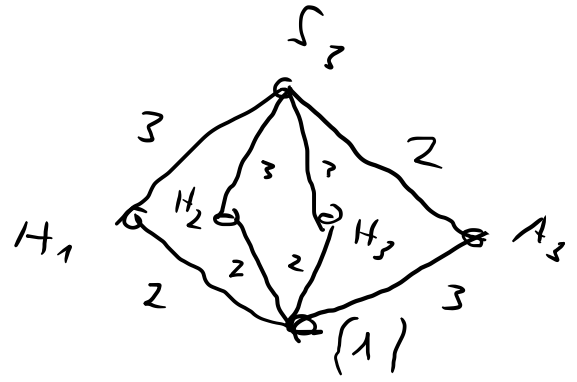


S_3 östzes resp-ja.
 ↪ resp-waport

id, (12), (13), (23), (123), (132)
 $H \leq S_3 \quad |H| = 1 \rightarrow \{1=id\}$



2
 3
 6 → S_3 „3-stab.“
 H_2

→ {a, b}
 // id ↓

{id, (12)} ✓
~~{id, (123)}~~ is'?

H_2 {id, (13)}

H_1 {id, (23)}

$\langle b \rangle$
 $o(b) = 2 \quad b^2 = id$

$(123)^2 = (132) \neq id$

$c^2 = c \Rightarrow c = id$

→ {id, c, d} $c^{-1} = d, \quad c^2 = id$

$|F| : d \text{ bzw } c$

Lagrange $\left(\begin{array}{l} o(c) = 3 \\ \text{outaja 6-vel} \\ \rightarrow 3\text{-vel} \end{array} \right.$

$\{id, (123), (132)\} = \langle (123) \rangle$
 A_3 alternat' $(123)^2 = (132)^{-1}$

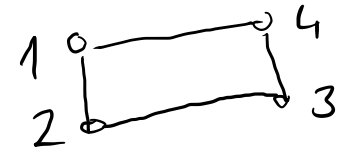
\mathbb{Z}_{12}^+ resp H (von Lagrange, Längen
zyklisch resp. total)

\mathbb{Z}_{12}^x $\{1, 5, 7, 11\}$ 2 elem' resp $\{1, 6\}$
 $o(5) = 2$ \rightarrow $\langle 6 \rangle$,
 Lagrange-satz resp. teiler!
 1 $\{1\}$
 2 $\{id, b\}$ $o(b) = 2$ $\{1, 5\}, \{1, 7\}, \{1, 11\}$
 4 exist



$H \subseteq A_4$ 4 elem' resp -io: A_4 elem: $id, (ab)(cd), (ac)(bd), (ad)(bc)$
 $o(k) = 4$ nur $\frac{|A_4|}{4} = 3$
 $\{id, c, d, f\}$

$C_{3,2}$ $\{id, (2)(34), (13)(24), (14)(23)\}$ \leftarrow $\{id, (14)(23)\}$ \leftarrow $\{id, (12)(34), (13)(24)\} =$
 Rep ??? \leftarrow $\{id, (14)(23)\}$
 1 0 4 \rightarrow $\{id, (14)(23)\}$
 2 0 3 \rightarrow $\{id, (14)(23)\}$
 exist. st. un.



S_3 bal u. o. H $\leq S_3$

id	(123)	(132)
(12)	(13)	(23)

$\Rightarrow (132 | H$
 $\leftarrow = (23 | H.$

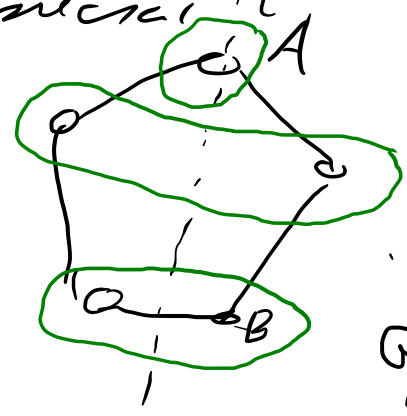
$H = \{ \text{id}, (12) \} = (12)$

$(123)H = \{ (123), (123)(12) \}$ bal
 $H(123) = \{ (123), (12), (123)(12) \}$ loss
 "(23)"

Loss □ \Rightarrow H neu normal "poset".

