

**Addendum: List of Intersections of Stabilizers of All Cells in the Boundary of RED SQUARE
of the Dissertation:**

**A Toolbox to Compute the Cohomology of Arithmetic Groups in Case of the Group
 $\mathrm{Sp}_2(\mathbb{Z})$**

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Table 1: Survey on the group structure of intersections of all cells in the closure of REDSQUARE with all other cells in the closure of REDSQUARE. The numbers refer to the number of the table where the related information can be found. For short we write = instead of $\Gamma_i \neq \Gamma_j$ and \neq instead of $\Gamma_i = \Gamma_j$.

	DESARGUES _j	REYE _j	DR _j	RR _j	TRIANGLE _j	SQUARE _j	HEXAGON _j	VERTEBRA _j	CRYSTAL _j	PYRAMID _j	REDSQUARE ₀
DESARGUES _i	$\begin{cases} C_2 & \neq \\ C_{10} & = \end{cases}$	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2
REYE _i	C_2	17,18	C_2	10,11	C_2	13,14	9	C_2	4	5	2
DR _i	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2
RR _i	C_2	10,11	C_2	15,16	C_2	12	9	C_2	$C_2 \times C_2$	6	$C_2 \times C_2$
TRIANGLE _i	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2
SQUARE _i	C_2	13,14	C_2	12	C_2	$\begin{cases} C_2 & \neq \\ C_2 \times C_2 & = \end{cases}$	9	C_2	4	7	2
HEXAGON _i	C_2	9	C_2	9	C_2	9	9	3	$C_2 \times C_2$	8	D_8
VERTEBRA _i	C_2	C_2	C_2	C_2	C_2	C_2	3	3	C_2	C_2	$C_4 \times C_2$
CRYSTAL _i	C_2	4	C_2	$C_2 \times C_2$	C_2	4	$C_2 \times C_2$	C_2	$\begin{cases} D_8 \\ (C_6 \times C_2) \rtimes C_2 \end{cases} \neq$	4	D_8
PYRAMID _i	C_2	5	C_2	6	C_2	7	8	C_2	4	$\begin{cases} C_2 \\ C_2 \times C_2 \end{cases} \neq$	2
REDSQUARE ₀	C_2	2	C_2	$C_2 \times C_2$	C_2	2	D_8	$C_4 \times C_2$	D_8	2	$(C_4 \times C_4) \rtimes C_2$

Table 2: Group structure of intersections of the stabilizers for all cells in the closure of RED SQUARE_0 with the stabilizer $\Gamma_{\text{RED SQUARE}_0}$ of the standard 4-cell.

Cell σ	Group Structure
DESARGUES_i for $i = 0, \dots, 47$	C_2
REYE_i for $i = 0, 1, 18, 19$	D_8
REYE_i for $i \neq 0, 1, 18, 19$	$C_2 \times C_2$
DR_i for $i = 0, \dots, 175$	C_2
RR_i for $i = 0, \dots, 39$	$C_2 \times C_2$
TRIANGLE_i for $i = 0, \dots, 111$	C_2
SQUARE_i for $i = 8, 9, 14, 15, 16, 17, 18, 19, 30, 31, 32, 33, 52, 53, 54, 55$	$C_2 \times C_2$
SQUARE_i for the other cases	C_2
HEXAGON_i for $i = 0, \dots, 3$	D_8
VERTEBRA_i for $i = 0, \dots, 3$	$C_4 \times C_2$
CRYSTAL_i for $i = 0, \dots, 3$	D_8
PYRAMID_i for $i = 0, \dots, 3, 12, \dots, 15, 20, \dots, 25, 30, 31$	C_2
PYRAMID_i for the other cases	$C_2 \times C_2$

Table 3: Group structure of intersections of stabilizers for all cells of type VERTEBRA in the closure of RED SQUARE_0 with the stabilizers of all cells in the closure of RED SQUARE_0 of lower dimension, which are not already listed in Table 1.

