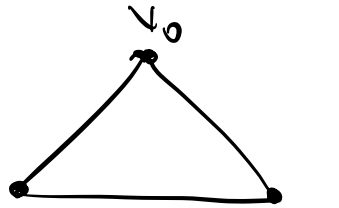
$\sigma = v_0 v_1 v_2$



$K_\sigma = \{$ faces of $\sigma\}$

$C_0(K_\sigma) = \{ n_0 v_0 + n_1 v_1 + n_2 v_2 \mid n_i \in \mathbb{Z} \}$

free abelian group generated by 0 simplices

$\cong \mathbb{Z}_3$

$C_1(K_\sigma) = \{ n_0[v_0, v_1] + n_1[v_1 v_0] + n_2[v_0 v_2] + n_3[v_2, v_0] + n_4[v_1 v_2] + n_5[v_2 v_1]$ st $n_i \in \mathbb{Z}$

$\langle [v_0 v_1] + [v_1 v_0], [v_1 v_2] + [v_2 v_1], [v_0 v_2] + [v_2 v_0] \rangle$

in $C_2(K_\sigma)$ $\quad [v_0 v_1] = -[v_1 v_0]$

$C_1(K_\sigma) \cong \mathbb{Z}^3$ a basis

$\{[v_0, v_1], [v_0, v_2], [v_1 v_2]\}$ $\quad C_2(K_\sigma) \cong \mathbb{Z}$