

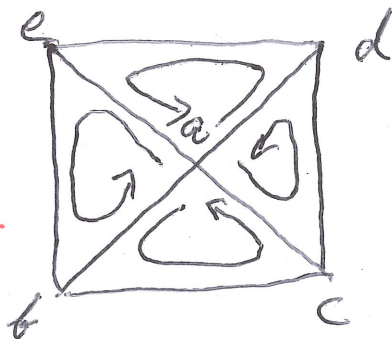
Addendum to Section V.3

An example



5 vertices
8 edges

$$\text{so } \dim H_1 = 1 + E - V = 1 + 8 - 5 = 4$$



order the
vertices
alphabetically

A basis for $H_1(X, \mathbb{R}^{\omega}, \mathbb{F})$ is given by

$$\begin{aligned} ab + bc - ac \\ ac + cd - ad \\ ad + de - ae \\ ae - be - ab. \end{aligned}$$

In this case the corresponding elements

$$\left. \begin{aligned} [ab + bc - ac] \\ [ac + cd - ad] \\ [ad + de - ae] \\ [ae - be - ab] \end{aligned} \right\} \text{ in } \pi_1(X, a) \text{ are free generators.}$$

for that group.