

12 頂点 E-cycle 付 DS-diagrams

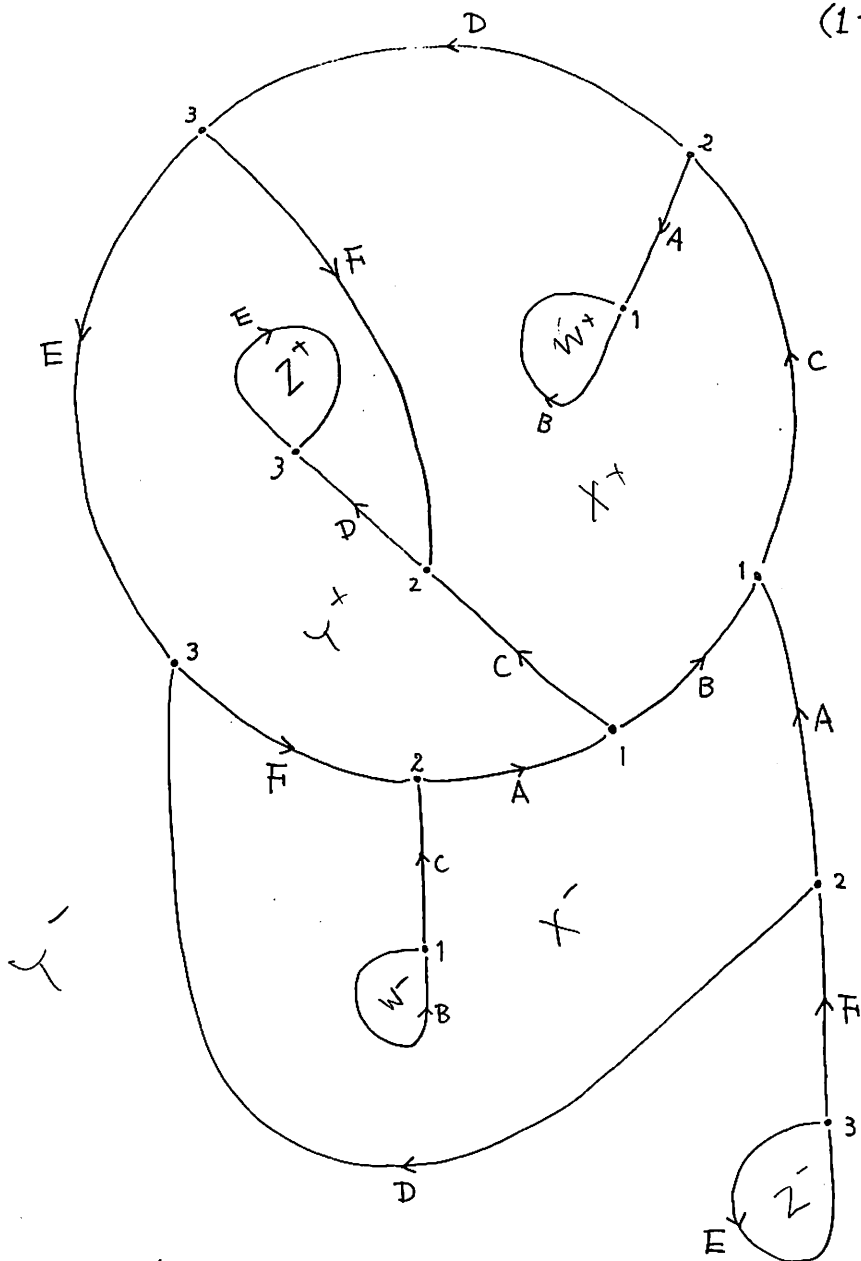
慶応大.理工.石井 一平

12 頂点の DS-diagrams で E-cycle を持ち、orientable manifold を表わすものをすべて挙げる。

注意

1. singularity-data (cf. 数理研講究録 563) としては、実現可能であっても diagram が非連結となるものは除く。
2. 互いに、DS-diagram として同じでも異なる E-cycles をとれる場合はこれらの E-cycle 2つを重複して挙げてある。

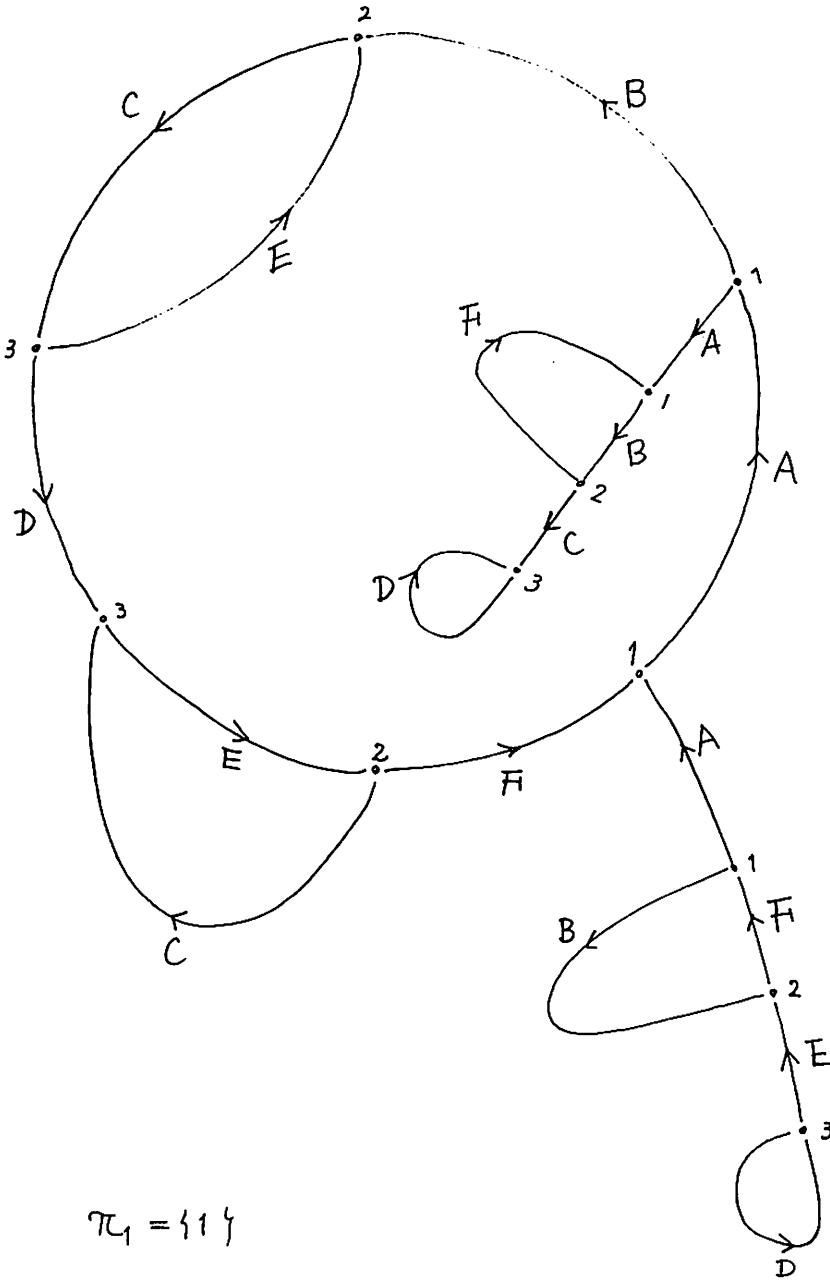
(1-1)



$$\pi_1 = \{1\}$$

$$\mathcal{G}_2 = \bigcirc \bigcirc \bigcirc \bigcirc$$

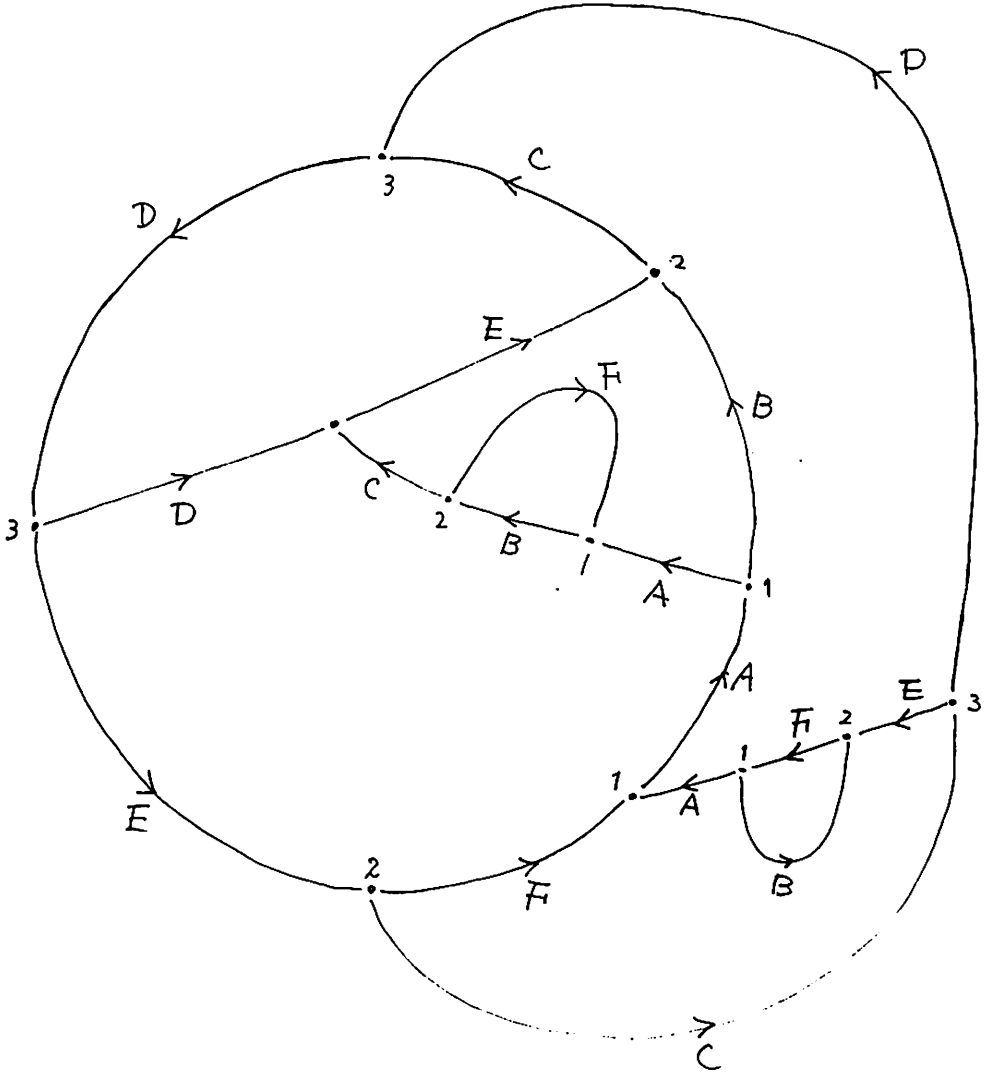
(1-2)



$\pi_1 = \{1\}$

$\mathcal{G}_2 = \bigcirc \bigcirc \bigcirc \bigcirc$

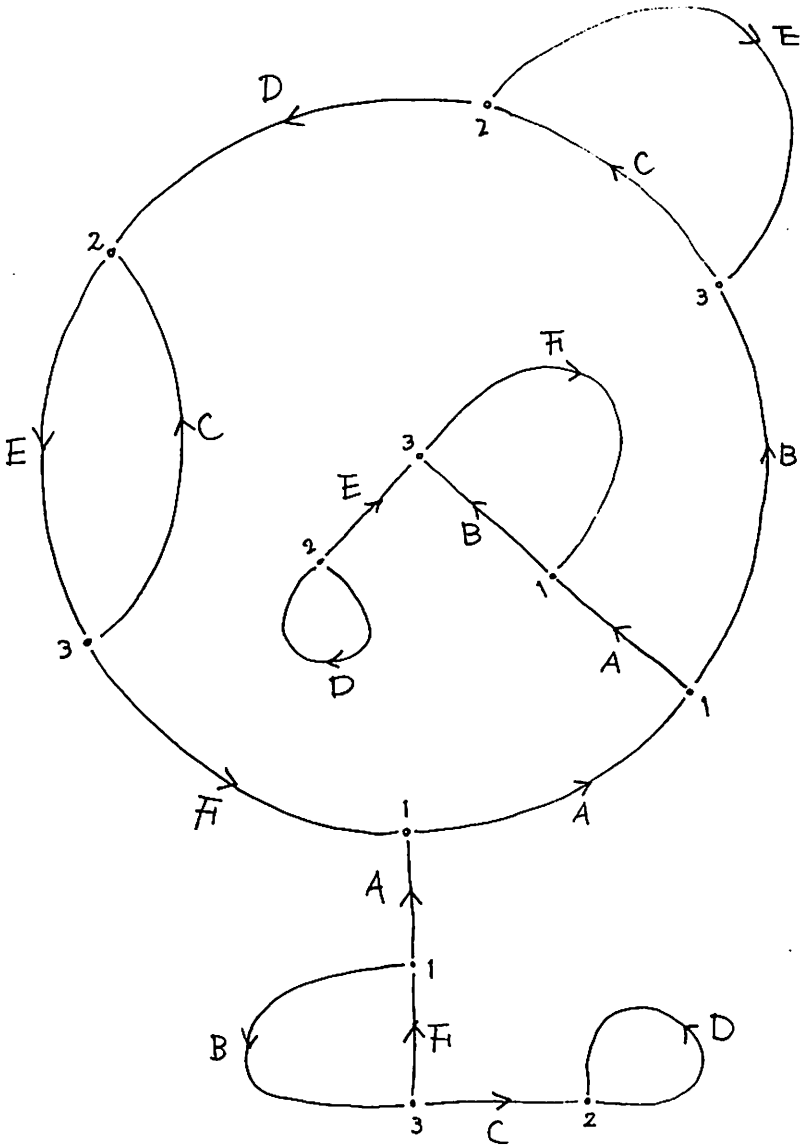
(1-3)