Cell σ	VERTEBRA_0	VERTEBRA_1	VERTEBRA_2	VERTEBRA_3
HEXAGON_0	$C_6 \times C_2$	$C_2 \times C_2$	$C_6 \times C_2$	$C_2 \times C_2$
HEXAGON_1	$C_2 \times C_2$	$C_6 \times C_2$	$C_6 \times C_2$	$C_2 \times C_2$
HEXAGON_2	$C_6 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_6 \times C_2$
HEXAGON_3	$C_2 \times C_2$	$C_6 \times C_2$	$C_2 \times C_2$	$C_6 \times C_2$
VERTEBRA_0	$C_{12} \times C_2$	$C_4 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
VERTEBRA_1	$C_4 \times C_2$	$C_{12} \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
VERTEBRA_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_{12} \times C_2$	$C_4 \times C_2$
VERTEBRA_3	$C_2 \times C_2$	$C_2 \times C_2$	$C_4 \times C_2$	$C_{12} \times C_2$

Table 4: Group structure of intersections of stabilizers for all cells of type **CRYSTAL** in the closure of RED SQUARE_0 with the stabilizers of all cells in the closure of RED SQUARE_0 of lower dimension, which are not already listed in Table 1.

Cell σ	CRYSTAL_0	CRYSTAL_1	CRYSTAL_2	CRYSTAL_3
REYE_i for $i = 0, 1, 18, 19$	D_8	D_8	D_8	D_8
REYE_i for $i = 3, 7, 11, 23$	D_8	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
REYE_i for $i = 2, 6, 10, 22$	$C_2 \times C_2$	D_8	$C_2 \times C_2$	$C_2 \times C_2$
REYE_i for $i = 8, 14, 21, 25$	$C_2 \times C_2$	$C_2 \times C_2$	D_8	$C_2 \times C_2$
REYE_i for $i = 9, 15, 20, 24$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_8
REYE_i for $i = 5, 13$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
REYE_i for $i = 4, 12$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$
REYE_i for $i = 16, 27$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$
REYE_i for $i = 17, 26$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}
DR_i for $i = 0, \dots, 175$	C_2	C_2	C_2	C_2
RR_i for $i = 0, \dots, 39$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
SQUARE_i for $i = 0, \dots, 3, 24, \dots, 27, 38, \dots, 43, 56, 57$	C_2	C_2	C_2	C_2
SQUARE_i for $i = 4, 6, 10, 12, 29, 45, 47, 59$	$C_2 \times C_2$	C_2	C_2	C_2
SQUARE_i for $i = 5, 7, 11, 13, 28, 44, 46, 58$	C_2	$C_2 \times C_2$	C_2	C_2
SQUARE_i for $i = 20, 21, 34, 35, 48, 49, 60, 61$	C_2	C_2	$C_2 \times C_2$	C_2
SQUARE_i for $i = 22, 23, 36, 37, 50, 51, 62, 63$	C_2	C_2	C_2	$C_2 \times C_2$
SQUARE_i for $i = 8, 9, 14, \dots, 19, 30, \dots, 33, 52, \dots, 55$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
HEXAGON_i for $i = 0, \dots, 3$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
PYRAMID_i for $i = 0, \dots, 3, 12, \dots, 15, 20, \dots, 25, 30, 31$	C_2	C_2	C_2	C_2
PYRAMID_i for $i = 4, \dots, 11, 16, \dots, 19, 26, \dots, 29$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$

Table 5: Group structure of intersections of stabilizers for all cells of type PYRAMID in the closure of REDSQUARE₀ with the stabilizers of all cells of type REYE in the closure of REDSQUARE₀. The entries marked with an X represent intersections isomorphic to $C_2 \times C_2$, i.e. both stabilizers coincide. The non marked entries have trivial intersection, i.e. they are isomorphic to C_2 .

	PYRAMID																			
REYE	0	1	2	3	4,...,11	12	13	14	15	16,...,19,26,...,29	20	21	22	23	24	25	30	31		
0					X			X		X		X				X		X		
1					X		X			X	X		X							
2		X		X						X										
3	X		X							X										
4,5,12,13					X															
6								X		X						X				
7							X			X			X							
8				X	X	X														
9			X		X				X											
10						X				X				X						
11									X	X					X					
14		X			X									X						
15	X				X										X					
16,17,26,27										X										
18		X		X	X	X				X				X						
19	X		X		X				X	X					X					
20					X			X				X								
21					X		X				X									
22										X		X						X		
23										X	X						X			
24					X											X		X		
25					X								X				X			

Table 6: Group structure of intersections of stabilizers for all cells of type PYRAMID in the closure of REDSQUARE₀ with the stabilizers of all cells of type RR in the closure of REDSQUARE₀. The entries marked with an X represent intersections isomorphic to $C_2 \times C_2$, i.e. both stabilizers coincide. The non marked entries have trivial intersection, i.e. they are isomorphic to C_2 .