$X = \text{stab. u. freig. transitiv}$

$G = D_n \curvearrowright A$ stab.
 \downarrow
 \downarrow

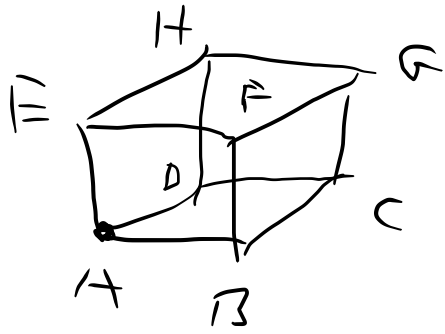


$G = \{ \text{id}, t \}$
 2 elem.
 A paigaija at osten Luis
 $2 \cdot 1 = 10 = |D_n - 1|$

G paigai?

$G_B = \{ \text{id} \}$
 $G_A = G$

\leftarrow
 HF G-vöszre



$$A \text{ stabil.} = G$$

$$|G| = \frac{48}{|A \text{ orbitia}|} = 6$$

A pãrta {A} (1)

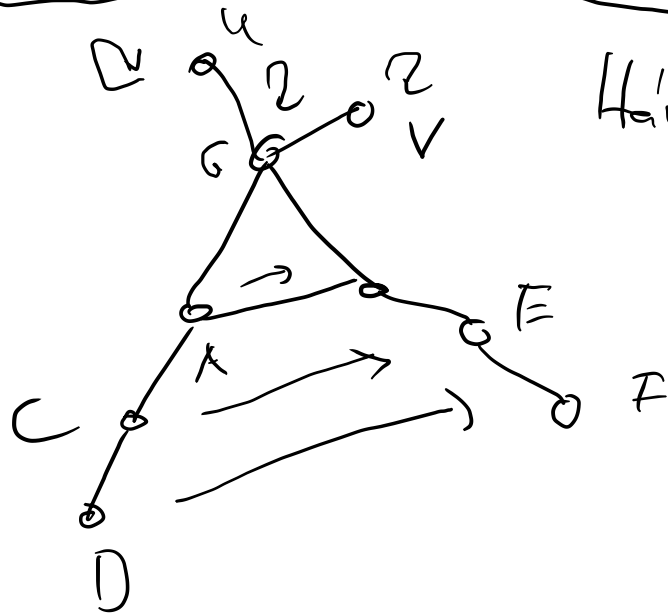
B pãrtaia : {B, D, E} for 120° testãtã (3)

C " " {C, F, H} (3)

G pãrtaia {G} testãtã tãu. (1)

$$G \cong D_3 (\cong S_3)$$

BDE stab. Δ
(leapãtã stãtãtã)



Hãug stãmm.