$$\pi_1 = \{1\}$$

$$G_2 = \bigcirc \bigcirc \bigcirc \bigcirc$$

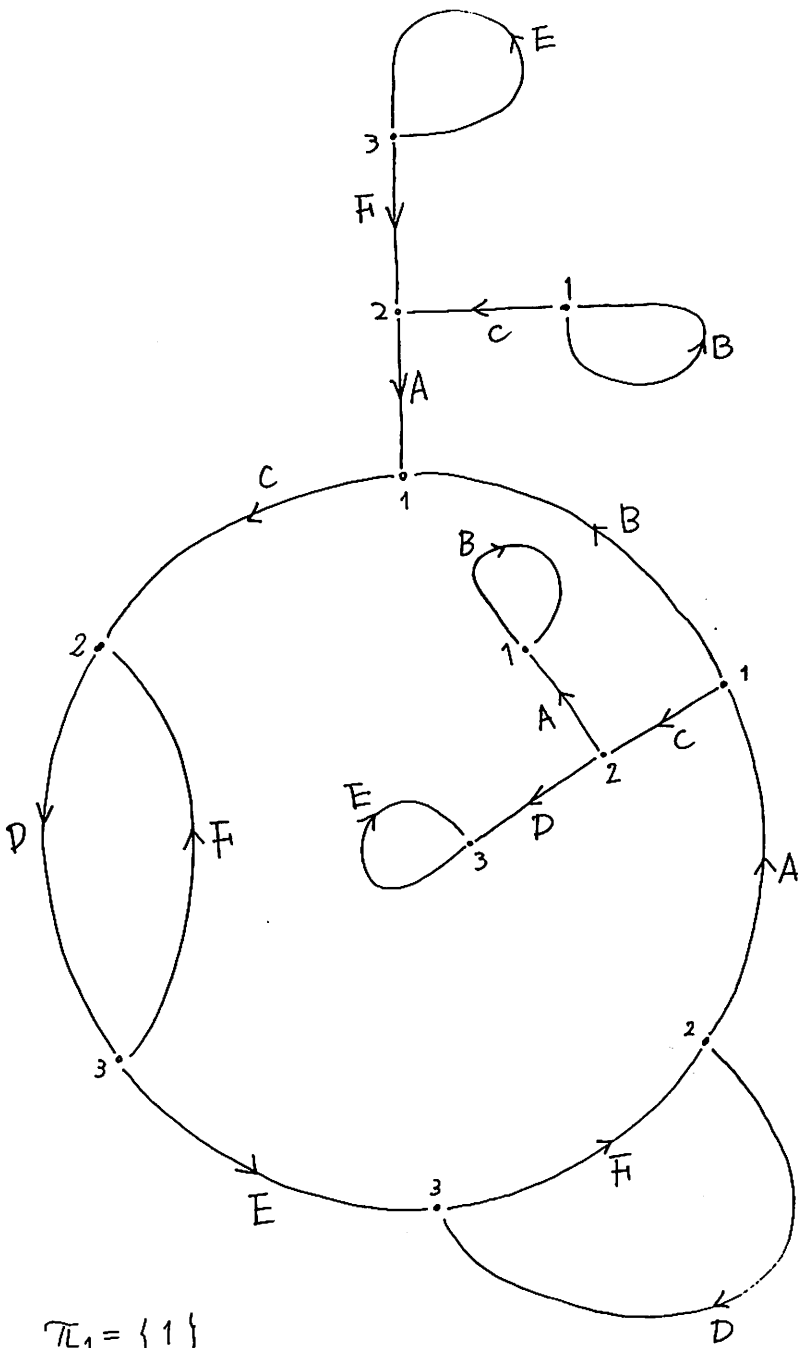
(1-4)



$$\pi_1 = \{1\}$$

$$\mathcal{G}_2 = \text{○○○○}$$

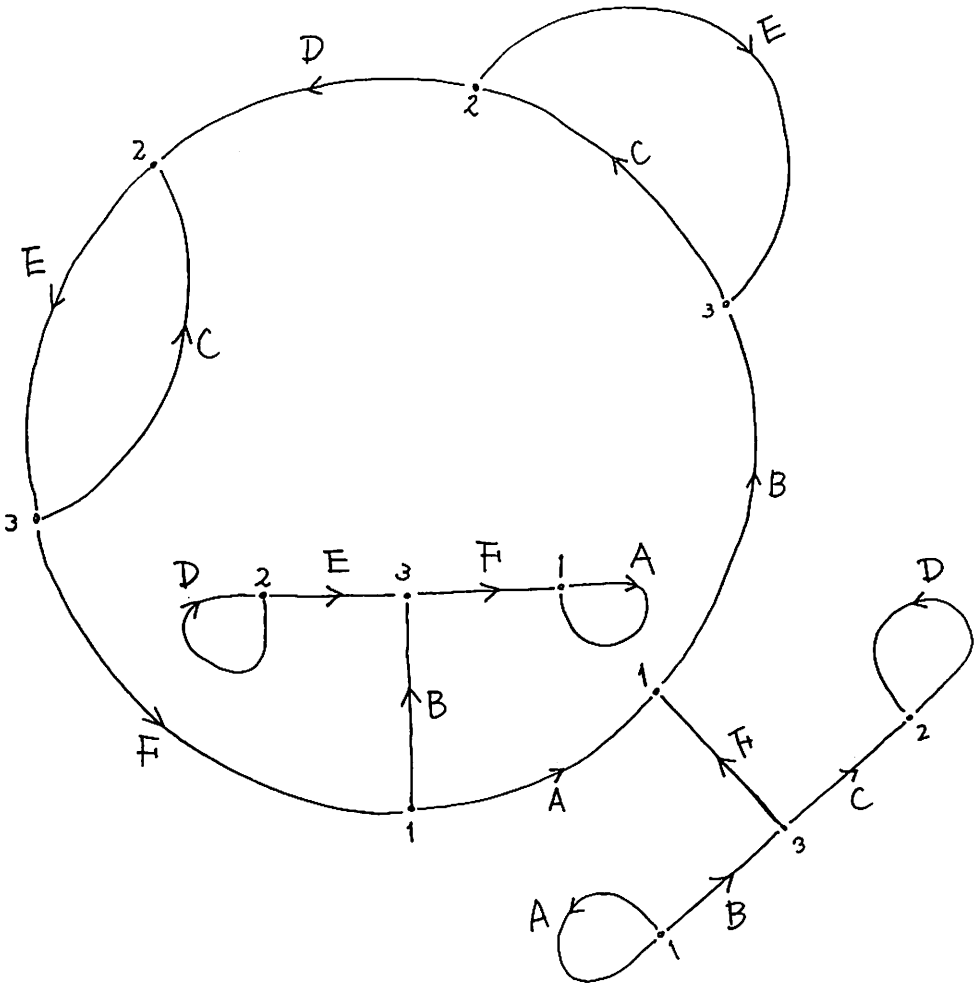
(1-5)



$$\pi_1 = \{1\}$$

$$\mathcal{G}_2 = \text{○○○○}$$

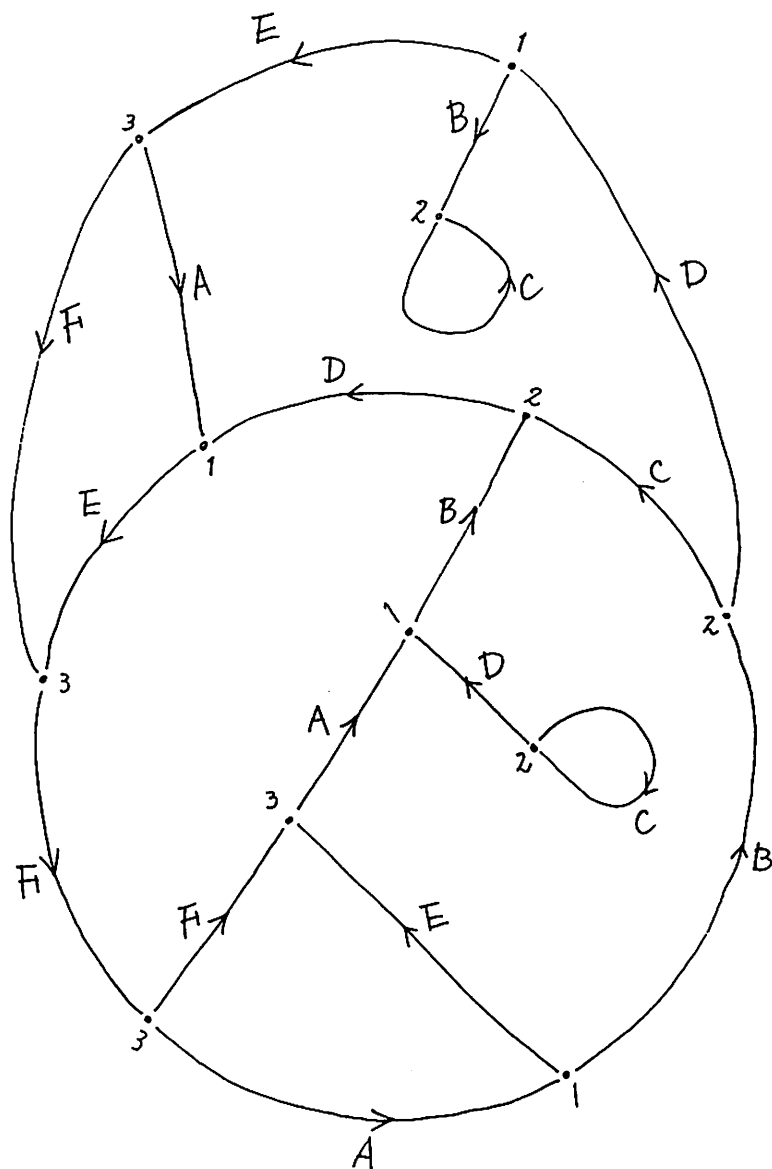
(1-6)



$$\pi_1 = \{1\}$$

$$\mathcal{G}_2 = \bigcirc \bigcirc \bigcirc \bigcirc$$

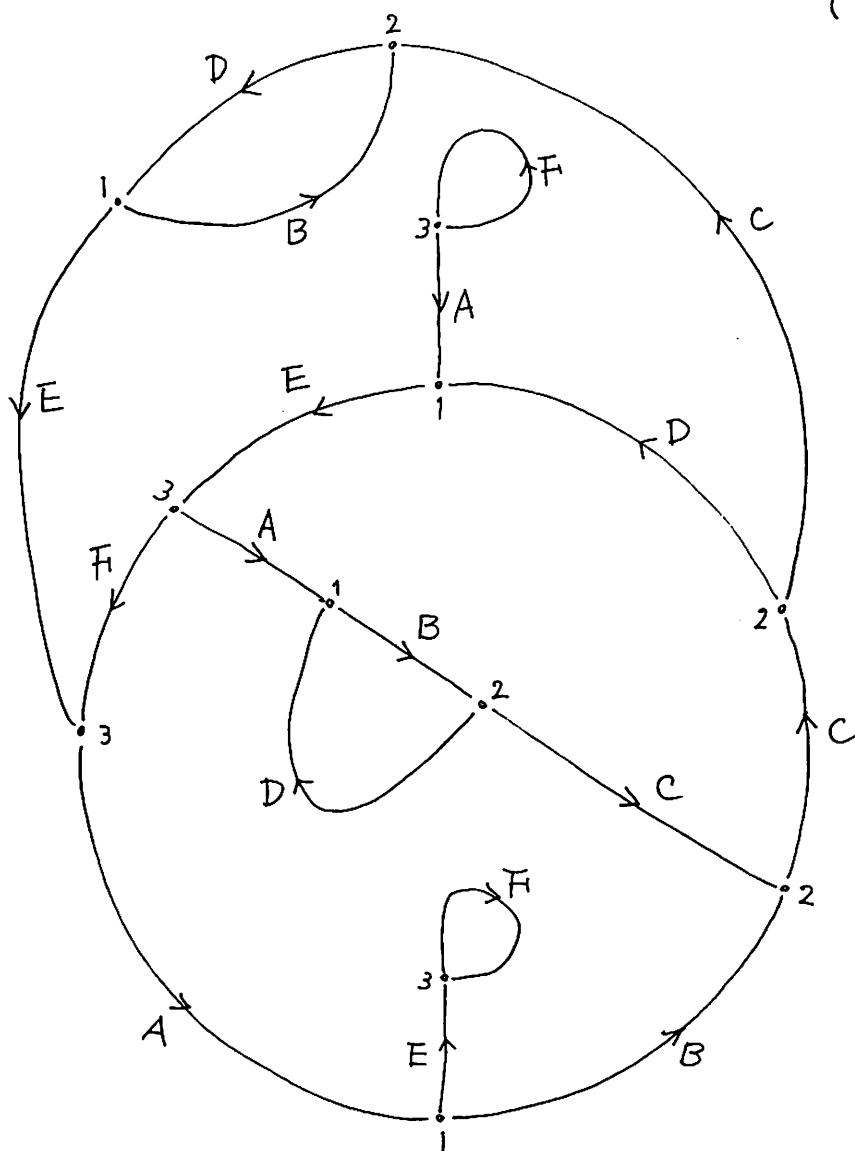
(1-7)



