

Number of vertices $n = 4$.

Adjacencies of Graph

1. vertex 1 adjacent to 3 4
2. vertex 2 adjacent to 3 4
3. vertex 3 adjacent to 1 2
4. vertex 4 adjacent to 1 2

Size of automorphism group of the graph=8

Full group: $|Aut(polytope)| = 384$

Restricted group: $|Aut(G) \times switch| = 64$

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 = 16

1. Inequality 1 with incidence 4 and stabilizer of size 24. Orbit size is 16

(1,3) : 1	(1,4) : -1	(2,3) : 1	(2,4) : 1		
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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 = 16

1. Inequality 1 with incidence 4 and stabilizer of size 8. Orbit size is 8

(1,3) : 1	(1,4) : -1	(2,3) : 1	(2,4) : 1		
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2. Inequality 2 with incidence 4 and stabilizer of size 8. Orbit size is 8

(1,3) : 0	(1,4) : 0	(2,3) : 1	(2,4) : 0		
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