Weekly Meeting

Topic: Property α for SOA of strength 3 with $s = 3$

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A grouping for $k = 4$

α	β	$\alpha \cdot \beta$	$\alpha \cdot \beta^2$
13	24	1234	$12^2 34^2$
$1^2 3$	$2^2 4$	$1^2 2^2 34$	$1^2 34^2$
23	$1^2 4$	$1^2 234$	1234^2
$2^2 3$	14	$12^2 34$	$1^2 2^2 34^2$
123	$12^2 4$	$1^2 34$	$2^2 34^2$
$1^2 2^2 3$	$1^2 24$	134	234^2
$12^2 3$	$1^2 2^2 4$	234	$1^2 34^2$
$1^2 23$	124	$2^2 34$	134^2
1	2	12	12^2

Issue

- Since 1 is equivalent to 1^2, $13 \times 1^2 3 \times 1 = I$.
- It does not have resolution IV. The final D should pass the check on `s22` and `s111`.
- Need to try other permutations.
- Maybe $m = 10$ can be found.

Other things to do

- How to find the grouping for $k = 6$ by utilizing the grouping for $k = 4$
- Since we need A to be of res. IV, the grouping of $k = 5$ is really not of interest. Find the grouping of $k = 3$, if the permutation of $k = 3$ is not feasible.