$$\pi_1 = \{1\}$$

$$\tilde{S}_2 = \text{○○○○}$$

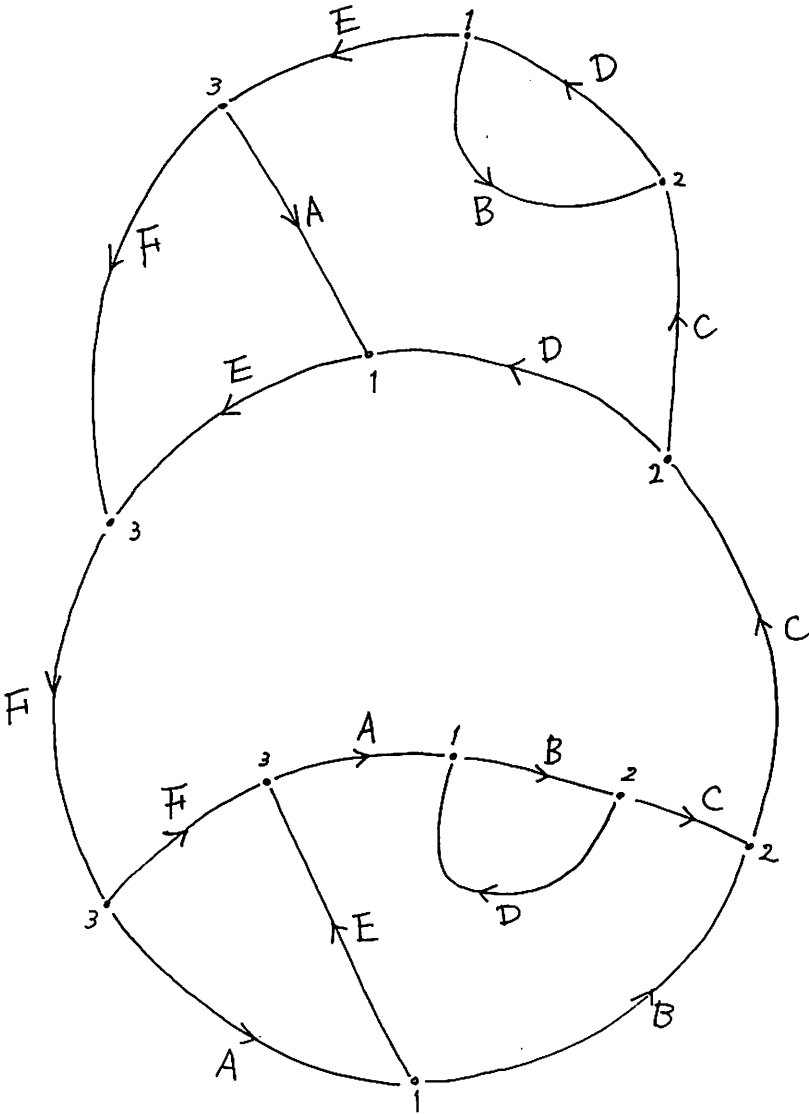
(1-8)



$$\pi_1 = \{1\}$$

$$\mathcal{G}_2 = \text{○○○○}$$

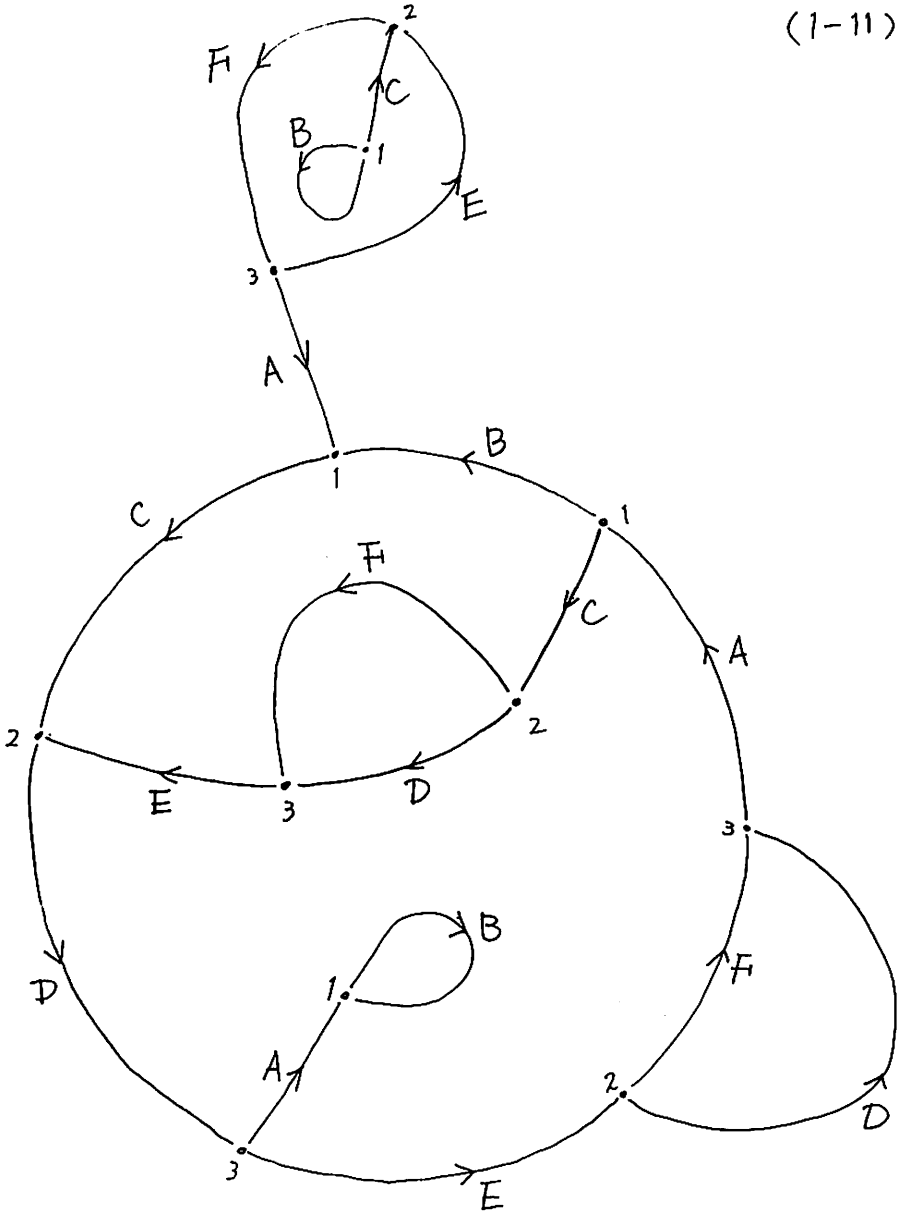
(1-9)



$$\pi_1 = \{1\}$$

$$\mathcal{G}_2 = \bigcirc \bigcirc \bigcirc \bigcirc$$

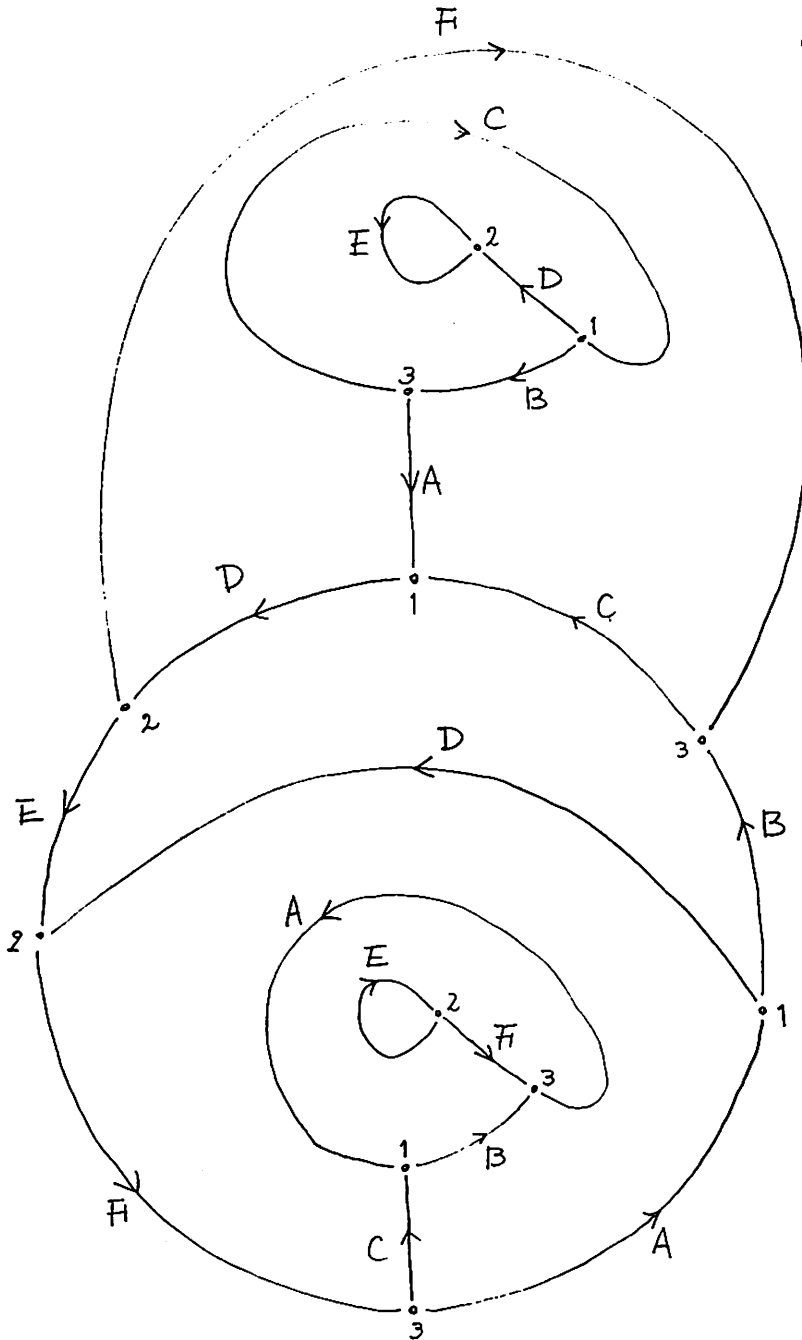
(1-11)



$$\pi_1 = \{1\}$$

$$\mathcal{G}_2 = \text{C} \cup \text{C}$$

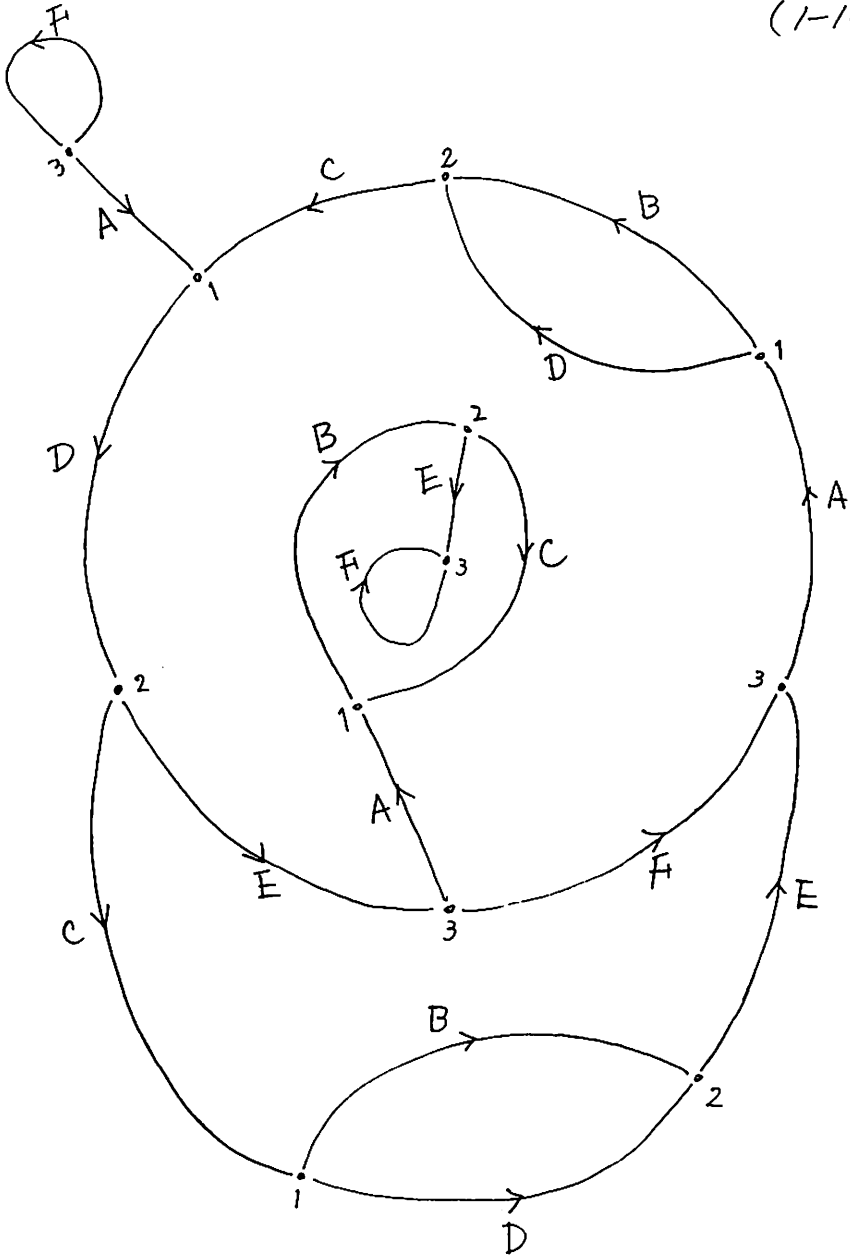
(1-12)



