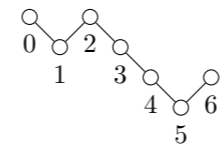


**Aval, Labbé, q-analogs of rational numbers:
from Ostrowski numeration systems
to perfect matchings, arXiv:2511.11290**

$\frac{9}{16}$ $\xrightarrow{\text{CF}_{\text{even}}}$ $[0, 1, 1, 3, 1, 1]$ \xrightarrow{W} 010001 $\xrightarrow{\theta}$ 000100

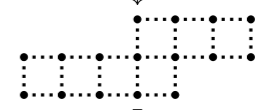
$\downarrow B$

$\downarrow F$

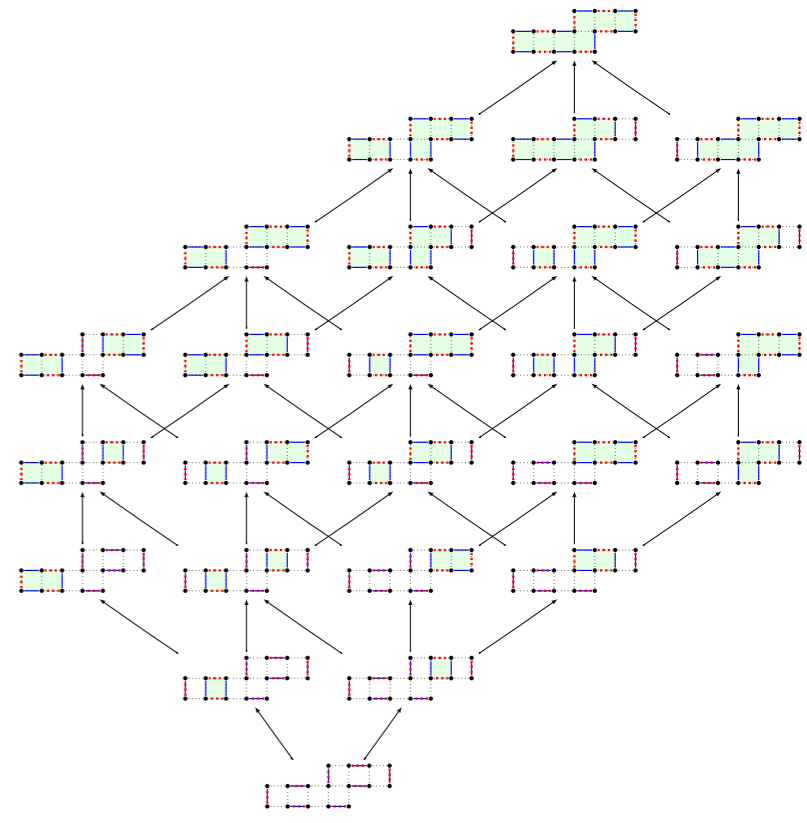
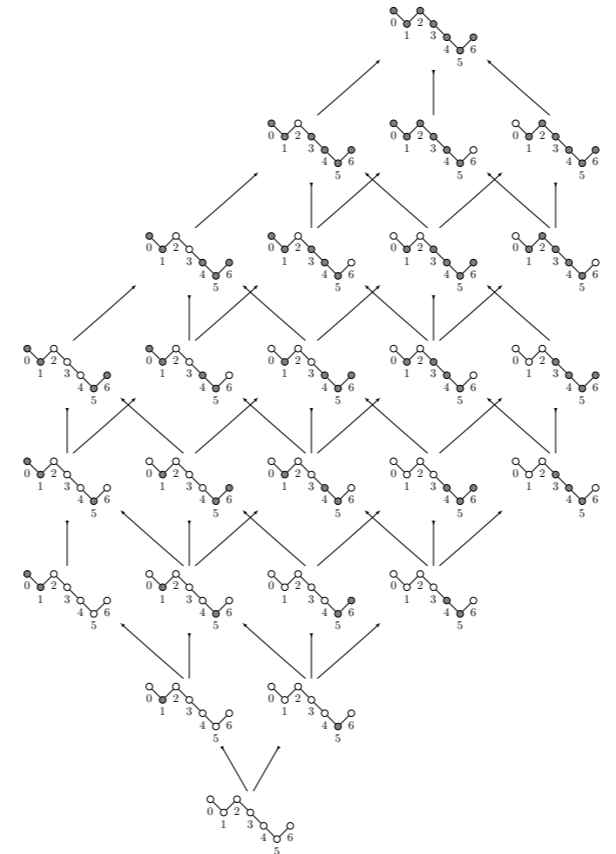
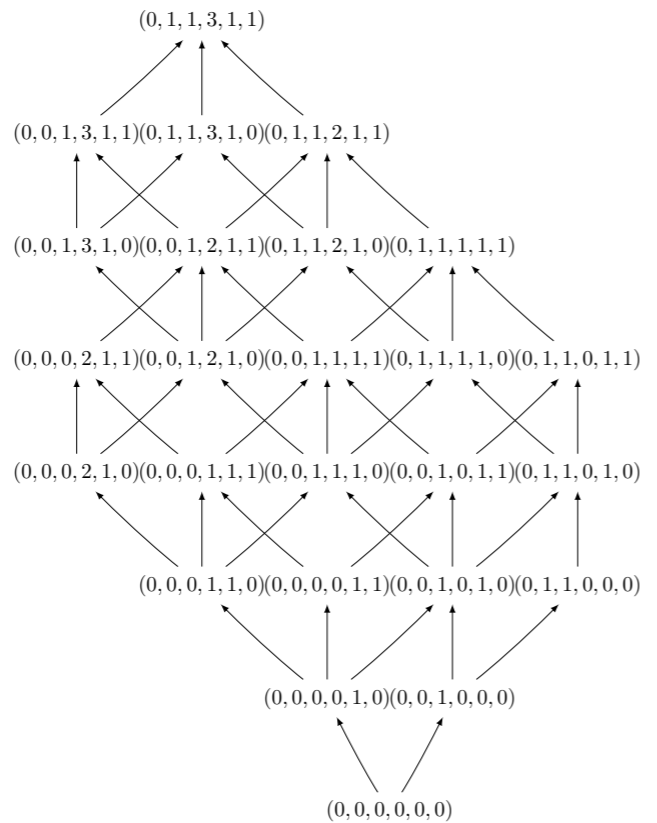
