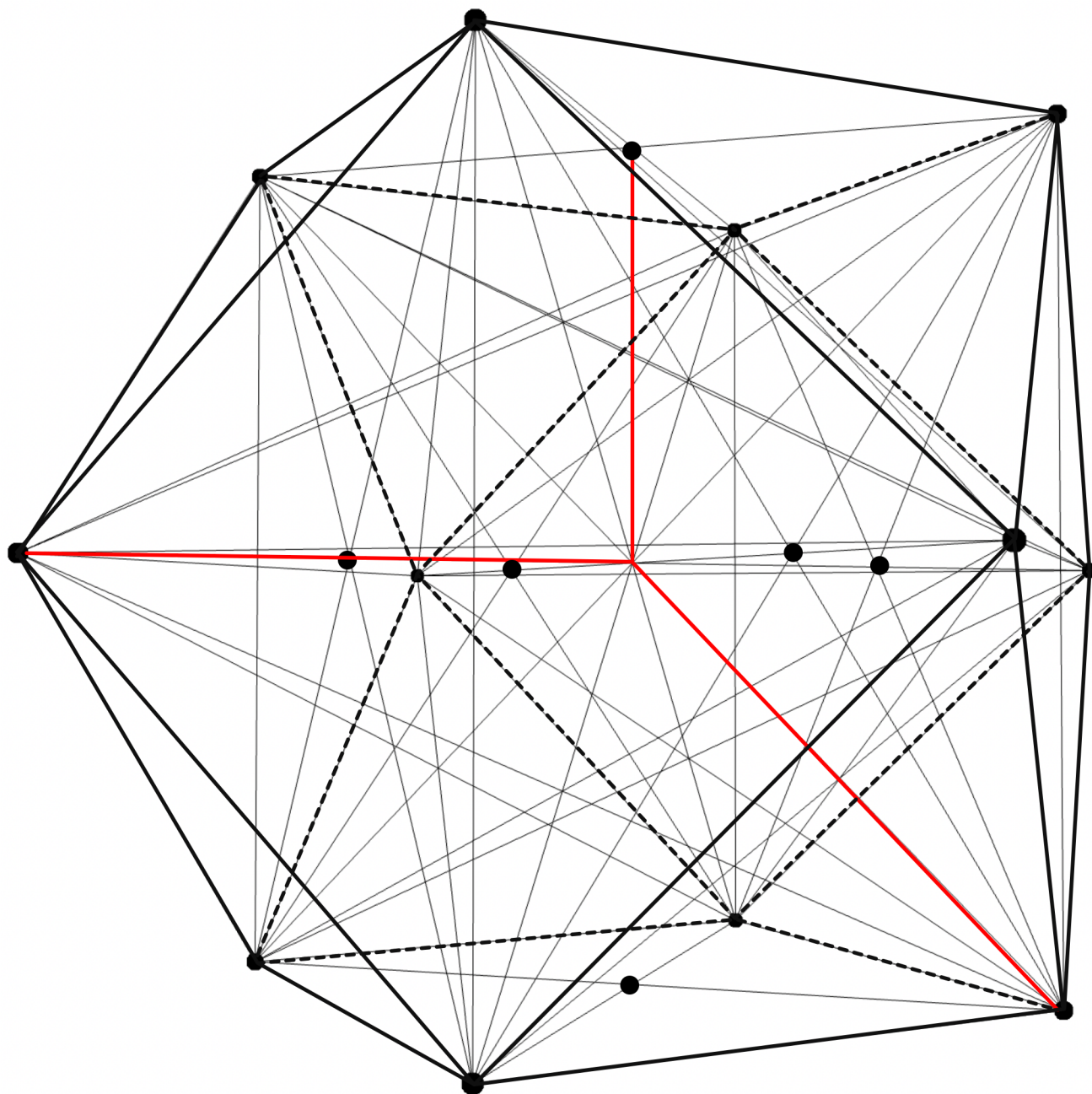
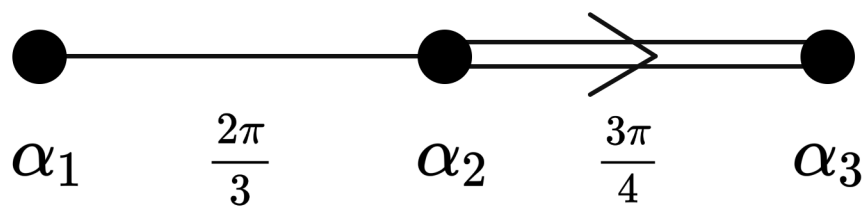


$\mathfrak{o}(7)$ B_3 – Lattice



$$W(B_3) = \left\langle \left(\begin{array}{ccc} 0 & -1 & 0 \\ -1 & 0 & 0 \\ 0 & 0 & 1 \end{array} \right), \left(\begin{array}{ccc} 0 & 0 & -1 \\ 0 & 1 & 0 \\ -1 & 0 & 0 \end{array} \right), \left(\begin{array}{ccc} 1 & 0 & 0 \\ 0 & 0 & -1 \\ 0 & -1 & 0 \end{array} \right), \left(\begin{array}{ccc} 1 & 0 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & 1 \end{array} \right) \right\rangle$$



Simple Root

$$\alpha_1 = \varepsilon_1 - \varepsilon_2$$

$$\alpha_2 = \varepsilon_2 - \varepsilon_3$$

$$\alpha_3 = \varepsilon_3$$

Cartan Matrix

$$C = \begin{pmatrix} 2 & -1 & 0 \\ -1 & 2 & -1 \\ 0 & -1 & 1 \end{pmatrix}$$