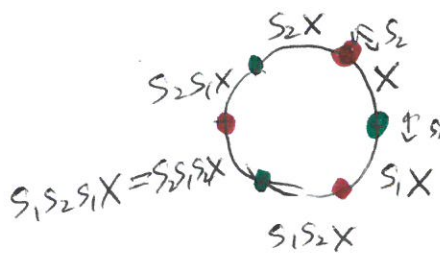
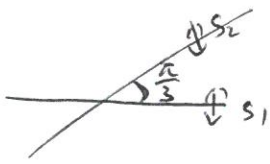
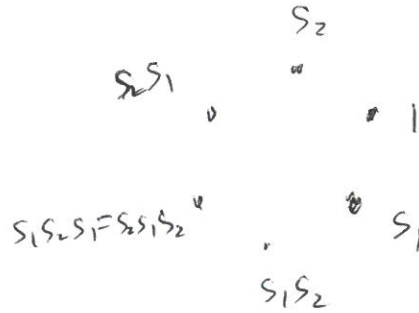


1. (1)



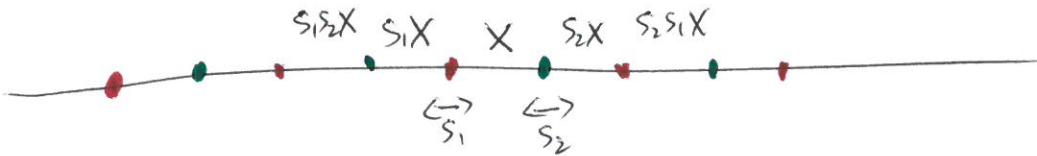
$X, s_1X = s_1$ -adjacent. ^u ①

$\langle s_1, s_2 \mid s_1^2 = s_2^2 = 1, (s_1 s_2)^3 \rangle$



Replace each chamber with a model space X , then glue them together.

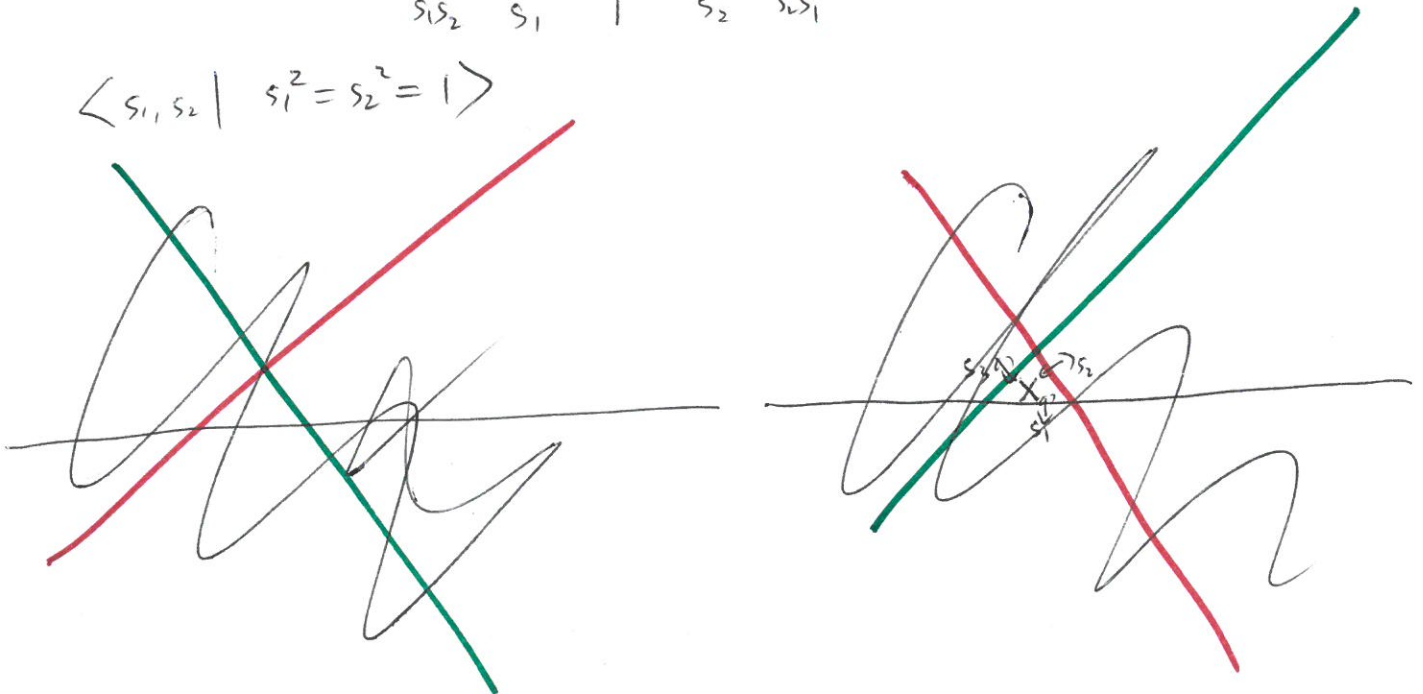
(2)



