} - y_{72} * y_{61} * y_{54} * y_{53} * y_{43} + y_{71} * y_{65} * y_{54} * y_{43} * y_{32} \\
& - y_{71} * y_{65} * y_{53} * y_{43} * y_{42} - y_{71} * y_{64} * y_{54} * y_{53} * y_{32} + y_{71} * y_{64} * y_{53}^2 * y_{42} \\
& - y_{71} * y_{64} * y_{53} * y_{52} * y_{43} - y_{71} * y_{63} * y_{54} * y_{53} * y_{42} + y_{71} * y_{63} * y_{54} * y_{52} * y_{43} \\
& + y_{71} * y_{62} * y_{54} * y_{53} * y_{43}
\end{aligned}$$

Largest index 8.



$$\begin{aligned}
& y_{84} * y_{72} * y_{65} * y_{41} * y_{32} - y_{84} * y_{72} * y_{62} * y_{53} * y_{41} - y_{84} * y_{71} * y_{65} * y_{42} * y_{32} \\
& + y_{84} * y_{71} * y_{62} * y_{53} * y_{42} - y_{82} * y_{74} * y_{65} * y_{41} * y_{32} + y_{82} * y_{74} * y_{62} * y_{53} * y_{41} \\
& + y_{82} * y_{71} * y_{65} * y_{43} * y_{42} + y_{82} * y_{71} * y_{64} * y_{54} * y_{32} - y_{82} * y_{71} * y_{64} * y_{53} * y_{42} \\
& - y_{82} * y_{71} * y_{62} * y_{54} * y_{43} + y_{81} * y_{74} * y_{65} * y_{42} * y_{32} - y_{81} * y_{74} * y_{62} * y_{53} * y_{42} \\
& - y_{81} * y_{72} * y_{65} * y_{43} * y_{42} - y_{81} * y_{72} * y_{64} * y_{54} * y_{32} + y_{81} * y_{72} * y_{64} * y_{53} * y_{42} \\
& + y_{81} * y_{72} * y_{62} * y_{54} * y_{43} \\
& y_{84} * y_{73} * y_{65} * y_{41} * y_{32} - y_{84} * y_{72} * y_{63} * y_{53} * y_{41} - y_{84} * y_{71} * y_{65} * y_{43} * y_{32} \\
& + y_{84} * y_{71} * y_{62} * y_{53} * y_{43} - y_{83} * y_{74} * y_{65} * y_{41} * y_{32} + y_{83} * y_{71} * y_{65} * y_{43} * y_{42} \\
& + y_{83} * y_{71} * y_{64} * y_{54} * y_{32} - y_{83} * y_{71} * y_{62} * y_{54} * y_{43} + y_{82} * y_{74} * y_{63} * y_{53} * y_{41} \\
& - y_{82} * y_{71} * y_{64} * y_{53} * y_{43} + y_{81} * y_{74} * y_{65} * y_{43} * y_{32} - y_{81} * y_{74} * y_{62} * y_{53} * y_{43} \\
& - y_{81} * y_{73} * y_{65} * y_{43} * y_{42} - y_{81} * y_{73} * y_{64} * y_{54} * y_{32} + y_{81} * y_{73} * y_{62} * y_{54} * y_{43} \\
& + y_{81} * y_{72} * y_{64} * y_{53} * y_{43} \\
& y_{84} * y_{75} * y_{61} * y_{53} * y_{42} - y_{84} * y_{75} * y_{61} * y_{52} * y_{43} - y_{84} * y_{71} * y_{65} * y_{53} * y_{42} \\
& + y_{84} * y_{71} * y_{65} * y_{52} * y_{43} + y_{83} * y_{75} * y_{64} * y_{51} * y_{42} - y_{83} * y_{75} * y_{61} * y_{54} * y_{42} \\
& - y_{83} * y_{74} * y_{65} * y_{51} * y_{42} + y_{83} * y_{74} * y_{61} * y_{54} * y_{52} + y_{83} * y_{71} * y_{65} * y_{54} * y_{42} \\
& - y_{83} * y_{71} * y_{64} * y_{54} * y_{52} - y_{82} * y_{75} * y_{64} * y_{51} * y_{43} + y_{82} * y_{75} * y_{61} * y_{54} * y_{43} \\
& + y_{82} * y_{74} * y_{65} * y_{51} * y_{43} - y_{82} * y_{74} * y_{61} * y_{54} * y_{53} - y_{82} * y_{71} * y_{65} * y_{54} * y_{43} \\
& + y_{82} * y_{71} * y_{64} * y_{54} * y_{53} - y_{81} * y_{75} * y_{64} * y_{53} * y_{42} + y_{81} * y_{75} * y_{64} * y_{52} * y_{43} \\
& + y_{81} * y_{74} * y_{65} * y_{53} * y_{42} - y_{81} * y_{74} * y_{65} * y_{52} * y_{43} \\
& y_{85} * y_{76} * y_{62} * y_{51} * y_{43} - y_{85} * y_{76} * y_{61} * y_{52} * y_{43} \\
& - y_{85} * y_{72} * y_{64} * y_{63} * y_{51} + y_{85} * y_{71} * y_{64} * y_{63} * y_{52} - y_{82} * y_{76} * y_{65} * y_{51} * y_{43} \\
& + y_{82} * y_{76} * y_{61} * y_{54} * y_{53} + y_{82} * y_{75} * y_{65} * y_{61} * y_{43} + y_{82} * y_{73} * y_{65} * y_{64} * y_{51} \\
& - y_{82} * y_{73} * y_{65} * y_{61} * y_{54} - y_{82} * y_{71} * y_{65} * y_{64} * y_{53} + y_{81} * y_{76} * y_{65} * y_{52} * y_{43} \\
& - y_{81} * y_{76} * y_{62} * y_{54} * y_{53} - y_{81} * y_{75} * y_{65} * y_{62} * y_{43} - y_{81} * y_{73} * y_{65} * y_{64} * y_{52} \\
& + y_{81} * y_{73} * y_{65} * y_{62} * y_{54} + y_{81} * y_{72} * y_{65} * y_{64} * y_{53} \\
& y_{85} * y_{76} * y_{72} * y_{51} * y_{43} - y_{85} * y_{76} * y_{71} * y_{52} * y_{43} - y_{85} * y_{73} * y_{72} * y_{64} * y_{51} \\
& + y_{85} * y_{73} * y_{71} * y_{64} * y_{52} - y_{82} * y_{76} * y_{75} * y_{51} * y_{43} + y_{82} * y_{76} * y_{71} * y_{54} * y_{53} \\
& + y_{82} * y_{75} * y_{73} * y_{64} * y_{51} + y_{82} * y_{75} * y_{71} * y_{65} * y_{43} - y_{82} * y_{75} * y_{71} * y_{64} * y_{53} \\
& - y_{82} * y_{73} * y_{71} * y_{65} * y_{54} + y_{81} * y_{76} * y_{75} * y_{52} * y_{43} - y_{81} * y_{76} * y_{72} * y_{54} * y_{53} \\
& - y_{81} * y_{75} * y_{73} * y_{64} * y_{52} - y_{81} * y_{75} * y_{72} * y_{65} * y_{43} + y_{81} * y_{75} * y_{72} * y_{64} * y_{53} \\
& + y_{81} * y_{73} * y_{72} * y_{65} * y_{54}
\end{aligned}$$

