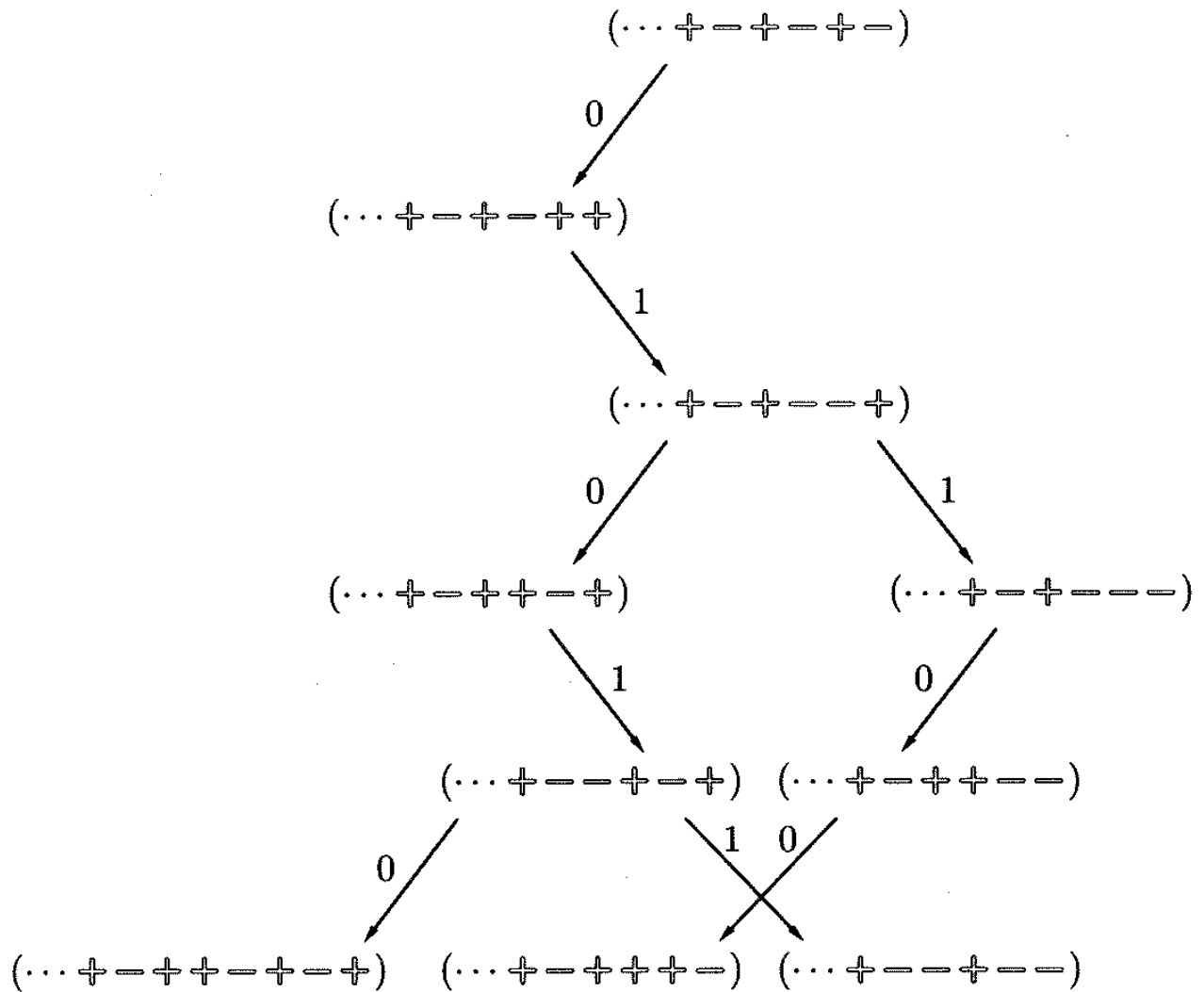
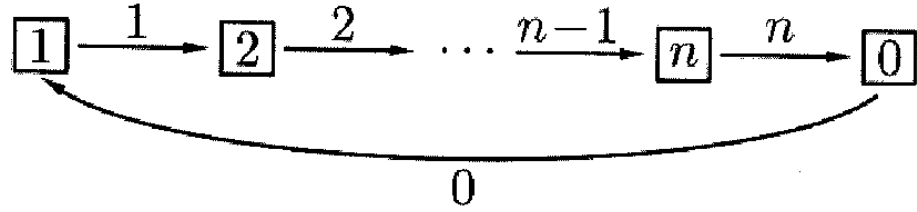