$\pi_1 = \{1\}$

$\pi_2 =$

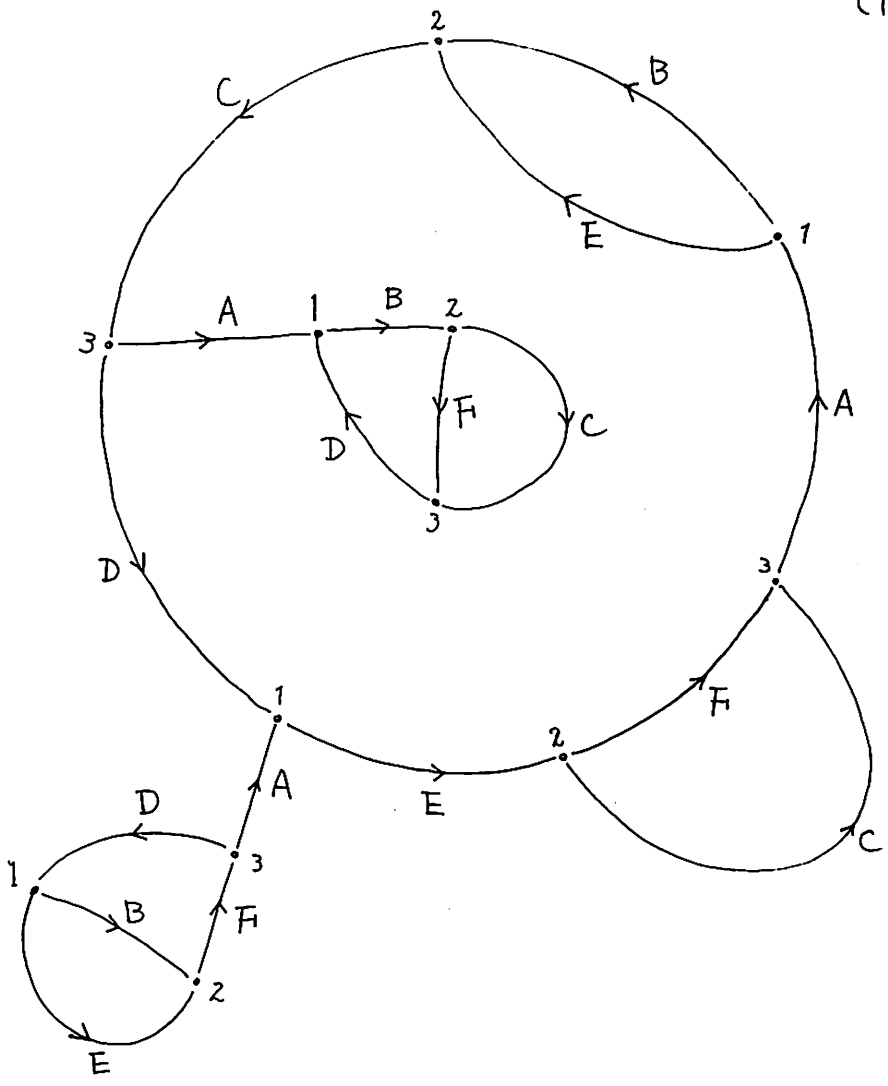
(1-14)



$$\pi_1 = \{1\}$$

$$\mathcal{G}_2 = \text{two circles}$$

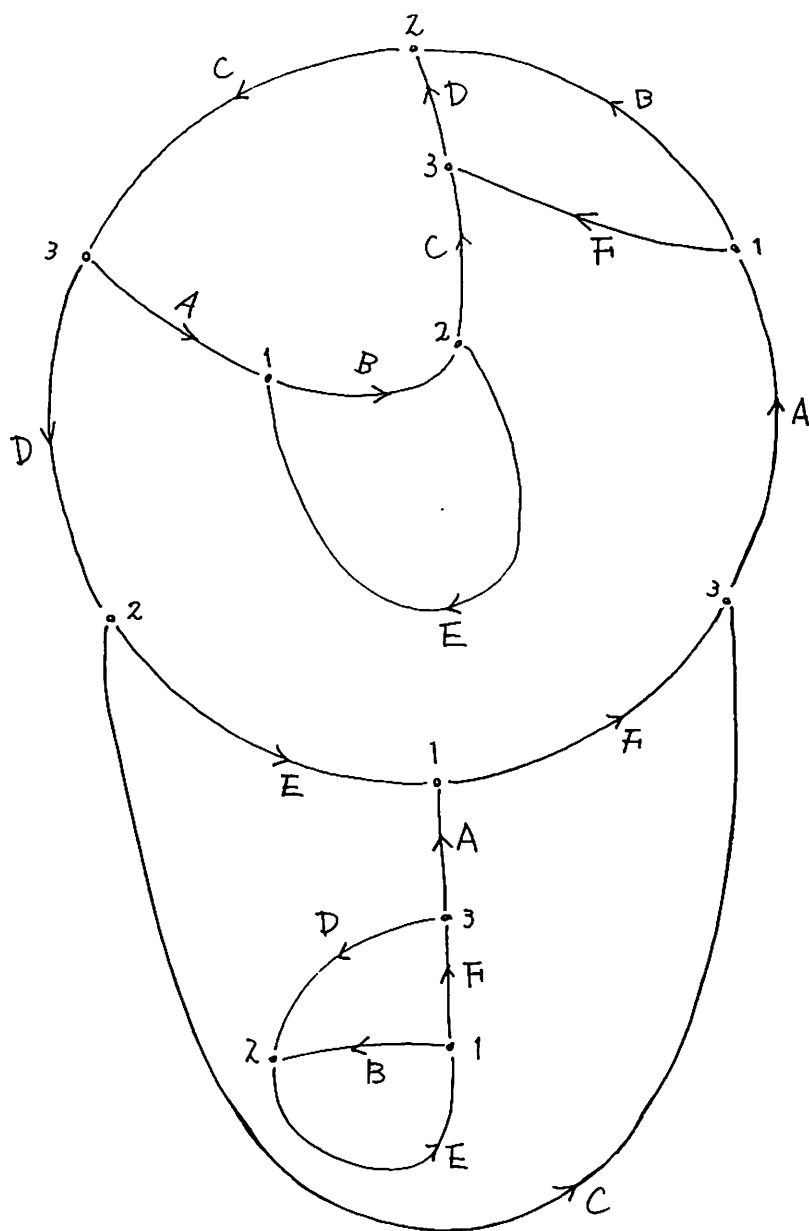
(1-15)



$$\pi_1 = \{1\}$$

$$\mathcal{G}_2 = \text{triangle}$$

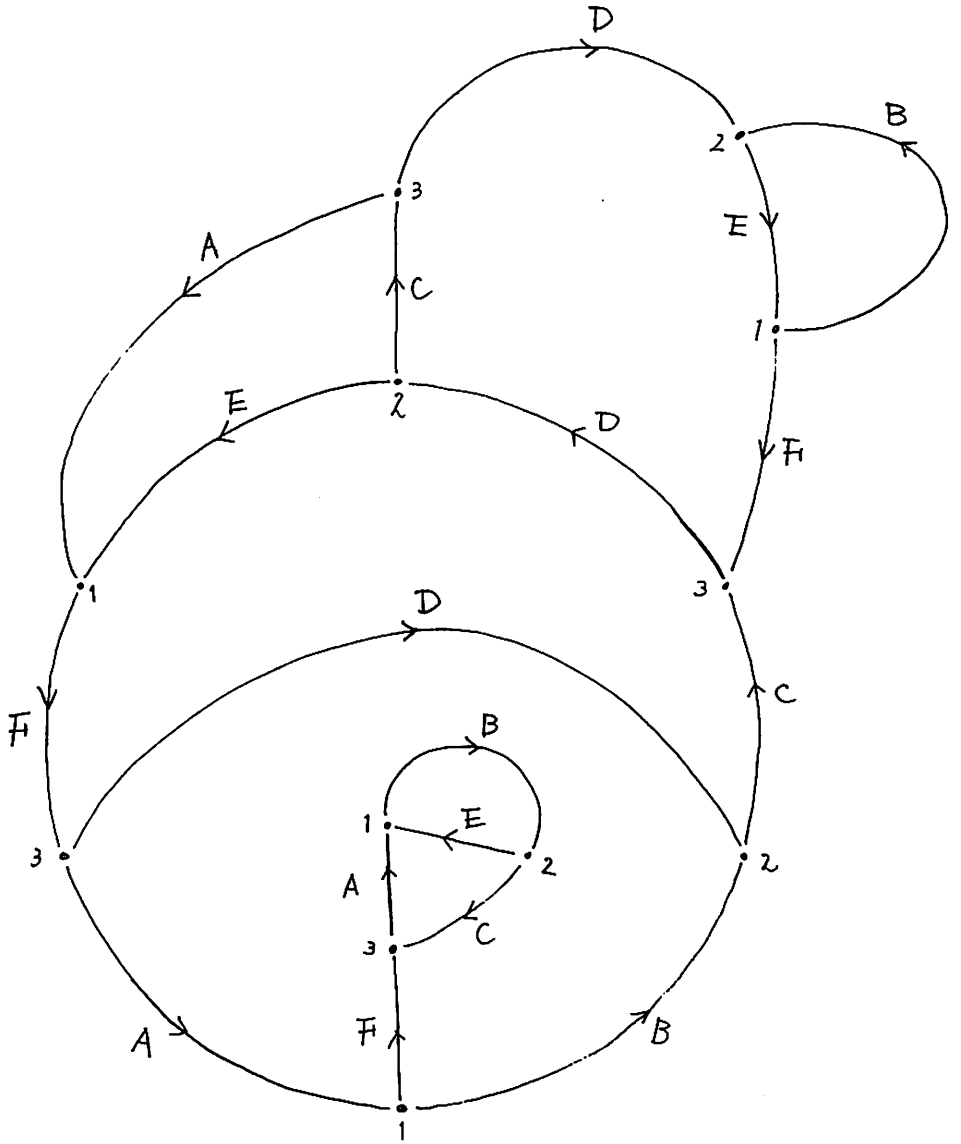
(1-16)



$\pi_1 = \{1\}$

$G_2 =$

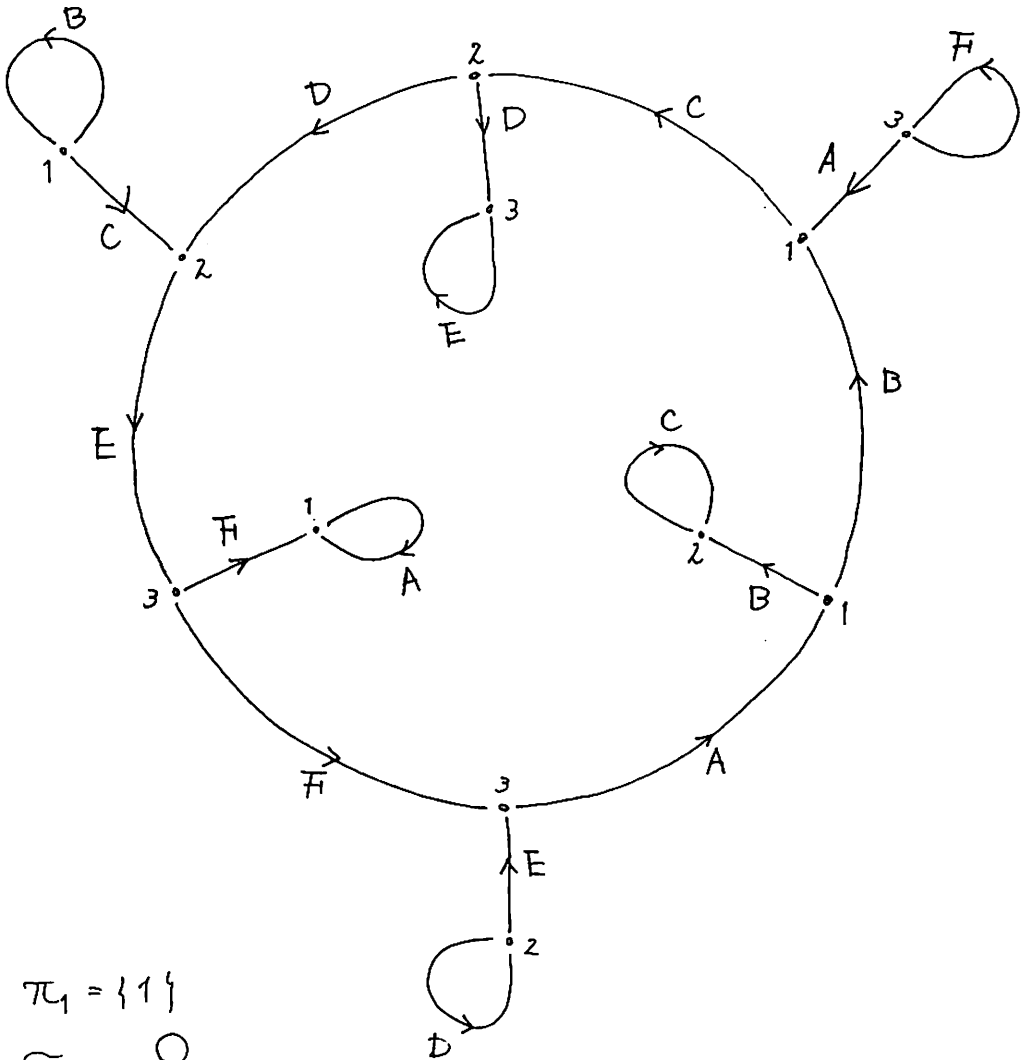
(1-17)



$$\pi_1 = \{1\}$$

$$\mathcal{G}_2 = \text{triangle}$$

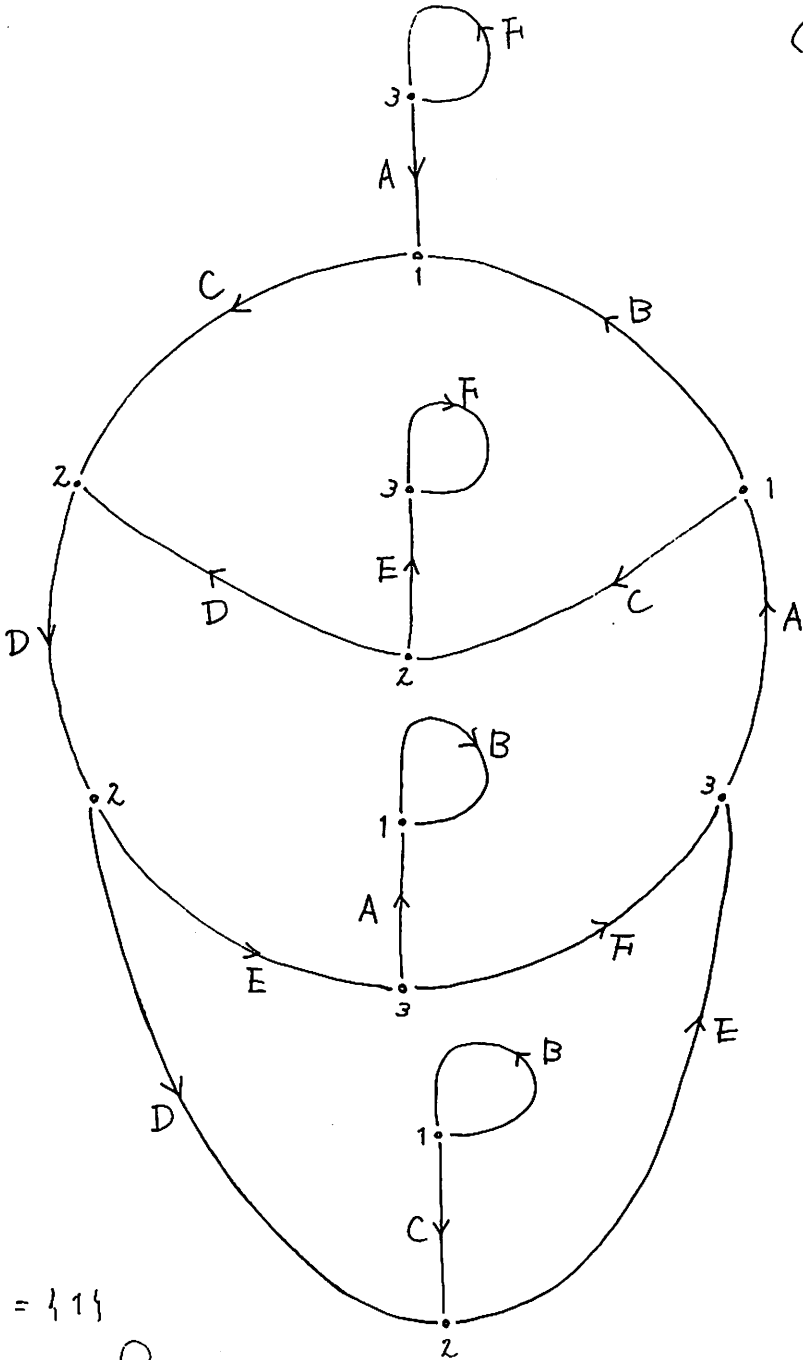
(1-18)