Largest index 9.



$$\begin{aligned}
& y_{95} * y_{82} * y_{76} * y_{51} * y_{43} - y_{95} * y_{82} * y_{73} * y_{64} * y_{51} - y_{95} * y_{81} * y_{76} * y_{52} * y_{43} \\
& + y_{95} * y_{81} * y_{73} * y_{64} * y_{52} - y_{92} * y_{85} * y_{76} * y_{51} * y_{43} + y_{92} * y_{85} * y_{73} * y_{64} * y_{51} \\
& + y_{92} * y_{81} * y_{76} * y_{54} * y_{53} + y_{92} * y_{81} * y_{75} * y_{65} * y_{43} - y_{92} * y_{81} * y_{75} * y_{64} * y_{53} \\
& - y_{92} * y_{81} * y_{73} * y_{65} * y_{54} + y_{91} * y_{85} * y_{76} * y_{52} * y_{43} - y_{91} * y_{85} * y_{73} * y_{64} * y_{52} \\
& - y_{91} * y_{82} * y_{76} * y_{54} * y_{53} - y_{91} * y_{82} * y_{75} * y_{65} * y_{43} + y_{91} * y_{82} * y_{75} * y_{64} * y_{53} \\
& + y_{91} * y_{82} * y_{73} * y_{65} * y_{54}
\end{aligned}$$

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