$s_1 s_2 \quad s_1 \quad 1 \quad s_2 \quad s_1 s_1$

$\langle s_1, s_2 \mid s_1^2 = s_2^2 = 1 \rangle$

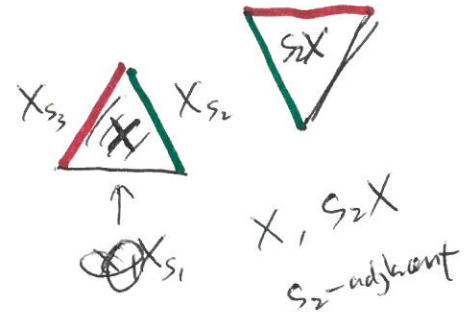
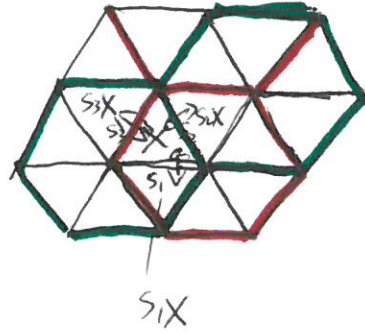
2.



2.

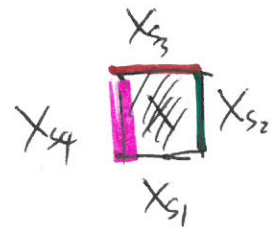
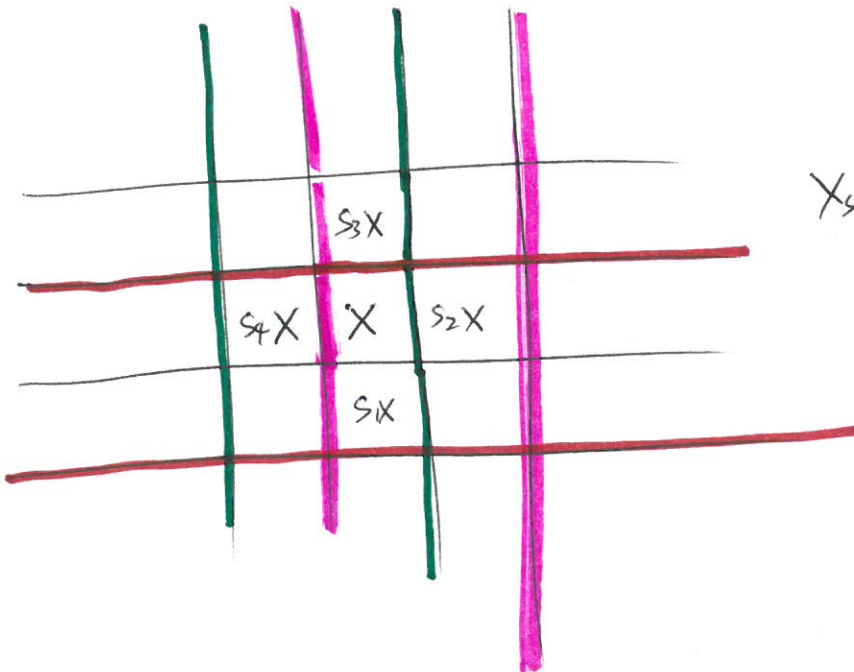
(1)

(2)



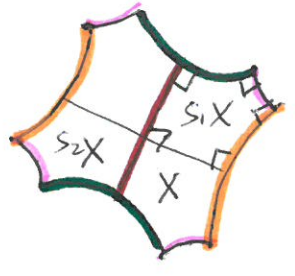
X, S_2X glued together
~~all the~~ ~~via~~ ~~the~~ ~~identity~~ ~~map~~
 on X_{S_2} .