RR	Pyramid																														
	0	1	2	3	4,..., 11	12	13	14	15	16,..., 19, 26,..., 29	20	21	22	23	24	25	30	31													
0					X											X		X													
1					X								X				X														
2,3,6,7,18,...,21, 28,29,34,35										X																					
4,5,14,...,17,22,23, 30,...,33					X																										
8					X			X				X																			
9					X		X				X																				
10				X	X	X																									
11			X		X				X																						
12		X			X									X																	
13	X				X										X																
24								X								X															
25									X						X																
26						X								X																	
27							X						X																		
36																		X													
37	X		X																												
38		X		X																											
39									X	X	X						X														

Table 7: Group structure of stabilizers for all cells of type PYRAMID in the closure of REDSQUARE₀ with the stabilizers of all cells of type SQUARE in the closure of REDSQUARE₀. The entries marked with an X represent intersections isomorphic to $C_2 \times C_2$, i.e. both stabilizers coincide. The non marked entries have trivial intersection, i.e. they are isomorphic to C_2 .

SQUARE	PYRAMID																		
	0	1	2	3	4, ..., 11	12	13	14	15	16, ..., 19, 26, ..., 29	20	21	22	23	24	25	30	31	
0	X																		
1		X																	
2			X																
3				X															
8, 9, 14, ..., 19					X										.				
24						X													
25							X												
26								X											
27									X										
30, ..., 33, 52, ..., 55										X									
38											X								
39												X							
40													X						
41														X					
42															X				
43																X			
56																	X		
57																		X	

Table 8: Group structure of the intersection of all cells of type PYRAMID in the boundary of REDSQUARE₀ with all cells of type HEXAGON in the closure of REDSQUARE₀.

HEXAGON	PYRAMID	
	4, ..., 11	16, ..., 19, 26, ..., 29
0, 3		X
1, 2	X	

Table 9: Group Structure of intersections of stabilizers for all cells of type HEXAGON in the closure of REDSQUARE₀ with the stabilizers of all cells in the closure of REDSQUARE₀ of lower dimension, as far as they are not already stated in Table 1. We set $\mathbf{G}_{\text{Hex}} = C_3 \times ((C_6 \times C_2) \rtimes C_2)$.

Cell σ	HEXAGON ₀	HEXAGON ₁	HEXAGON ₂	HEXAGON ₃
HEXAGON ₀	\mathbf{G}_{Hex}	$C_6 \times C_2$	$C_6 \times C_2$	D_8
HEXAGON ₁	$C_6 \times C_2$	\mathbf{G}_{Hex}	D_8	$C_6 \times C_2$
HEXAGON ₂	$C_6 \times C_2$	D_8	\mathbf{G}_{Hex}	$C_6 \times C_2$
HEXAGON ₂	D_8	$C_6 \times C_2$	$C_6 \times C_2$	\mathbf{G}_{Hex}
SQUARE _{i} for $i = 8, 9, 14, \dots, 19$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	C_2
SQUARE _{i} for $i = 30, \dots, 33, 52, \dots, 55$	$C_2 \times C_2$	C_2	C_2	$C_2 \times C_2$
SQUARE _{i} for the other cases	C_2	C_2	C_2	C_2
RR _{i} for $i = 0, 1, 8, \dots, 13$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	C_2
RR _{i} for $i = 2, 3, 6, 7, 20, 21$	$C_2 \times C_2$	C_2	C_2	D_{12}
RR _{i} for $i = 4, 5, 16, 17, 31, 32$	C_2	D_{12}	$C_2 \times C_2$	C_2
RR _{i} for $i = 14, 15, 22, 23, 30, 33$	C_2	$C_2 \times C_2$	D_{12}	C_2
RR _{i} for $i = 18, 19, 28, 29, 34, 35$	D_{12}	C_2	C_2	$C_2 \times C_2$
RR _{i} for $i = 24, \dots, 27, 36, \dots, 39$	$C_2 \times C_2$	C_2	C_2	$C_2 \times C_2$
REYE _{i} for $i = 0, 1, 18, 19$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
REYE _{i} for $i = 2, 3, 6, 7, 16, 17$	$C_2 \times C_2$	C_2	C_2	D_{12}
REYE _{i} for $i = 4, 5, 14, 15, 20, 21$	C_2	D_{12}	$C_2 \times C_2$	C_2
REYE _{i} for $i = 8, 9, 12, 13, 24, 25$	C_2	$C_2 \times C_2$	D_{12}	C_2
REYE _{i} for $i = 10, 11, 22, 23, 26, 27$	D_{12}	C_2	C_2	$C_2 \times C_2$