$\pi_1 = \{1\}$

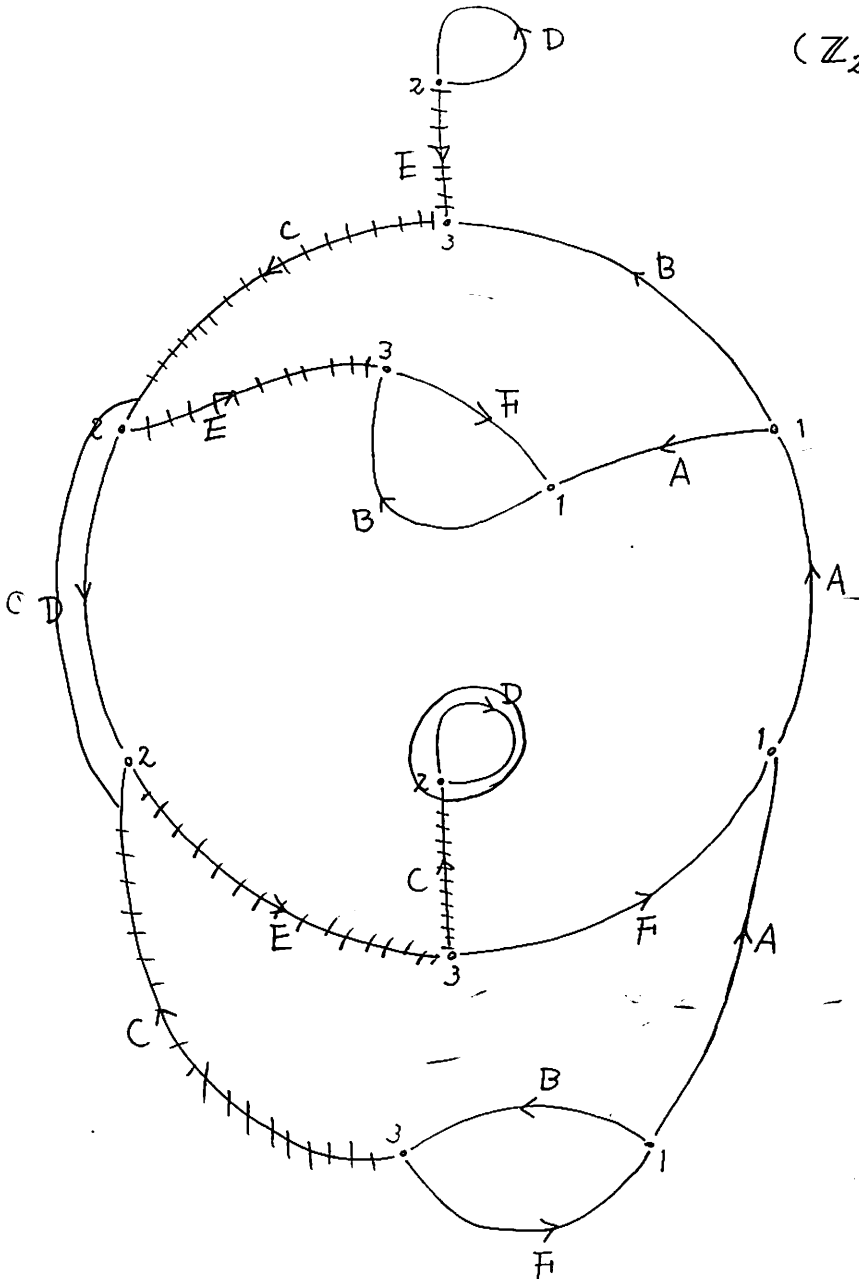
$G_3 =$

(1-19)



$$\pi_1 = \{1\}$$

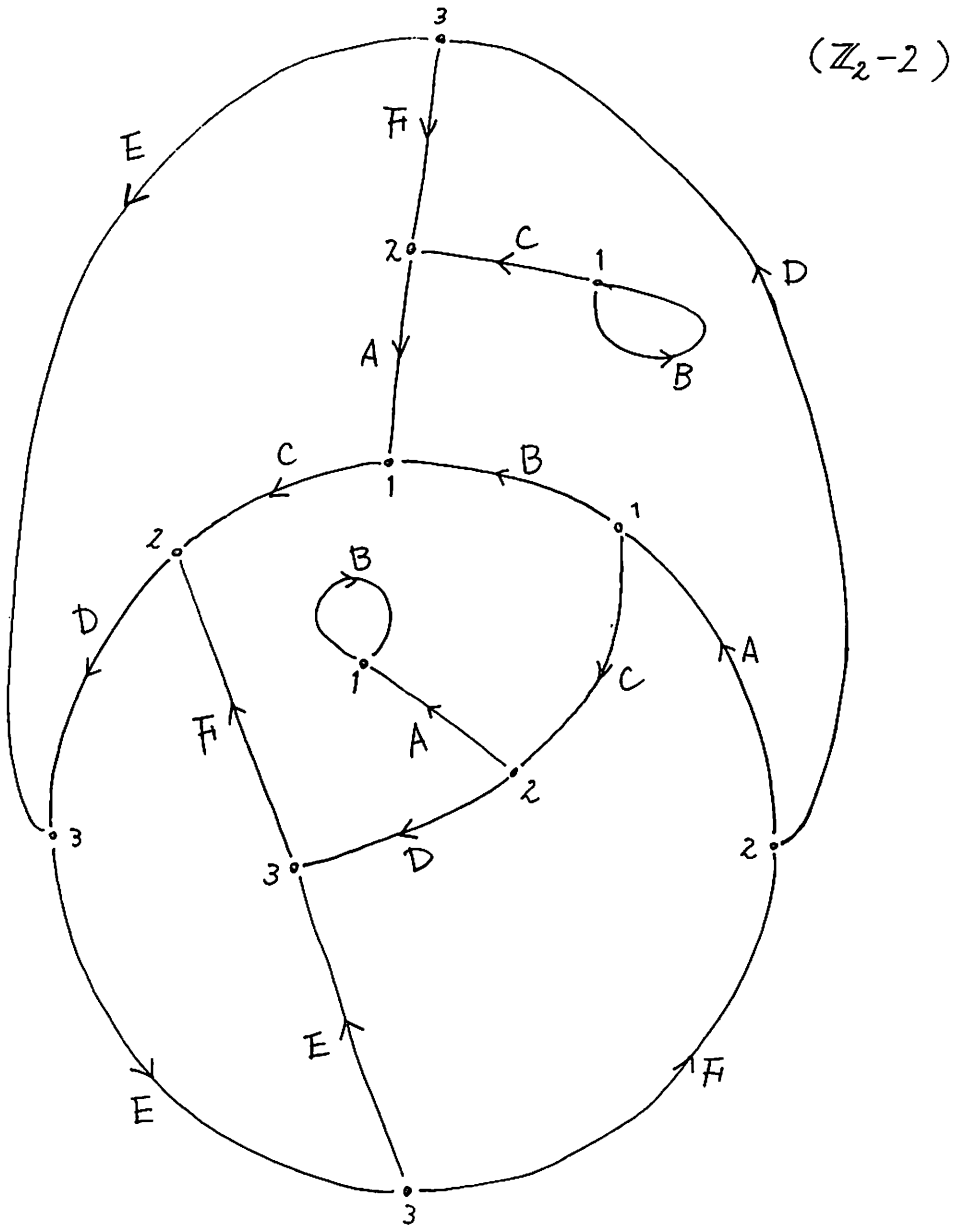
$$\mathcal{G}_2 =$$



$\pi_1 = \mathbb{Z}_2$

$\mathcal{C}_2 = \bigcirc \bigcirc \bigcirc \bigcirc$

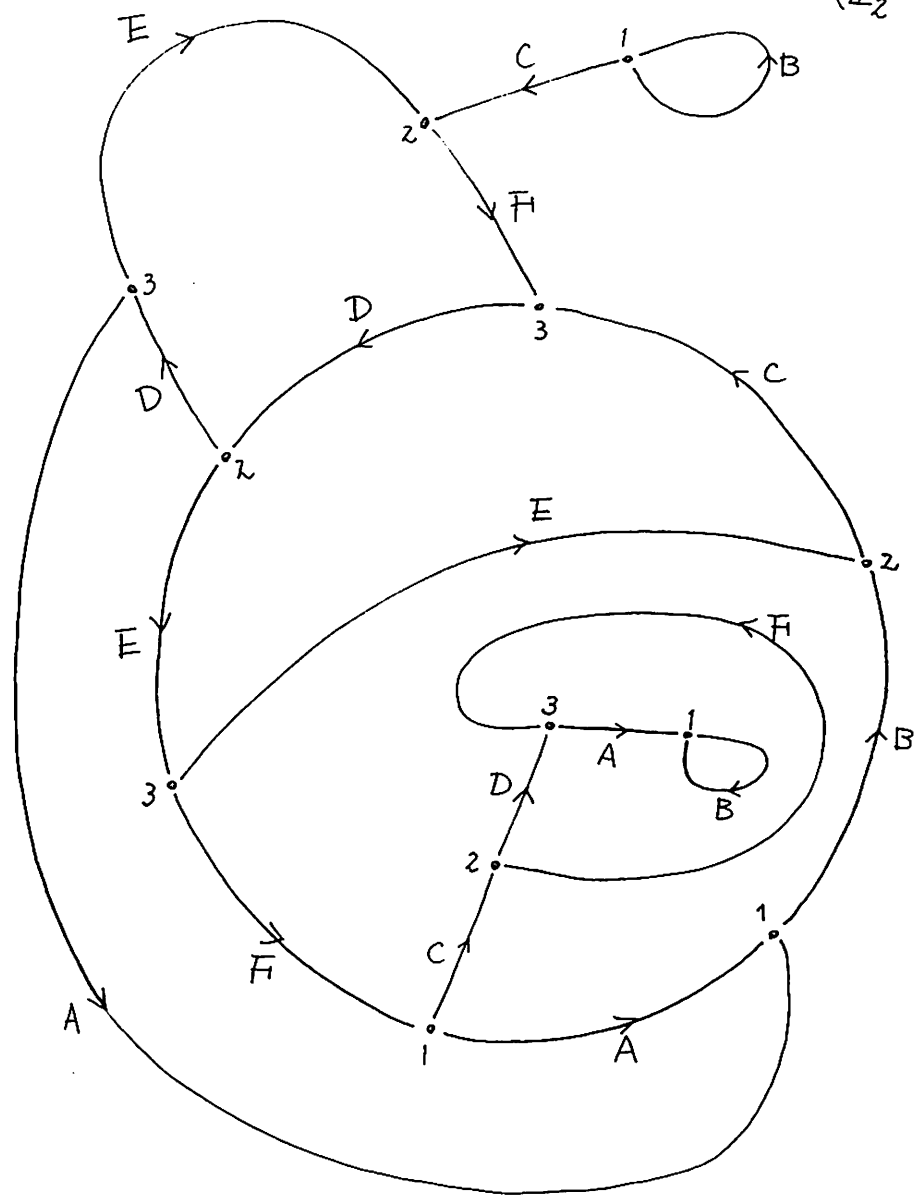
F, A



$$\pi_1 = \mathbb{Z}_2$$

$$\mathcal{G}_2 = \bigcirc \bigcirc \bigcirc \bigcirc$$

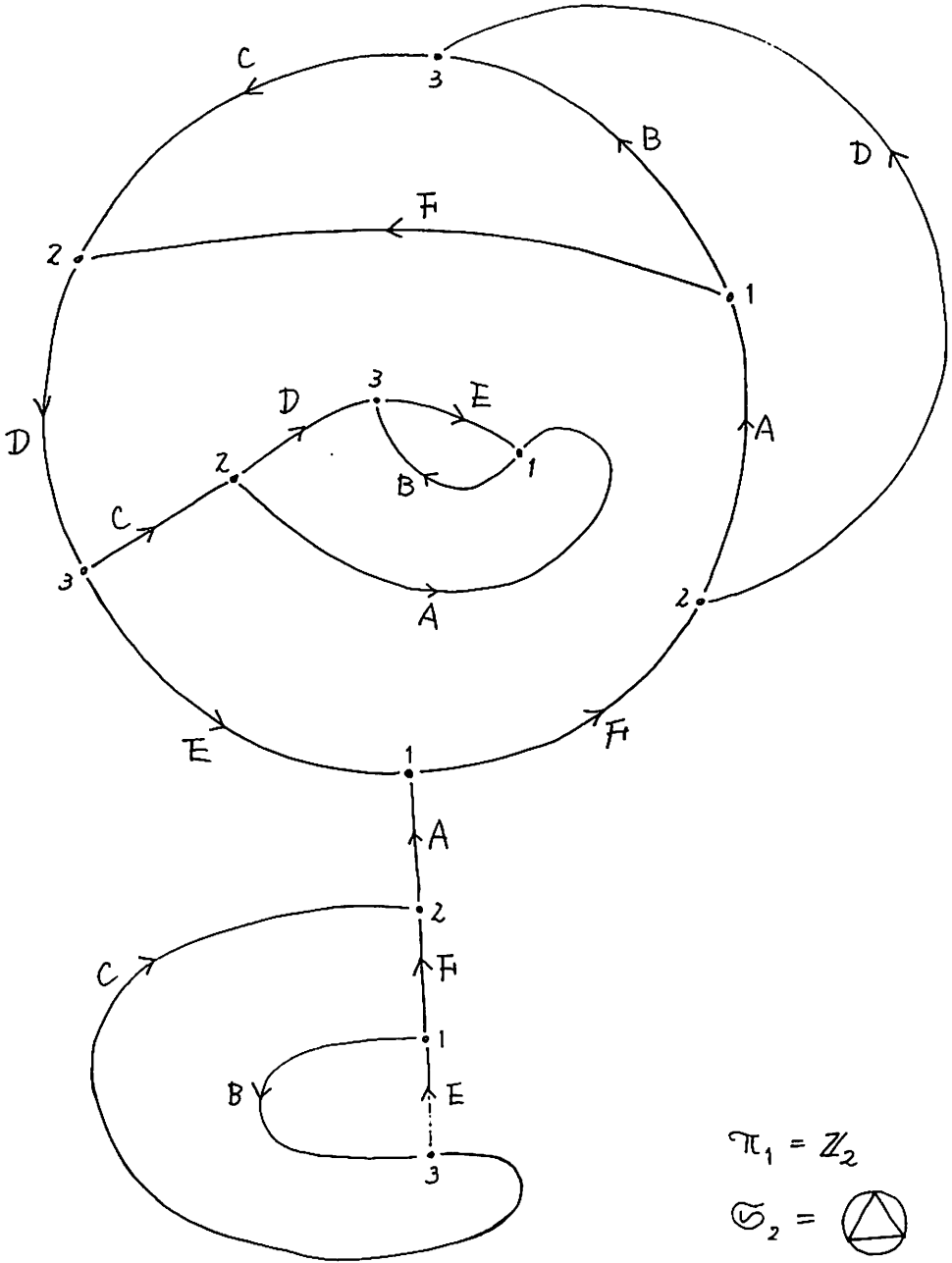
(\mathbb{Z}_2-3)