Example 9.3.1. The crystal structure of $\mathcal{P}(\Lambda_0)$ is shown below.



$$A_n^{(1)} \quad (n \geq 1)$$

Perfect crystal of level 1:

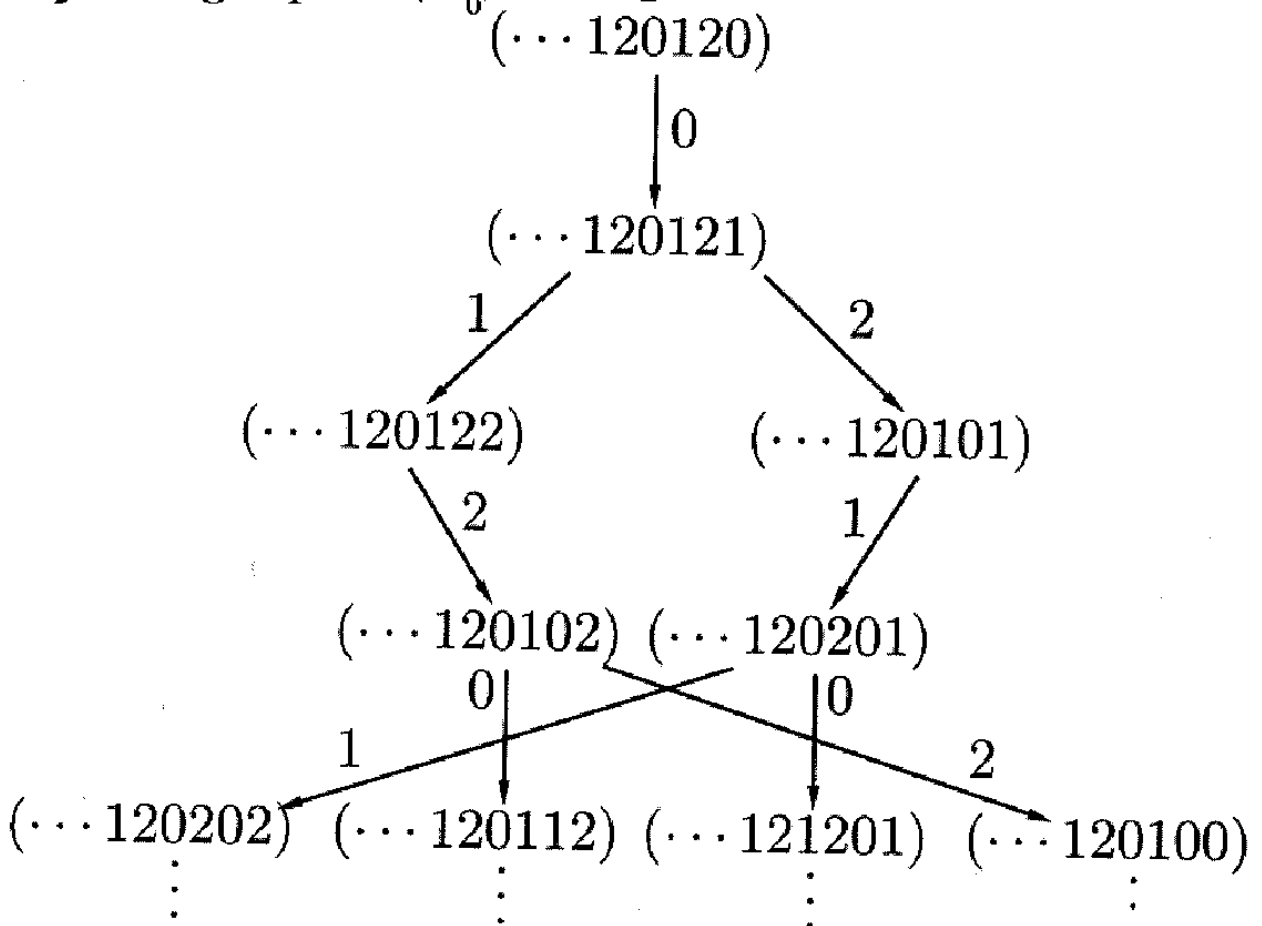


$$b_{\Lambda_i} = [i], \quad b^{\Lambda_i} = [i+1] \quad \text{for } i = 0, 1, \dots, n.$$