Table 10: Group structure of intersections of stabilizers for all cells of type RR in the closure of RedSquare_0 with the stabilizers of all cells of type REYE in the closure of RedSquare_0 , Part 1.

RR											
REYE	0	1	2, 3, 6, 7, 20, 21	4, 5, 16, 17, 31, 32	8	9	10	11	12	13	
0	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
1	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
2	C_2	C_2	D_{12}	C_2	C_2	C_2	$C_2 \times C_2$	C_2	$C_2 \times C_2$	C_2	
3	C_2	C_2	D_{12}	C_2	C_2	C_2	C_2	$C_2 \times C_2$	C_2	$C_2 \times C_2$	
4,5	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
6	$C_2 \times C_2$	C_2	D_{12}	C_2	$C_2 \times C_2$	C_2	C_2	C_2	C_2	C_2	
7	C_2	$C_2 \times C_2$	D_{12}	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	C_2	
8	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
9	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	
10	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	$C_2 \times C_2$	C_2	
11	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	C_2	$C_2 \times C_2$	C_2	$C_2 \times C_2$	
12,13	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
14	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	
15	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	
16,17	C_2	C_2	D_{12}	C_2	C_2	C_2	C_2	C_2	C_2	C_2	
18	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	
19	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	D_{12}	
20	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
21	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
22	$C_2 \times C_2$	C_2	$C_2 \times C_2$	C_2	$C_2 \times C_2$	C_2	C_2	C_2	C_2	C_2	
23	C_2	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	C_2	
24	D_{12}	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
25	$C_2 \times C_2$	D_{12}	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
26,27	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	C_2	C_2	C_2	C_2	

Table 11: Group structure of intersections of stabilizers for all cells of type RR in the closure of RedSquare_0 with the stabilizers of all cells of type REXE in the closure of RedSquare_0 . Part 2.

REXE	RR									
	14, 15, 22, 23, 30, 33	18, 19, 28, 29, 34, 35	24	25	26	27	36	37	38	39
0	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
1	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}
2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$
3	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$
4, 5	$C_2 \times C_2$	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2
6	C_2	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
7	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
8	D_{12}	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2
9	D_{12}	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2
10	C_2	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
11	C_2	D_{12}	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
12, 13	D_{12}	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2
14	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2
15	$C_2 \times C_2$	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2
16, 17	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
18	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$
19	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$
20	$C_2 \times C_2$	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2
21	$C_2 \times C_2$	C_2	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$
22	C_2	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
23	C_2	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}
24	D_{12}	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2
25	D_{12}	C_2	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$
26, 27	C_2	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$

Table 12: Group structure of intersections of stabilizers for all cells of type SQUARE in the closure of REDSQUARE₀ with the stabilizers of all cells of type RR in the closure of REDSQUARE₀. The entries marked with an X represent intersections isomorphic to $C_2 \times C_2$, i.e. both stabilizers coincide. The non marked entries have trivial intersection, i.e. they are isomorphic to C_2 .

RR	SQUARE																		
	0	1	2	3	8, 9, 14, ..., 19	24	25	26	27	30, ..., 33, 52, ..., 55	38	39	40	41	42	43	56	57	
0					X											X		X	
1					X						X		X				X		
2, 3, 6, 7, 18, ..., 21, 28, 29, 34, 35										X									
4, 5, 14, ..., 17, 22, 23, 30, ..., 33					X														
8					X			X				X							
9					X		X				X								
10				X	X	X													
11			X		X				X										
12		X			X									X					
13	X				X										X				
24								X			X					X			
25									X						X				
26						X					X			X					
27							X						X						
36			X									X					X	X	
37	X																		
38		X		X							X								
39											X						X		

Table 13: Group structure of intersections of stabilizers for all cells of type SQUARE in the closure of REDSQUARE₀ with the stabilizers of all cells of type REYE in the closure of REDSQUARE₀. The entries marked with an X represent intersections isomorphic to $C_2 \times C_2$, i.e. both stabilizers coincide. The non marked entries have trivial intersection, i.e. they are isomorphic to C_2 . Part 1.

