№9

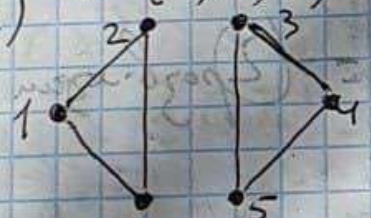
Знайти по три пари неізоморфних графів G_1 та G_2, в яких:

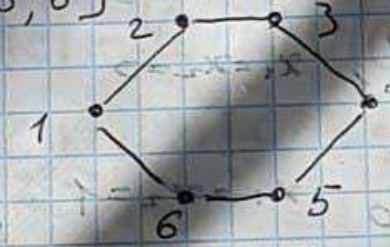
а) к-сть вершин степеня k однакова для всіх $k \geq 0$

б) к-сть простих циклів довжини l однакова для всіх $l \geq 0$

Розв'язання:

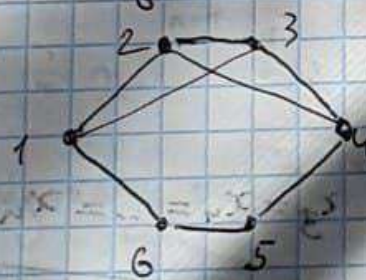
а) $V = \{1, 2, 3, 4, 5, 6\}$

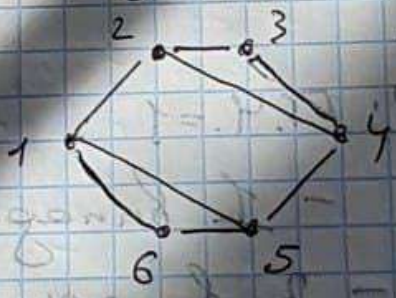




$E = \{(1,2)(2,6)(1,6)(3,4)(4,5)(3,5)\}$

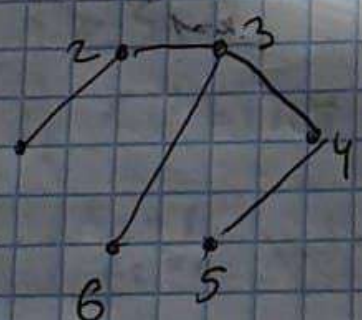
$E_2 = \{(12)(23)(34)(45)(56)(61)\}$

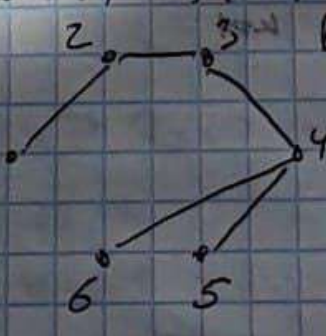




$E_1 = \{(12)(23)(34)(45)(56)(61)(13)(24)\}$

$E_2 = \{(12)(23)(34)(45)(56)(61)(15)(24)\}$

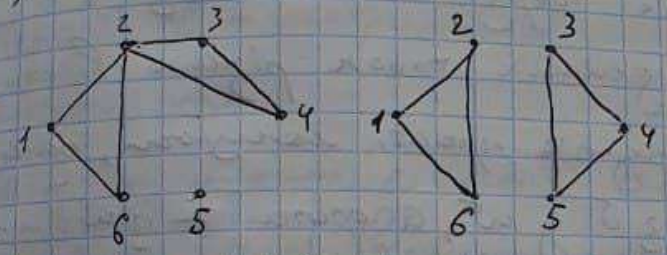




$E_1 = \{(12)(32)(45)(36)\}$

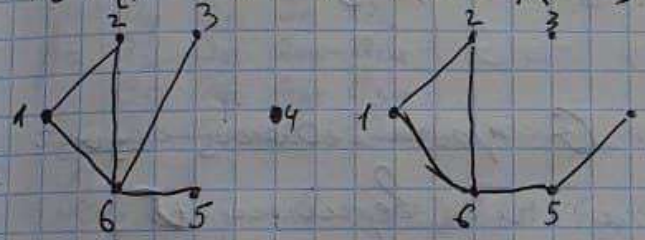
$E_2 = \{(12)(23)(34)(45)(46)$

5) $V=\{1,2,3,4,5,6\}$



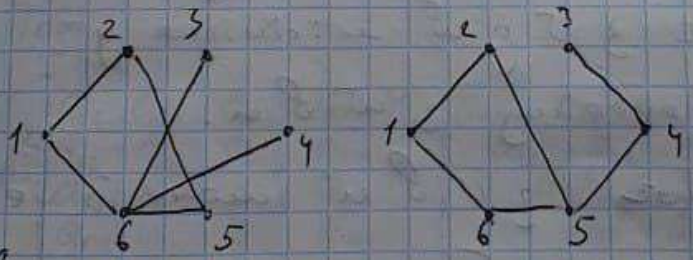
$E_1=\{(12)(26)(61)(23)(34)(24)\}$

$E_2=\{(12)(26)(16)(34)(45)(35)\}$



$E_1=\{(12)(26)(61)(63)(65)\}$

$E_2=\{(12)(26)(61)(65)(54)\}$



6)

$E_1=\{(12)(25)(56)(61)(63)(64)\}$

$E_2=\{(12)(25)(56)(61)(54)(43)\}$