$Z_1(K)$: $0 =$

$\partial_\rho (n_1 e_1 + n_2 e_2 + n_3 e_3 + n_4 e_4)$

$= (n_4 - n_1) V_1 + (n_1 - n_2) V_2$

$+ (n_2 - n_3) V_3 + (n_3 - n_4) V_4$

$\Leftrightarrow$

$n_4 - n_1 = 0$

$n_1 - n_2 = 0$

$n_2 - n_3 = 0$

$n_3 - n_4 = 0$

$\Leftrightarrow$

$n_1 = n_4 = n_2 = n_3$

$Z_1(K) = \{ n(e_1 + e_2 + e_3 + e_4) \mid n \in \mathbb{Z} \} \cong \mathbb{Z}$

$B_1(K)$: $\partial_2 C_2(K) = 0$

$\Rightarrow H_1(K) = \frac{Z_1(K)}{B_\rho(K)} = \mathbb{Z}$

$H_2(L) = \frac{Z_2(L)}{B_2(L)}$

$Z_2(L) = ?$

$0 = \partial_2 (n_1 \sigma_1 + n_2 \sigma_2)$

$= n_1 \partial_2 \sigma_1 + n_2 \partial_2 \sigma_2 =$

$n_1 ([V_2 V_3] - [V_1 V_3]$

$+ [V_1 V_2]) + n_2 ([V_3 V_4]$

$- [V_1 V_4] + [V_1 V_3]) =$

$n_1 (e_2 - e_5 + e_1) +$

$n_2 (e_3 - e_4 + e_5)$

$=$

$n_1 e_2 + (n_2 - n_1) e_5$

$+ n_1 e_1 + + n_2 e_3 +$

$- n_2 e_4 = 0$

$\Rightarrow n_1 = n_2 = 0$

$H_2(L) = 0 / B_2(L) = 0$