		SQUARE																	
REYE	0	1	2	3	4, 6, 10, 12	5, 7, 11, 13	8, 9, 14, ..., 19	20, 21, 48, 49	22, 23, 50, 51	24	25	26	27	28, 44, 46, 58	29, 45, 47, 59	30, ..., 33, 52, ..., 55	34, 35, 60, 61	36, 37, 62, 63	
0							X					X				X			
1							X				X					X			
2		X		X										X		X			
3	X		X												X	X			
4						X	X							X					
5					X		X								X				
6						X						X				X			
7					X						X					X			
8				X			X	X											
9			X				X		X				X						
10						X				X						X			
11					X								X			X			
12						X	X							X					
13					X		X								X				
14		X					X										X		
15	X						X											X	
16								X									X		
17									X							X		X	
18		X		X			X			X						X			
19	X		X				X						X			X			
20							X		X			X							
21							X	X			X					X			
22														X					
23															X				
24							X											X	
25							X										X		
26									X							X		X	
27								X								X	X		

Table 14: Group structure of intersections of stabilizers for all cells of type SQUARE in the closure of REDSQUARE₀ with the stabilizers of all cells of type REYE in the closure of REDSQUARE₀. The entries marked with an X represent intersections isomorphic to $C_2 \times C_2$, i.e. both stabilizers coincide. The non marked entries have trivial intersection, i.e. they are isomorphic to C_2 . Part 2.

REYE	SQUARE									
	38	39	40	41	42	43	46	57		
0		X				X		X		
1	X		X				X			
2										
3										
4										
5										
6						X				
7			X							
8										
9										
10				X						
11					X					
12										
13										
14				X						
15					X					
16										
17										
18				X						
19					X					
20		X								
21	X									
22		X						X		
23	X						X			
24						X			X	
25			X				X			
26										
27										

Table 15: Group structure of intersections of stabilizers for all cells of type RR in the closure of REDSquare₀ with the stabilizers of all cells of type RR in the closure of REDSquare₀. Part 1.

	RR												
RR	0	1	2, 3, 6, 7, 20, 21	4, 5, 16, 17, 31, 32	8	9	10	11	12	13	14, 15, 22, 23, 30, 33		
0	D_{12}	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$		
1	$C_2 \times C_2$	D_{12}	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$		
2, 3, 6, 7, 20, 21	C_2	C_2	D_{12}	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2		
4, 5, 16, 17, 31, 32	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$		
8	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$		
9	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$		
10	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$		
11	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$		
12	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$		
13	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$		
14, 15, 22, 23, 30, 33	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}		
18, 19, 28, 29, 34, 35	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2		
24	$C_2 \times C_2$	C_2	$C_2 \times C_2$	C_2	$C_2 \times C_2$	C_2	C_2	C_2	C_2	C_2	C_2		
25	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	C_2	$C_2 \times C_2$	C_2	$C_2 \times C_2$	C_2		
26	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	$C_2 \times C_2$	C_2	C_2		
27	C_2	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	C_2	C_2		
36	$C_2 \times C_2$	C_2	$C_2 \times C_2$	C_2	$C_2 \times C_2$	C_2	C_2	C_2	C_2	C_2	C_2		
37	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	C_2	$C_2 \times C_2$	C_2	$C_2 \times C_2$	C_2		
38	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	$C_2 \times C_2$	C_2	C_2		
39	C_2	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2	$C_2 \times C_2$	C_2	C_2	$C_2 \times C_2$	C_2	C_2		

Table 16: Group structure of intersections of stabilizers for all cells of type RR in the closure of REDSQUARE₀ with the stabilizers of all cells of type RR in the closure of REDSQUARE₀. Part 2.

