

Introduction to Coxeter groups

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Coxeter systems

An example : Dihedral groups

Definition

Let D_n , called **dihedral group of order $2n$** be the group of all transformations leaving a regular n -gon unchanged.

D_n can be given a Coxeter group structure with :

- ▶ Coxeter matrix :

$$MC(D_n, S_n) = \begin{pmatrix} 1 & n \\ n & 1 \end{pmatrix}$$

- ▶ Coxeter graph :