(2)



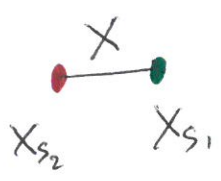
3.

3

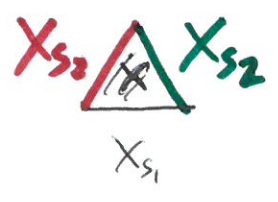


Examples:

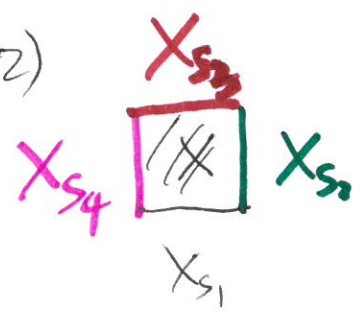
1.



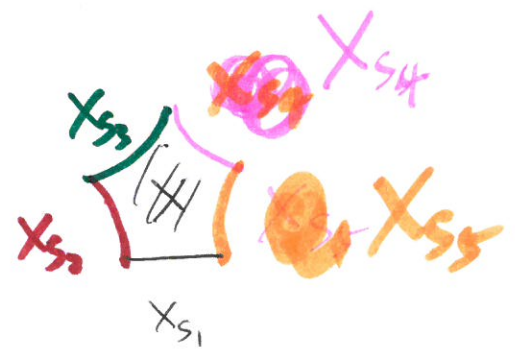
2. (1)



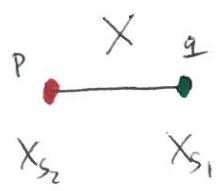
(2)



3.



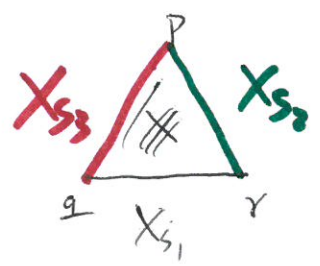
Examples: 1.



$$S(p) = \{s_2\}$$

$$S(q) = \{s_1\}$$

2.



$$S(p) = \{s_2, s_3\}$$

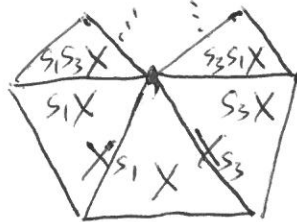
$$S(q) = \{s_1, s_3\}$$

$$S(r) = \{s_1, s_2\}$$

In general, Coxeter complex is NOT locally finite. (5)

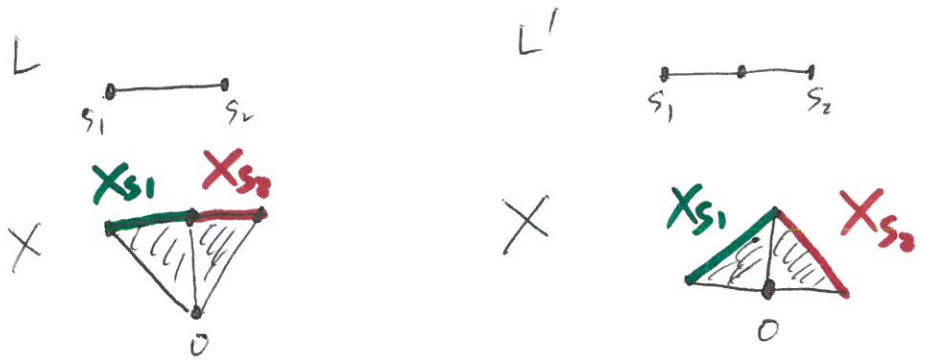
Example:

$$W = \langle s_1, s_2, s_3 \mid s_i^2 = 1, (s_1 s_2)^3 = 1, (s_2 s_3)^3 = 1 \rangle$$

