

Number of vertices  $n = 6$ .

Adjacencies of Graph

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

Size of automorphism group of the graph=48

Full group:  $|Aut(polytope)| = 294912$

Restricted group:  $|Aut(G) \times switch| = 1536$

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 24 and stabilizer of size 18432. Orbit size is 16 nature: 3-cycle inequality,  $C=[1, 3, 2]$   $F=[1, 3]$

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

Number of orbits for the restricted group : 1

List of orbits of facets for the restricted group: Total number of orbits = 1 Total number of facets = 16

1. Inequality 1 with incidence 24 and stabilizer of size 96. Orbit size is 16 nature: 3-cycle inequality,  $C=[1, 3, 2]$   $F=[1, 3]$

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