	RR									
RR	18, 19, 28, 29, 34, 35	24	25	26	27	36	37	38	39	
0	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	
1	C_2	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	
2, 3, 6, 7, 20, 21	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
4, 5, 16, 17, 31, 32	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	
8	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	
9	C_2	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	
10	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	
11	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	
12	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	
13	C_2	C_2	$C_2 \times C_2$	C_2	C_2	C_2	$C_2 \times C_2$	C_2	C_2	
14, 15, 22, 23, 30, 33	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	C_2	
18, 19, 28, 29, 34, 35	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
24	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
25	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
26	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
27	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
36	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
37	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	
38	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	
39	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	

Table 17: Group structure of intersections of stabilizers for all cells of type REYE in the closure of REDSQUARE₀ with the stabilizers of all cells of type REYE in the closure of REDSQUARE₀. Part 1.

	Reve													
Reve	0	1	2	3	4	5	6	7	8	9	10	11	12	13
0	$\mathbf{GL}_2(\mathbb{F}_3)$	D_8	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
1	D_8	$\mathbf{GL}_2(\mathbb{F}_3)$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
2	$C_2 \times C_2$	$C_2 \times C_2$	$\mathbf{GL}_2(\mathbb{F}_3)$	D_{12}	$C_2 \times C_2$	C_2	D_{12}	D_{12}	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2
3	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$\mathbf{GL}_2(\mathbb{F}_3)$	C_2	$C_2 \times C_2$	D_{12}	D_{12}	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$
4	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$\mathbf{GL}_2(\mathbb{F}_3)$	D_{12}	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	$C_2 \times C_2$
5	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	D_{12}	$\mathbf{GL}_2(\mathbb{F}_3)$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}
6	D_{12}	$C_2 \times C_2$	D_{12}	D_{12}	$C_2 \times C_2$	C_2	$\mathbf{GL}_2(\mathbb{F}_3)$	D_{12}	C_2	C_2	D_8	$C_2 \times C_2$	$C_2 \times C_2$	C_2
7	$C_2 \times C_2$	D_{12}	D_{12}	D_{12}	C_2	$C_2 \times C_2$	D_{12}	$\mathbf{GL}_2(\mathbb{F}_3)$	C_2	C_2	$C_2 \times C_2$	D_8	C_2	$C_2 \times C_2$
8	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2	$\mathbf{GL}_2(\mathbb{F}_3)$	D_{12}	$C_2 \times C_2$	C_2	D_{12}	D_{12}
9	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2	D_{12}	$\mathbf{GL}_2(\mathbb{F}_3)$	C_2	$C_2 \times C_2$	D_{12}	D_{12}
10	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_8	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$\mathbf{GL}_2(\mathbb{F}_3)$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$
11	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_8	C_2	$C_2 \times C_2$	C_2	D_{12}	$\mathbf{GL}_2(\mathbb{F}_3)$	$C_2 \times C_2$	$C_2 \times C_2$
12	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$\mathbf{GL}_2(\mathbb{F}_3)$	D_{12}
13	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	C_2	$C_2 \times C_2$	D_{12}	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$\mathbf{GL}_2(\mathbb{F}_3)$
14	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	D_{12}	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$
15	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	D_{12}	D_{12}	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
16	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	D_{12}	C_2	C_2	D_{12}	D_{12}	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2
17	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	D_{12}	C_2	C_2	D_{12}	D_{12}	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2
18	D_8	D_8	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
19	D_8	D_8	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	D_{12}	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$
20	D_{12}	$C_2 \times C_2$	C_2	C_2	D_{12}	D_{12}	$C_2 \times C_2$	C_2	$C_2 \times C_2$	D_8	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
21	$C_2 \times C_2$	D_{12}	C_2	C_2	D_{12}	D_{12}	C_2	$C_2 \times C_2$	D_8	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$
22	D_{12}	$C_2 \times C_2$	D_8	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2	D_{12}	D_{12}	$C_2 \times C_2$	C_2
23	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	D_8	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2	D_{12}	D_{12}	C_2	$C_2 \times C_2$
24	D_{12}	$C_2 \times C_2$	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	D_{12}	C_2	C_2	D_{12}	D_{12}
25	$C_2 \times C_2$	D_{12}	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	D_{12}	D_{12}	C_2	C_2	D_{12}	D_{12}
26	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	D_{12}	D_{12}	C_2	C_2
27	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	D_{12}	C_2	C_2

Table 18: Group structure of intersections of stabilizers for all cells of type REYE in the closure of REDSQUARE₀ with the stabilizers of all cells of type REYE in the closure of REDSQUARE₀. Part 2.

