

Number of vertices $n = 7$.

Adjacencies of Graph

1. vertex 1 adjacent to 3 4 5 6 7
2. vertex 2 adjacent to 3 4 5 6 7
3. vertex 3 adjacent to 1 2
4. vertex 4 adjacent to 1 2
5. vertex 5 adjacent to 1 2
6. vertex 6 adjacent to 1 2
7. vertex 7 adjacent to 1 2

Size of automorphism group of the graph=240

Full group: $|Aut(polytope)| = 29491200$

Restricted group: $|Aut(G) \times switch| = 15360$

Number of orbits for the full group : 1

List of orbits of facets for the full group: Total number of orbits = 1 Total number of facets = 100

1. Inequality 1 with incidence 32 and stabilizer of size 294912. Orbit size is 100 nature: edge inequality $e=[1, 7]$

(1,3) : 0	(1,4) : 0	(1,5) : 0	(1,6) : 0	(1,7) : 1	(2,3) : 0
(2,4) : 0	(2,5) : 0	(2,6) : 0	(2,7) : 0		

Number of orbits for the restricted group : 2

List of orbits of facets for the restricted group: Total number of orbits = 2 Total number of facets = 100

1. Inequality 1 with incidence 32 and stabilizer of size 768. Orbit size is 20 nature: edge inequality $e=[1, 7]$

(1,3) : 0	(1,4) : 0	(1,5) : 0	(1,6) : 0	(1,7) : 1	(2,3) : 0
(2,4) : 0	(2,5) : 0	(2,6) : 0	(2,7) : 0		

2. Inequality 2 with incidence 32 and stabilizer of size 192. Orbit size is 80 nature: 4-cycle inequality, $C=[2, 6, 1, 7]$ $F=[2, 6]$

(1,3) : 0	(1,4) : 0	(1,5) : 0	(1,6) : 1	(1,7) : 1	(2,3) : 0
(2,4) : 0	(2,5) : 0	(2,6) : -1	(2,7) : 1		