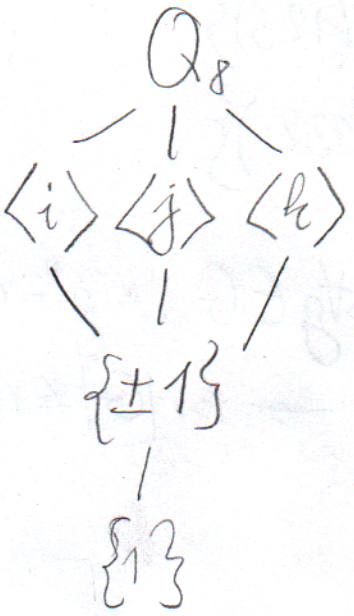
2025.09.26.

$|G| = |H| \cdot |H:G|$

(3.1) Lagrange alapján

$|H| \in \{1, 2, 4, 8\}$



részben rendezett halmazrendszer

(3.2) 1 $G = \{\mathbb{Z}, +\}$, $H = n\mathbb{Z}$

H rés. $\leftrightarrow n\mathbb{Z}$

Bal mellékosztályok: $3+H = \{3+x \cdot n : x \in \mathbb{Z}\} =$

$= (2n+3) + H = \{2n+3+h : h \in H = n \cdot \mathbb{Z}\}$

2 $G = Q_8$, $H = \langle -1 \rangle = \{1, -1\}$

$1H = \{1, -1\}$

$iH = \{i, -i\} = -iH$

$jH = \{j, -j\}$

$kH = \{k, -k\}$

3 $G = S_3$, $H = \{(), (12)\}$ $\quad |G| = 3! = 6 \quad H = 2$

$|G:H| = \frac{|G|}{|H|} = 3$

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

$(13)H = \{(13), (13)(12)\} = \{(13), (132)\}$

$(23)H = \{(23), (123)\}$