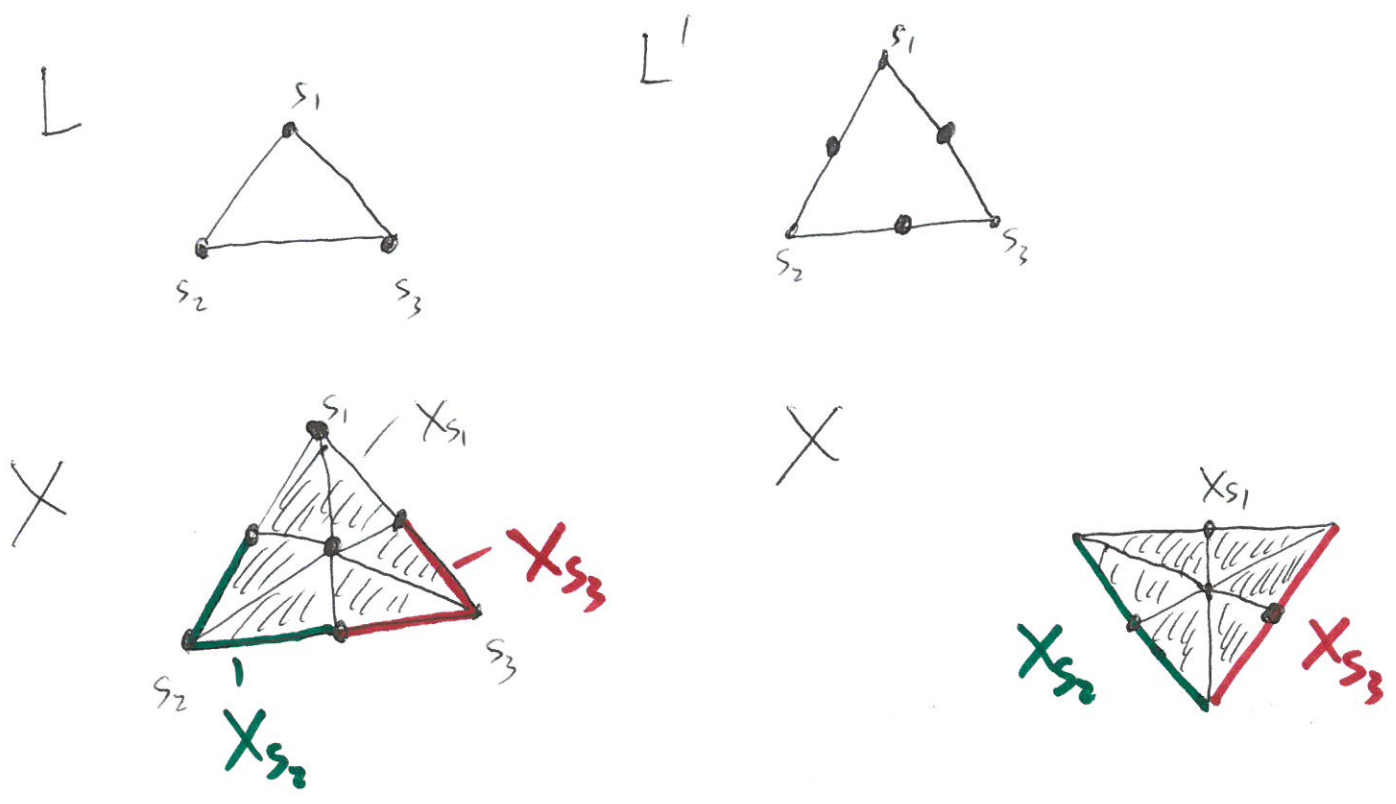


$$|s_1 s_3| = \infty$$

Examples: (1) $W = \langle s_1, s_2 \mid s_1^2 = s_2^2 = 1, (s_1 s_2)^m = 1, 2 \leq m < \infty \rangle$



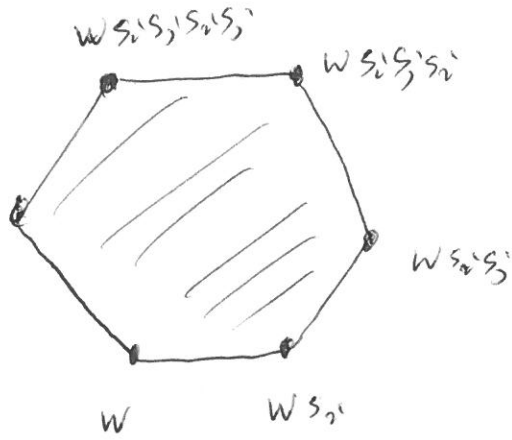
(2) $W = \langle s_1, s_2, s_3 \mid s_i^2 = 1, (s_i s_j)^3 = 1, i \neq j \rangle$



$$w_{ij} < \infty$$

(7)

$$w_{ij} = w_{s_1 s_2 s_3 s_4 s_5 s_6}$$



Case $w_{ij} = 3$

