

Number of vertices $n = 10$.

Adjacencies of Graph

1. vertex 1 adjacent to 3 4 5 6 7 8 9 10
2. vertex 2 adjacent to 3 4 5 6 7 8 9 10
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
8. vertex 8 adjacent to 1 2
9. vertex 9 adjacent to 1 2
10. vertex 10 adjacent to 1 2

Size of automorphism group of the graph=80640

Full group: $|Aut(polytope)| = 213084064972800$

Restricted group: $|Aut(G) \times switch| = 41287680$

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 = 256

1. Inequality 1 with incidence 256 and stabilizer of size 832359628800. Orbit size is 256 nature: 4-cycle inequality, $C=[1, 3, 2, 9]$ $F=[1, 3]$

(1,3) : -1	(1,4) : 0	(1,5) : 0	(1,6) : 0	(1,7) : 0	(1,8) : 0
(1,9) : 1	(1,10) : 0	(2,3) : 1	(2,4) : 0	(2,5) : 0	(2,6) : 0
(2,7) : 0	(2,8) : 0	(2,9) : 1	(2,10) : 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 = 256

1. Inequality 1 with incidence 256 and stabilizer of size 184320. Orbit size is 224 nature: 4-cycle inequality, $C=[1, 3, 2, 9]$ $F=[1, 3]$

(1,3) : -1	(1,4) : 0	(1,5) : 0	(1,6) : 0	(1,7) : 0	(1,8) : 0
(1,9) : 1	(1,10) : 0	(2,3) : 1	(2,4) : 0	(2,5) : 0	(2,6) : 0
(2,7) : 0	(2,8) : 0	(2,9) : 1	(2,10) : 0		

2. Inequality 2 with incidence 256 and stabilizer of size 1290240. Orbit size is 32 nature: edge inequality $e=[2, 3]$

(1,3) : 0	(1,4) : 0	(1,5) : 0	(1,6) : 0	(1,7) : 0	(1,8) : 0
(1,9) : 0	(1,10) : 0	(2,3) : 1	(2,4) : 0	(2,5) : 0	(2,6) : 0
(2,7) : 0	(2,8) : 0	(2,9) : 0	(2,10) : 0		