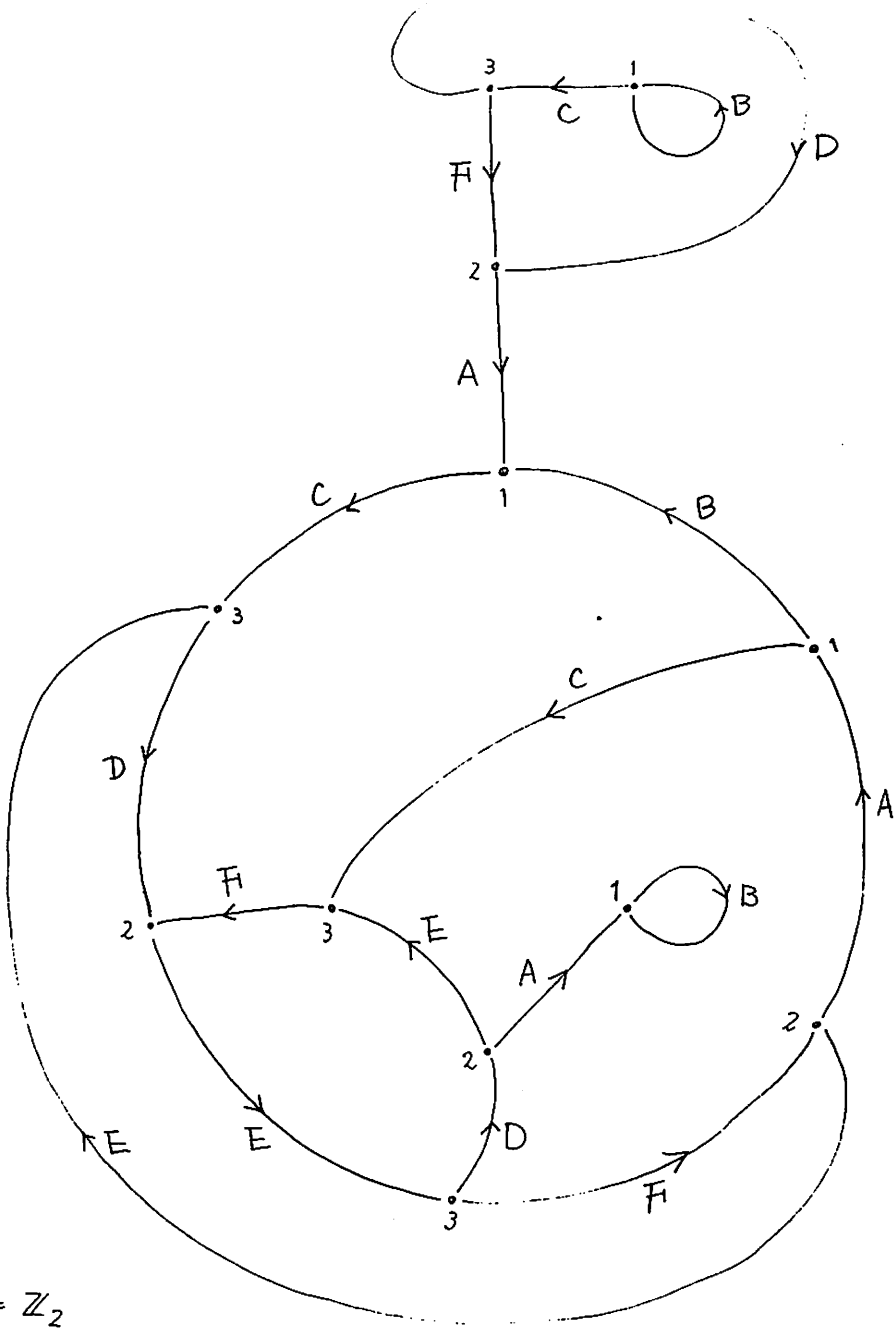
$\pi_1 = \mathbb{Z}_2$

$\mathcal{G}_2 = \text{two overlapping circles}$

$(\mathbb{Z}_2 - 4)$



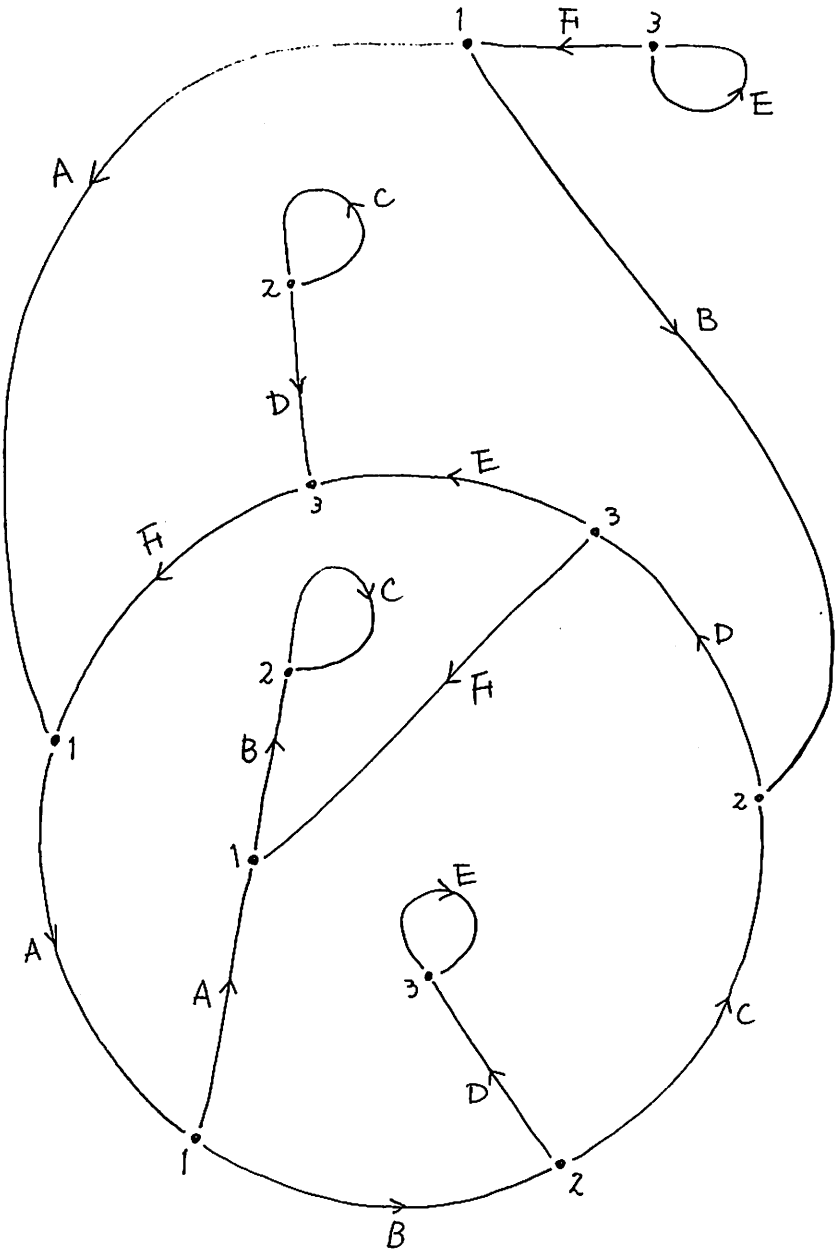
(E₂-5)



$\pi_1 = \mathbb{Z}_2$

$\mathcal{G}_2 =$

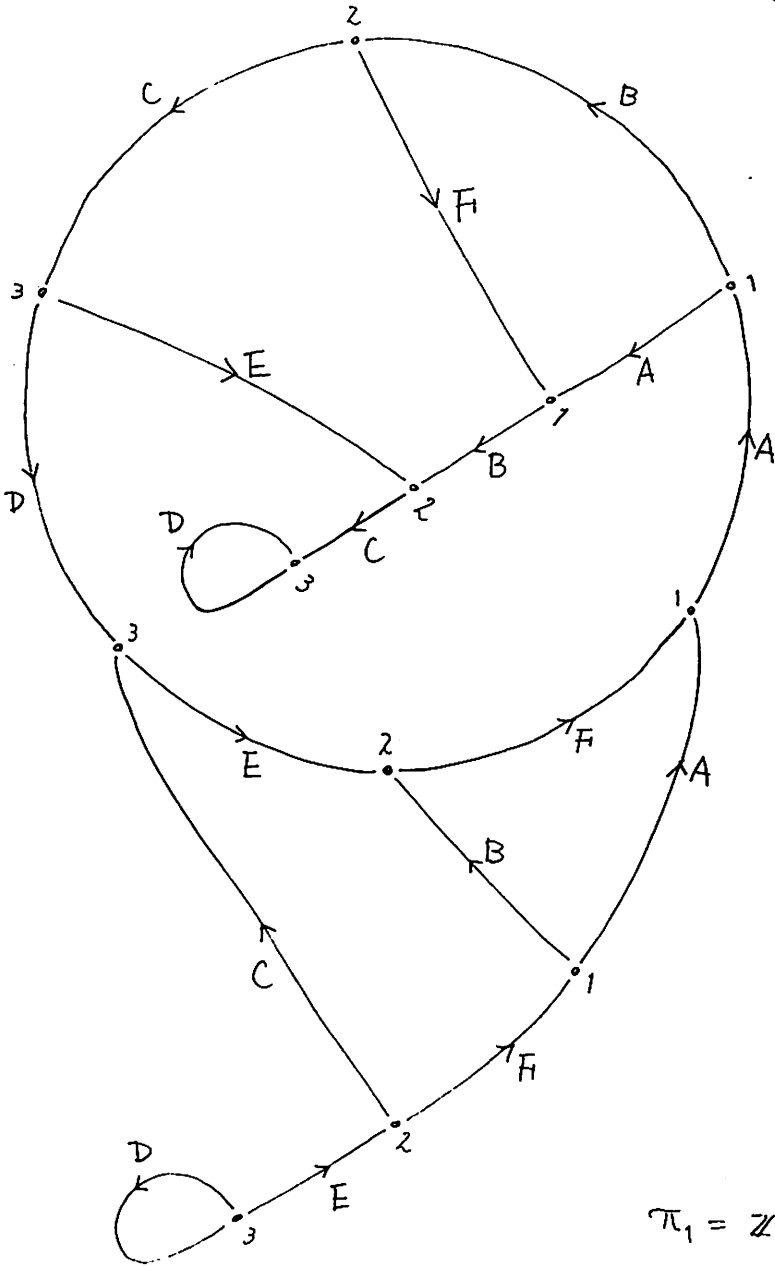
(\mathbb{Z}_2 -6)