	REYE														
REYE	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
0	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_8	D_8	D_{12}	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
1	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_8	D_8	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	
2	$C_2 \times C_2$	C_2	D_{12}	D_{12}	D_{12}	$C_2 \times C_2$	C_2	C_2	D_8	$C_2 \times C_2$	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	
3	C_2	$C_2 \times C_2$	D_{12}	D_{12}	$C_2 \times C_2$	D_{12}	C_2	C_2	$C_2 \times C_2$	D_8	C_2	$C_2 \times C_2$	C_2	C_2	
4	D_{12}	D_{12}	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	D_{12}	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2	
5	D_{12}	D_{12}	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	D_{12}	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2	
6	C_2	C_2	D_{12}	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	
7	C_2	C_2	D_{12}	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
8	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	D_8	C_2	C_2	D_{12}	D_{12}	C_2	$C_2 \times C_2$	
9	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	D_8	$C_2 \times C_2$	C_2	C_2	D_{12}	D_{12}	$C_2 \times C_2$	C_2	
10	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	C_2	C_2	D_{12}	D_{12}	C_2	C_2	D_{12}	D_{12}	
11	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	C_2	C_2	D_{12}	D_{12}	C_2	C_2	D_{12}	D_{12}	
12	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	D_{12}	C_2	C_2	
13	$C_2 \times C_2$	$C_2 \times C_2$	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	D_{12}	D_{12}	C_2	C_2	
14	$\mathbf{GL}_2(\mathbb{F}_3)$	D_{12}	$C_2 \times C_2$	C_2	D_{12}	$C_2 \times C_2$	D_{12}	D_{12}	C_2	C_2	$C_2 \times C_2$	D_8	C_2	$C_2 \times C_2$	
15	D_{12}	$\mathbf{GL}_2(\mathbb{F}_3)$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	D_{12}	D_{12}	C_3	C_2	D_8	$C_3 \times C_2$	$C_2 \times C_2$	C_2	
16	$C_2 \times C_2$	C_2	$\mathbf{GL}_2(\mathbb{F}_3)$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	
17	C_2	$C_2 \times C_2$	D_{12}	$\mathbf{GL}_2(\mathbb{F}_3)$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	$C_2 \times C_2$	
18	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$\mathbf{GL}_2(\mathbb{F}_3)$	D_8	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
19	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	D_8	$\mathbf{GL}_2(\mathbb{F}_3)$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	
20	D_{12}	D_{12}	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$\mathbf{GL}_2(\mathbb{F}_3)$	D_{12}	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	
21	D_{12}	D_{12}	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$\mathbf{GL}_2(\mathbb{F}_3)$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	
22	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$\mathbf{GL}_2(\mathbb{F}_3)$	D_{12}	$C_2 \times C_2$	C_2	D_{12}	D_{12}	
23	C_2	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	D_{12}	$\mathbf{GL}_2(\mathbb{F}_3)$	C_2	$C_2 \times C_2$	D_{12}	D_{12}	
24	$C_2 \times C_2$	D_8	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$\mathbf{GL}_2(\mathbb{F}_3)$	D_{12}	$C_2 \times C_2$	C_2	
25	D_8	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$\mathbf{GL}_2(\mathbb{F}_3)$	D_{12}	$\mathbf{GL}_2(\mathbb{F}_3)$	C_2	$C_2 \times C_2$	
26	C_2	$C_2 \times C_2$	$C_2 \times C_2$	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	D_{12}	D_{12}	$C_2 \times C_2$	C_2	$\mathbf{GL}_2(\mathbb{F}_3)$	D_{12}	
27	$C_2 \times C_2$	C_2	D_{12}	$C_2 \times C_2$	$C_2 \times C_2$	$C_2 \times C_2$	C_2	$C_2 \times C_2$	D_{12}	D_{12}	C_2	$C_2 \times C_2$	D_{12}	$\mathbf{GL}_2(\mathbb{F}_3)$	