Ground-state paths:

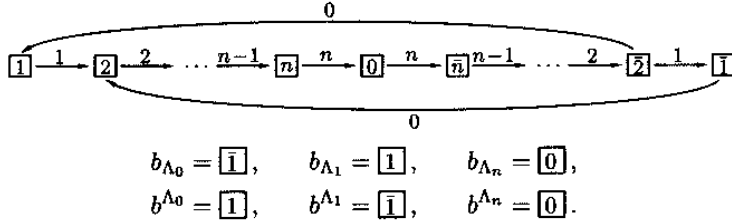
$$\mathbf{p}_{\Lambda_i} = (\mathbf{p}_{\Lambda_i}(k))_{k=0}^{\infty} = (\dots 12 \dots n012 \dots i).$$

Crystal graph $B(\Lambda_0)$ for $A_2^{(1)}$



Example 11.1.6. $B_n^{(1)}$ ($n \geq 3$).

(1) Perfect crystal of level 1:



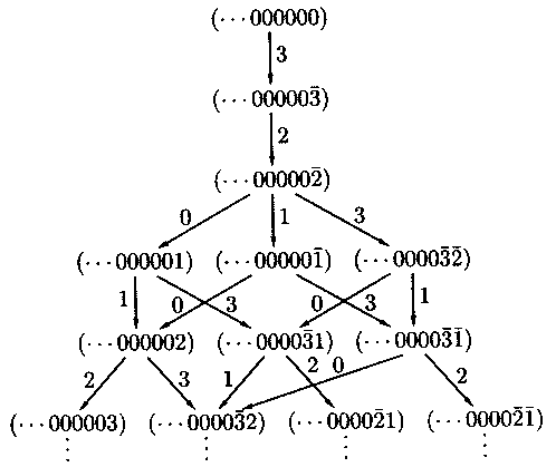
(2) Ground-state paths:

$$\mathbf{p}_{\Lambda_0} = (\mathbf{p}_{\Lambda_0}(k))_{k=0}^{\infty} = (\cdots 1\bar{1}1\bar{1}1\bar{1}),$$

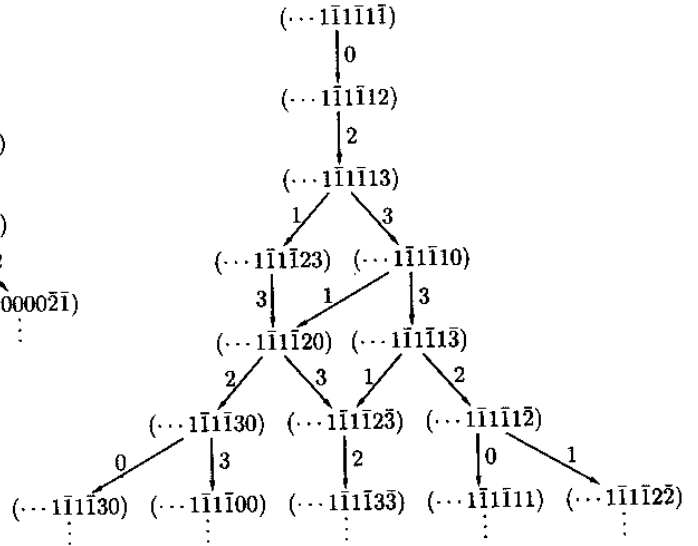
$$\mathbf{p}_{\Lambda_1} = (\mathbf{p}_{\Lambda_1}(k))_{k=0}^{\infty} = (\cdots \bar{1}1\bar{1}1\bar{1}),$$