$\pi_1 = \mathbb{Z}_2$

$\mathbb{G}_2 = \text{C}_2 \cup \text{C}_2$

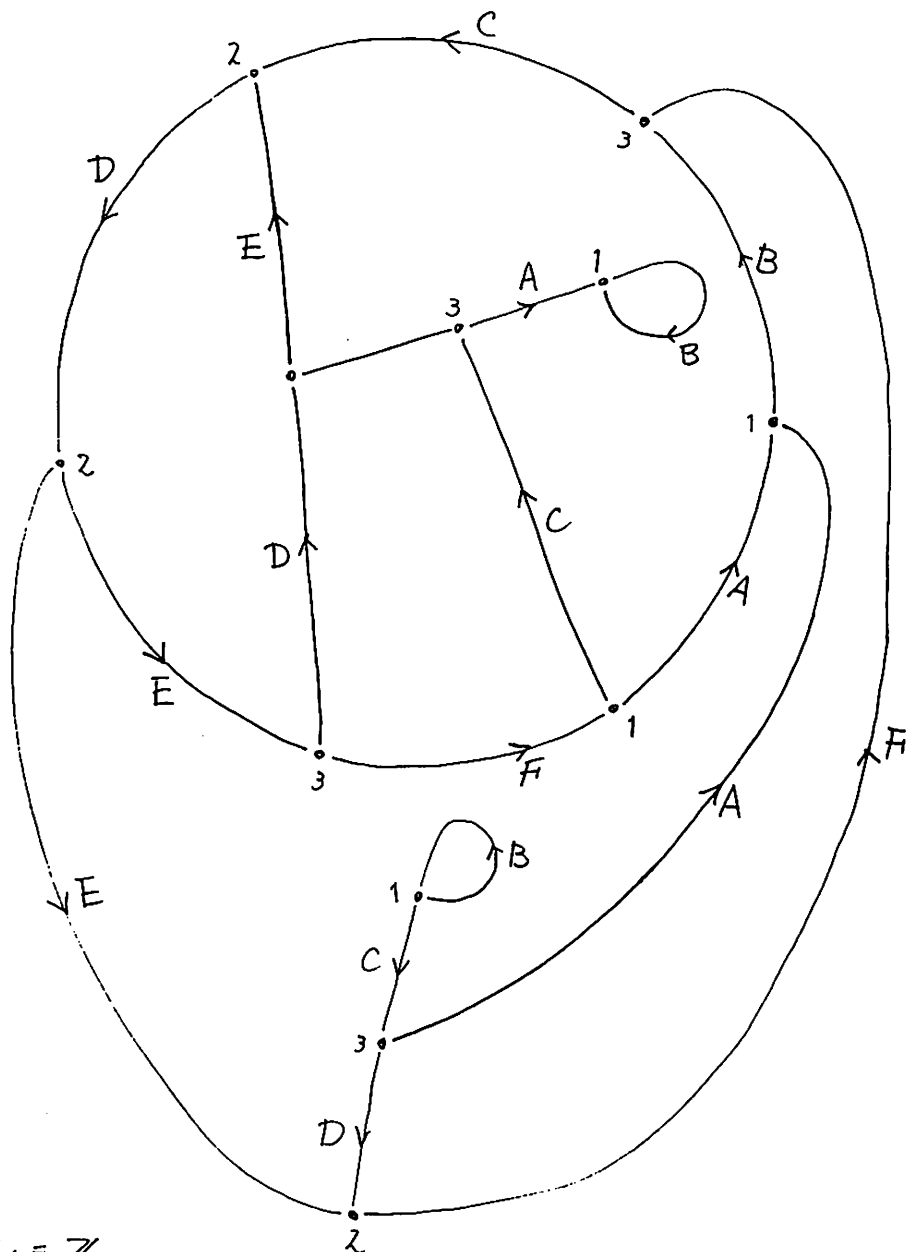
$(Z_3 - 1)$



$$\pi_1 = Z_3$$

$$\mathcal{G}_2 = \bigcirc \bigcirc \bigcirc \bigcirc$$

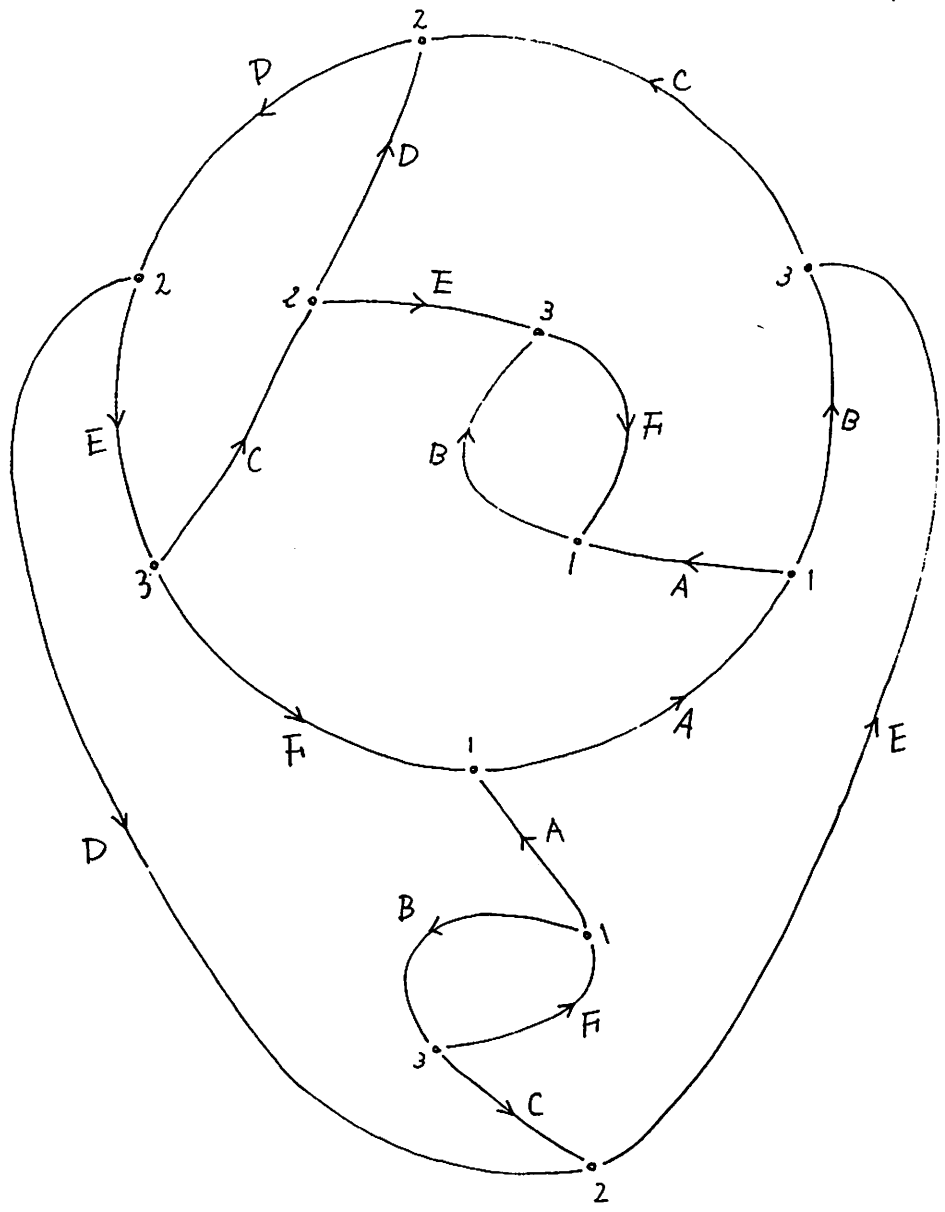
$(\mathbb{Z}_3 - 2)$



$\pi_1 = \mathbb{Z}_3$

$\mathcal{G}_2 = \bigcirc \bigcirc \bigcirc \bigcirc$

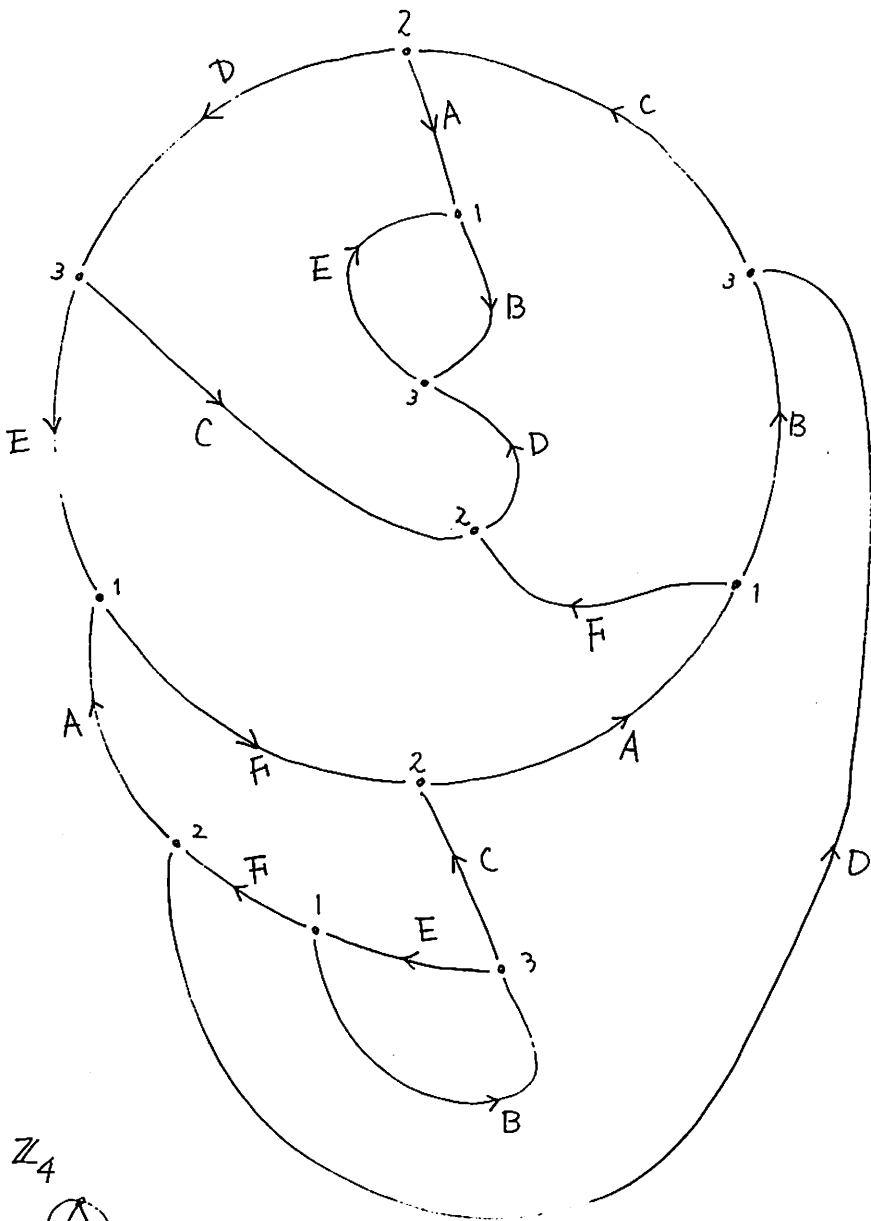
$(\mathbb{Z}_4 - 1)$



$\pi_1 = \mathbb{Z}_4$

$\mathbb{G}_2 = \text{oooo}$

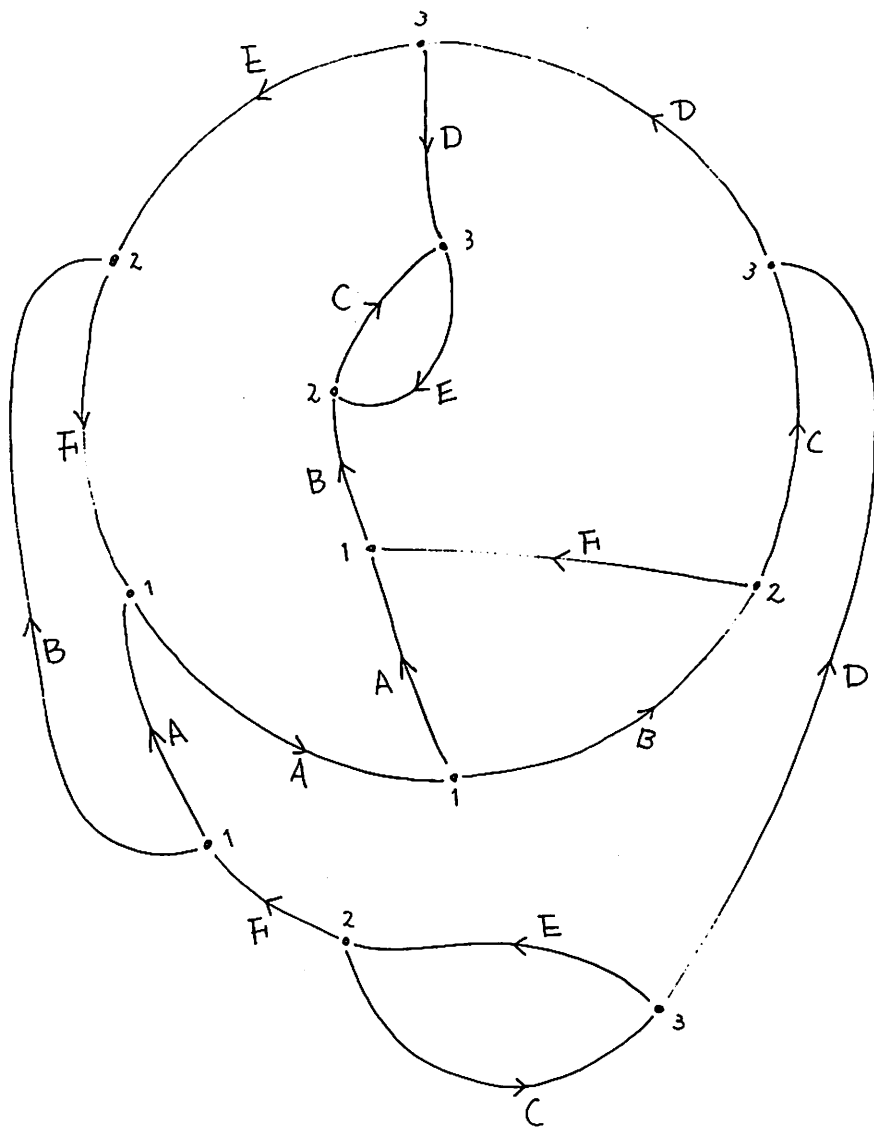
$(\mathbb{Z}_4 - 2)$



$\pi_1 = \mathbb{Z}_4$

$\mathcal{G}_2 = \triangle$

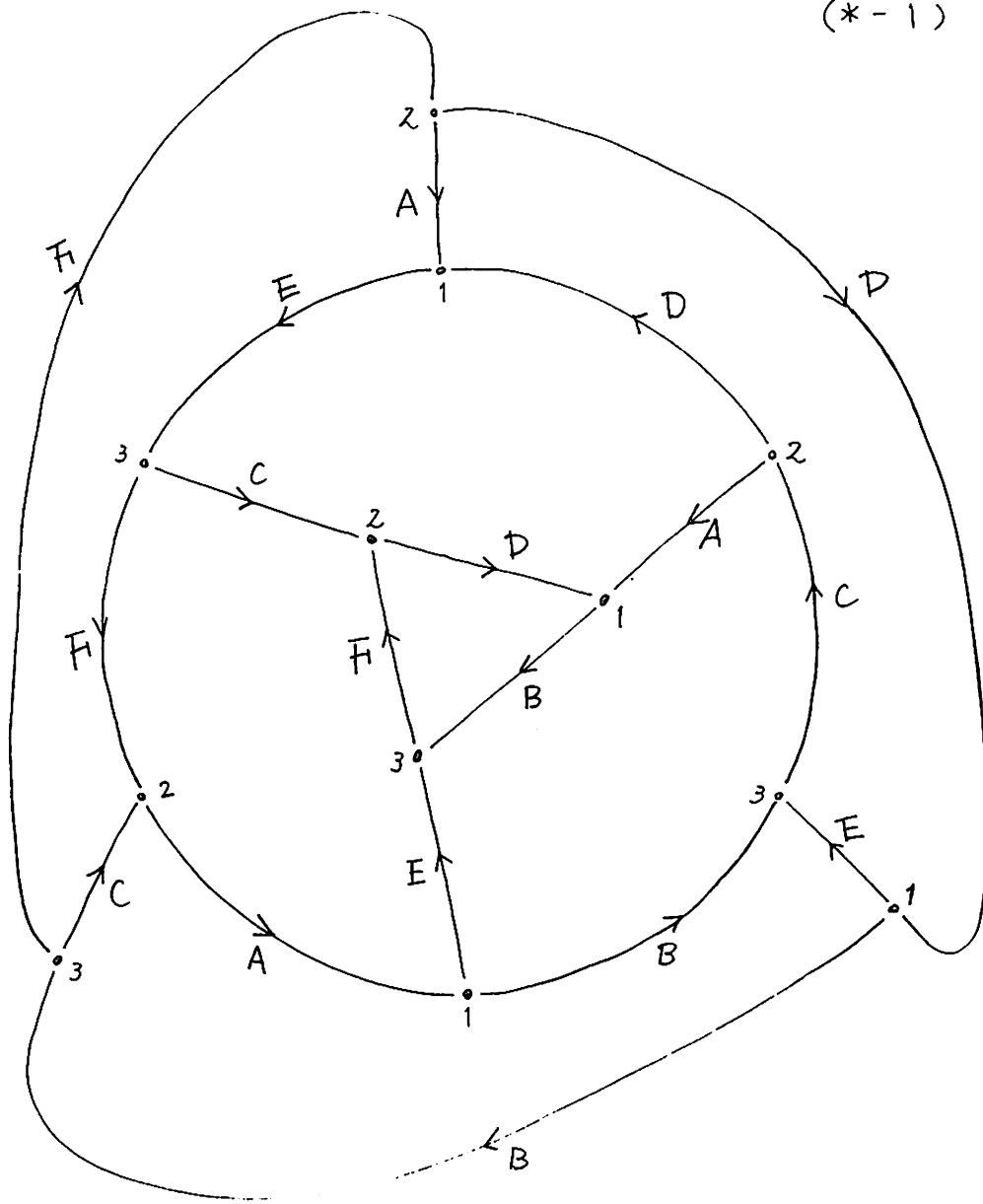