A pãrtaia? {A, B}

$u \rightarrow u, v$

A fix : C ãrãpã

stãtãtã
A stãmmãtã

$C \rightarrow C$

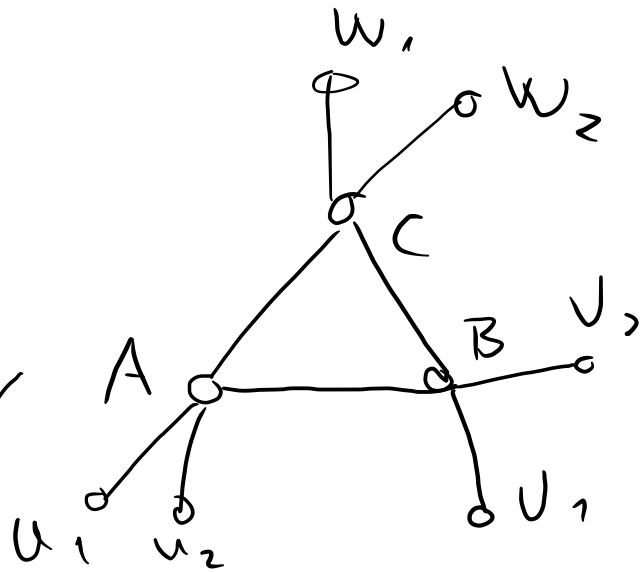
$E \rightarrow E$

$D \rightarrow D$

$F \rightarrow F$

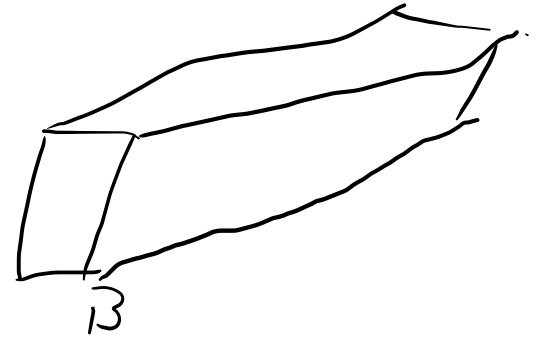
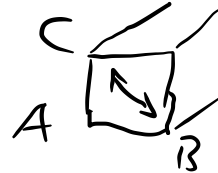
$\rightarrow \{id, uv, \dots\}$

G 2.2 stãmm.



Itéj kiem?

7. feladat.



A → B félre félre

A → C csúcsok 8

A $\{x\} \Rightarrow B \{y\}$
 $\hookrightarrow \{1 \neq 1\}$

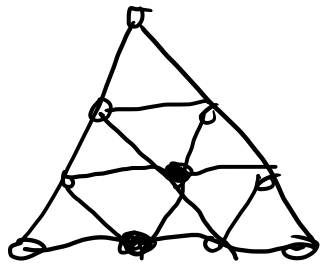
Édglak test $8 \cdot 1 = \underline{8}$
 képrét alapú hasáb 16
 szél. Δ alapú hasáb 12
 " " " " " " 6
 szél. tet. részes 24 54
 szél. tet. részes \approx 20 db

48 = $6 \cdot 2 \cdot 2 \cdot 2$
 " " " " " " 3 · 2

A → {A, B, C} 3
 A $\{x\}$ B → {C, B} 2

ABC $\{x\}$ $u_1 \rightarrow$ A két előfordul
 szimmetria
 $\{u_1, u_2\}$ 2
 $w_1 \rightarrow \{w_1, w_2\}$ 2

HF !!! (12) ol'c'lar al'p'ri'u



9 zir Δ

3 -at id'li'nd' u'yg'

6 s'iu'u : D_3 .

id 1 db

\curvearrowright 120° 2 db

$$\binom{9}{3} = \frac{9 \cdot 8 \cdot 7}{6} = \underline{84}$$

$$3 \quad 2 \cdot 3 = \underline{6}$$

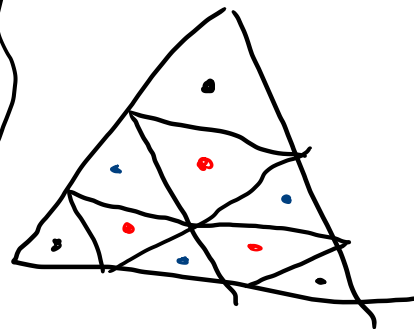
t'uz' 3 db 9 3 \cdot 9

$$\underline{84 + 6 + 3 \cdot 10}$$

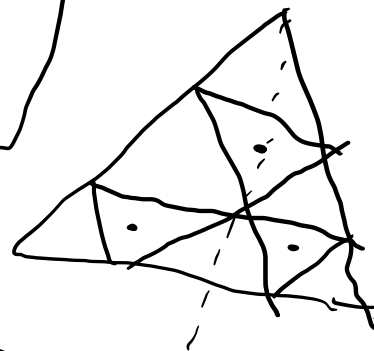
6

$$(X | = \binom{9}{3})$$

\curvearrowright 120°



3 db



| t'uz'

1 k'uz'ge'de 3
u'ni'v'el 2 s'iu'u
u'cu' c' k'uz'ge'de 3

$$\underline{9 + 1}$$