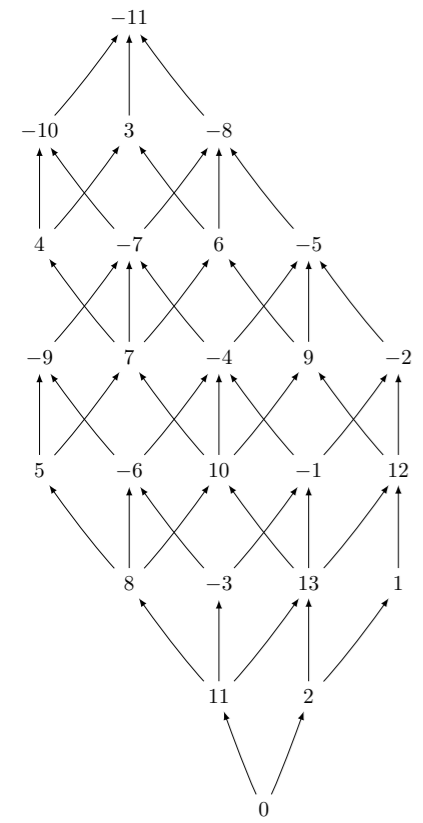


$\downarrow J$

$\downarrow G$



$\downarrow M$



$\mathcal{Z}([0, 1, 1, 3, 1, 1]) = \mathbb{Z} \cap [-11, 14]$

$\xleftarrow{\text{val}}$

$\mathcal{B}([0, 1, 1, 3, 1, 1])$

$\xleftarrow{\Psi}$

$\mathcal{J}(\frac{9}{16})$

$\xleftarrow{\Phi}$

$\mathcal{M}(\frac{9}{16})$

$(r_0, -r_1, r_2, -r_3, r_4, -r_5) = (1, -1, 2, -3, 11, -14)$
 $r_6 = 25$

$\left[\frac{9}{16} \right]_q = q^{-1} \frac{q^7 + 2q^6 + 2q^5 + 2q^4 + q^3 + q^2}{q^6 + 2q^5 + 3q^4 + 4q^3 + 3q^2 + 2q + 1}$