

Number of vertices $n = 7$.

Adjacencies of Graph

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

Size of automorphism group of the graph=14

Full group: $|Aut(polytope)| = 896$

Restricted group: $|Aut(G) \times switch| = 896$

Number of orbits for the full group : 3

List of orbits of facets for the full group: Total number of orbits = 3 Total number of facets = 148

1. Inequality 1 with incidence 48 and stabilizer of size 32. Orbit size is 28

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

2. Inequality 2 with incidence 32 and stabilizer of size 16. Orbit size is 56

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

3. Inequality 3 with incidence 21 and stabilizer of size 14. Orbit size is 64

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