$(\mathbb{Z}_5 - 1)$



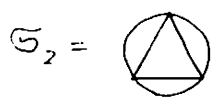
$\pi_1 = \mathbb{Z}_5$

$\mathcal{G}_2 = \text{O O O O O}$

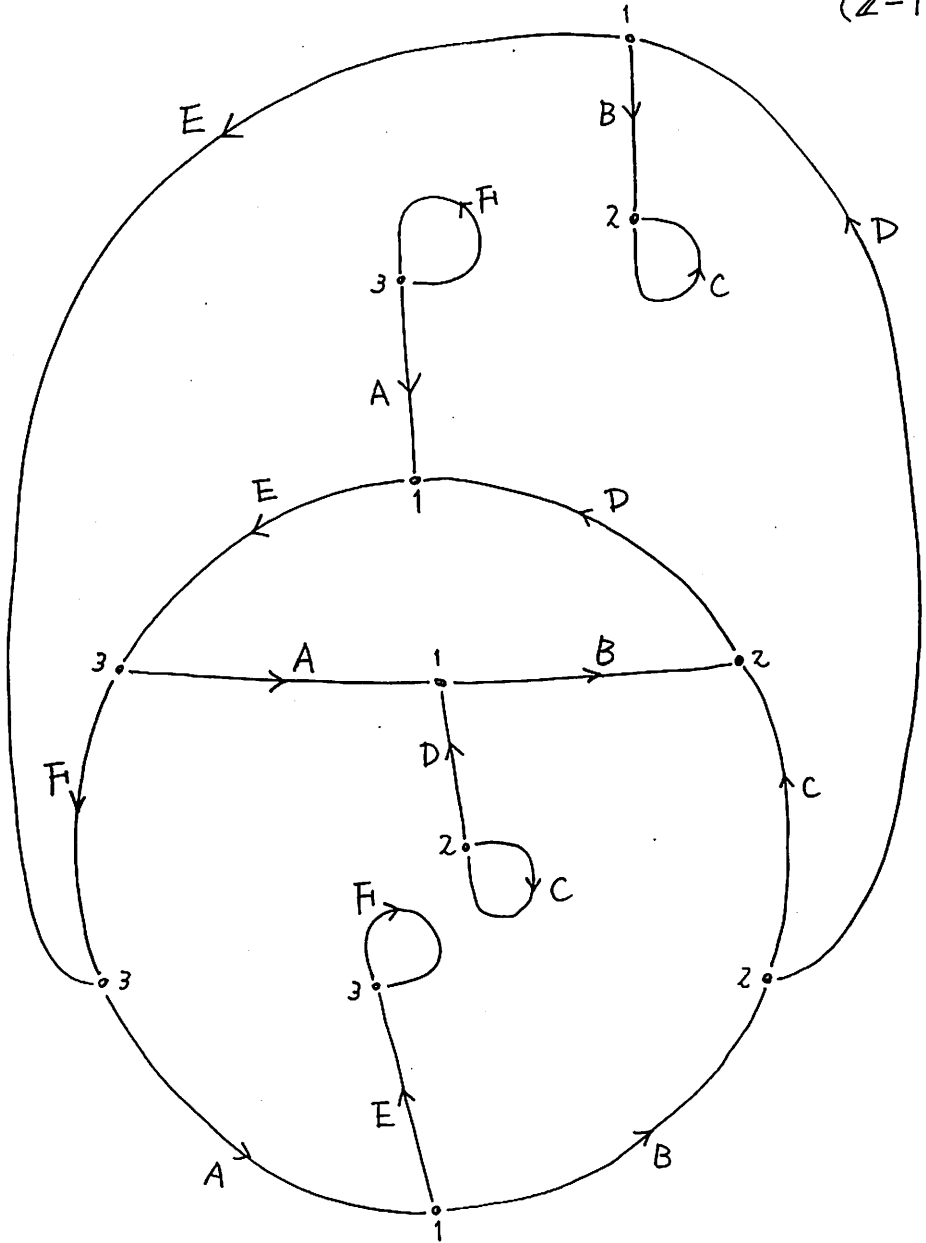
(* - 1)



$$\pi_1 = \langle g_1, g_2; g_1 g_2 g_1 g_2^{-1}, g_2 g_1 g_2 g_1^{-1} \rangle$$



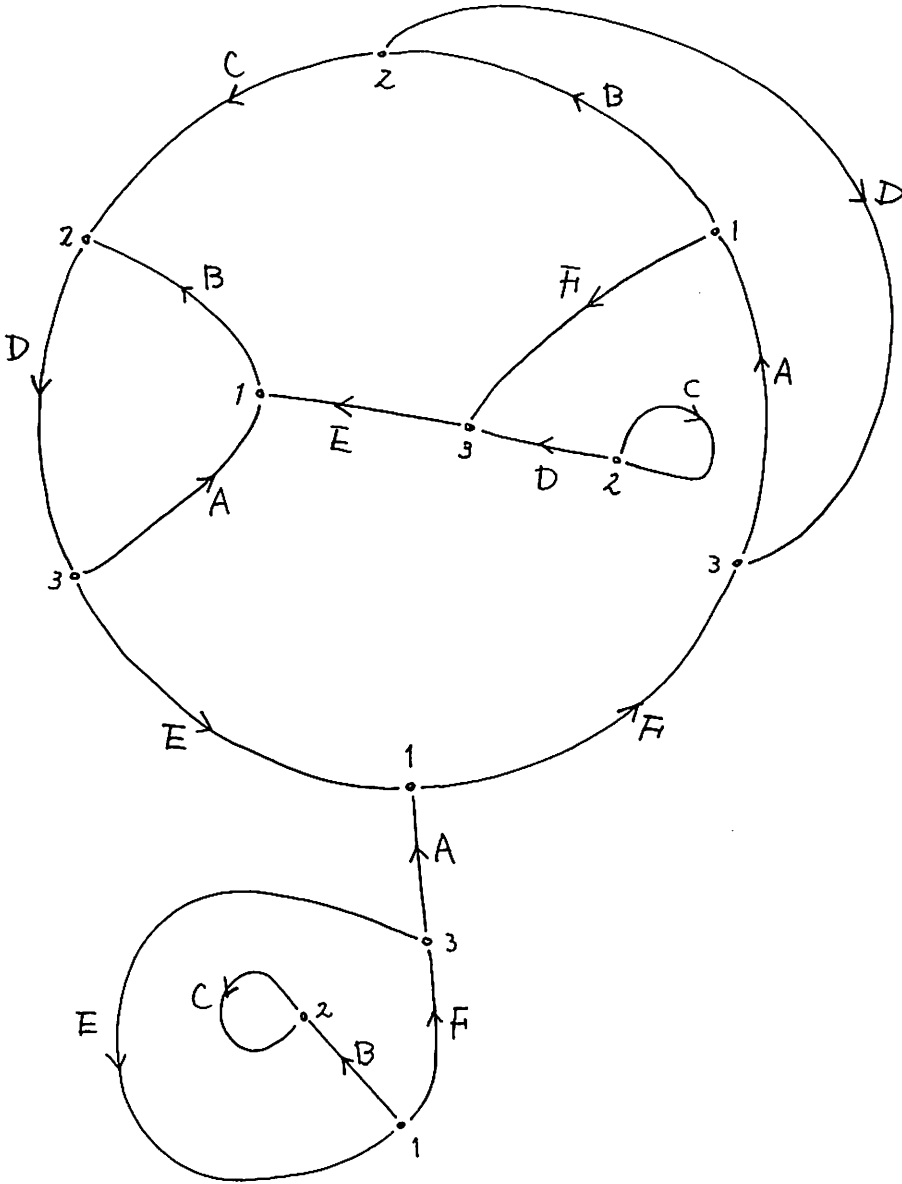
(Z-1)



$\pi_1 = \mathbb{Z}$

$\mathcal{G}_2 = \bigcirc \bigcirc \bigcirc \bigcirc$

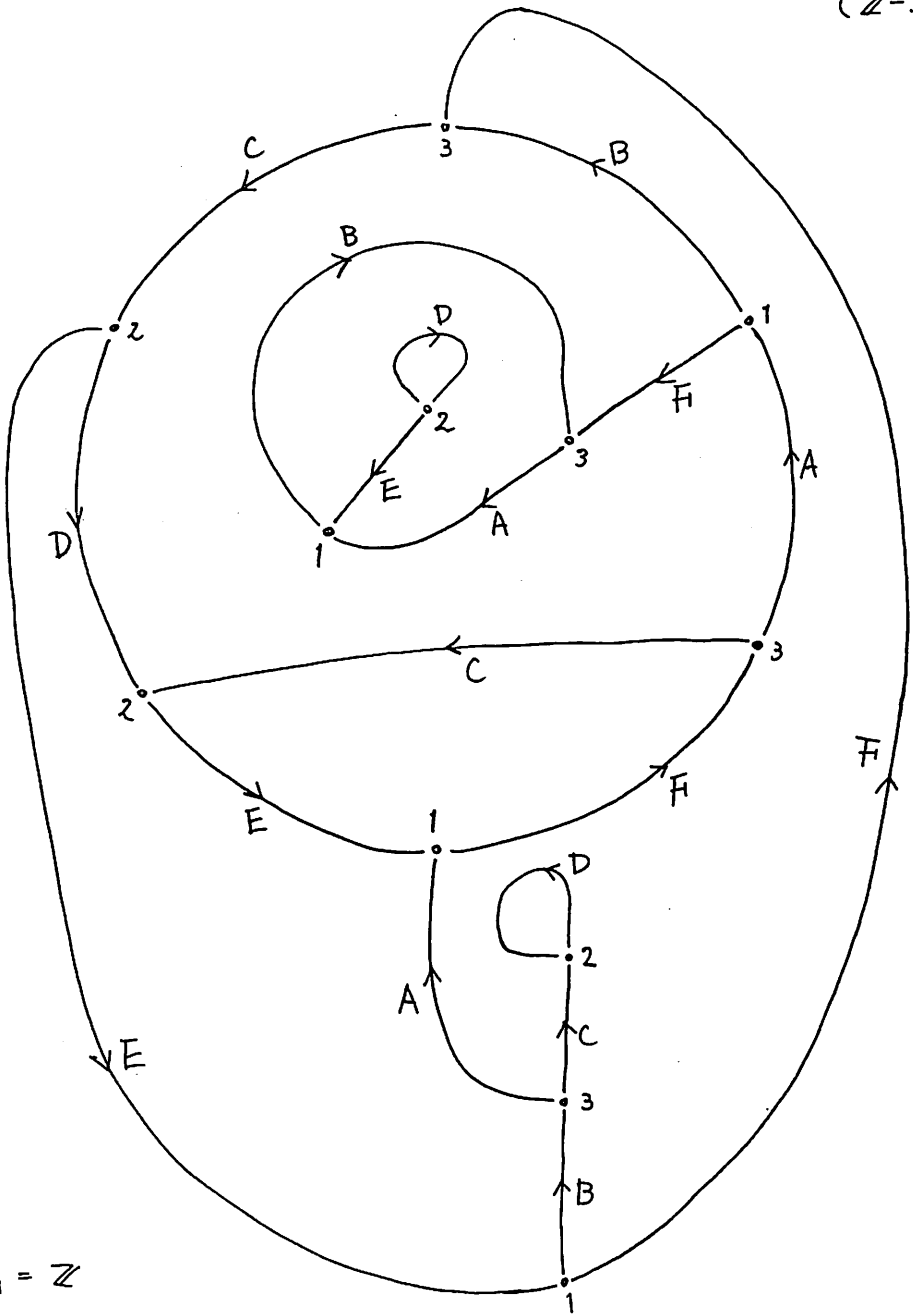
($\mathbb{Z}-2$)



$$\pi_1 = \mathbb{Z}$$

$$\mathcal{G}_2 = \bigcirc \bigcirc \bigcirc$$

(Z-3)



$$\pi_1 = \mathbb{Z}$$

$$\mathcal{G}_2 = \text{two circles}$$