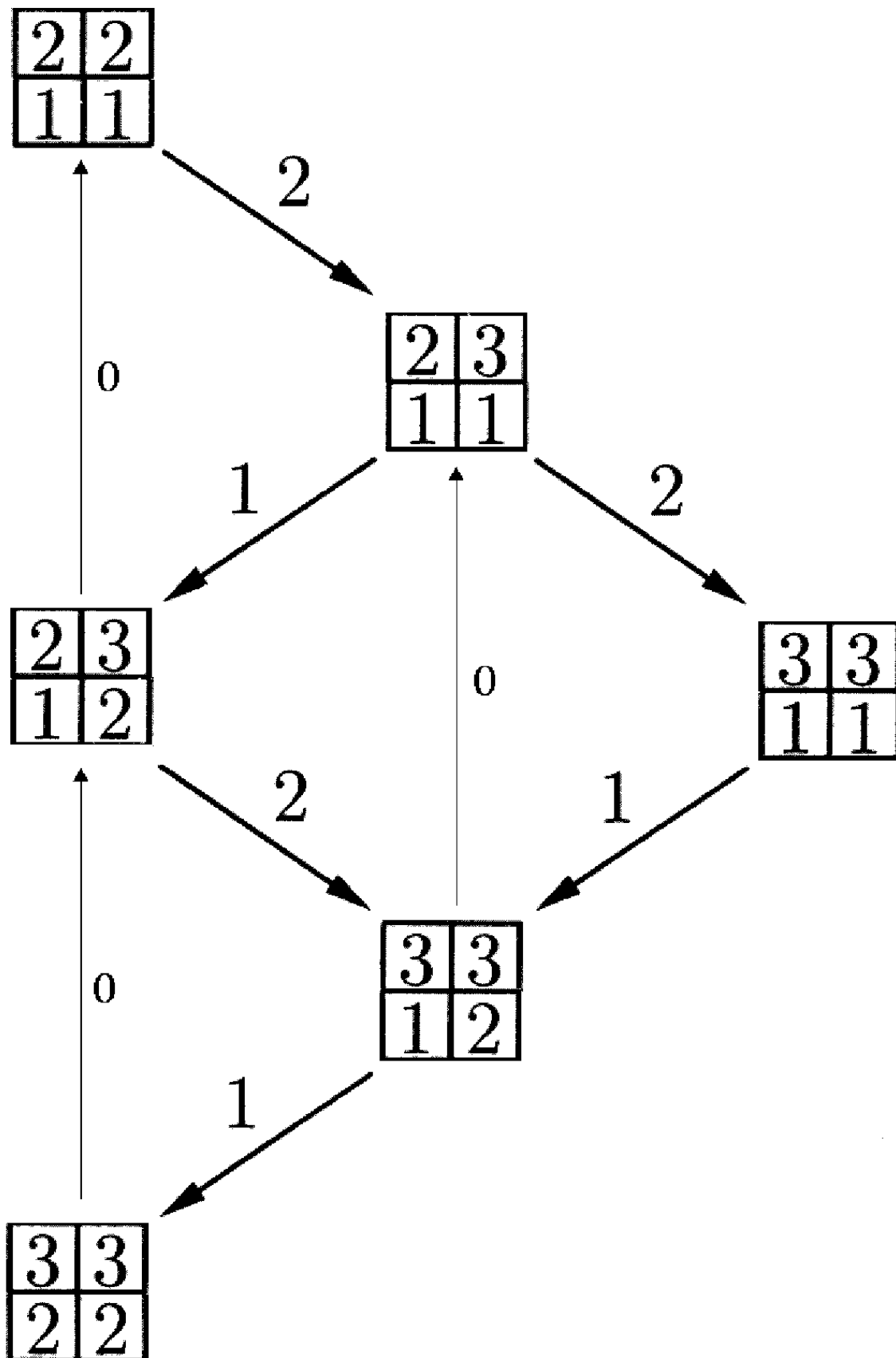
$$\mathbf{p}_{\Lambda_n} = (\mathbf{p}_{\Lambda_n}(k))_{k=0}^{\infty} = (\cdots 000000).$$

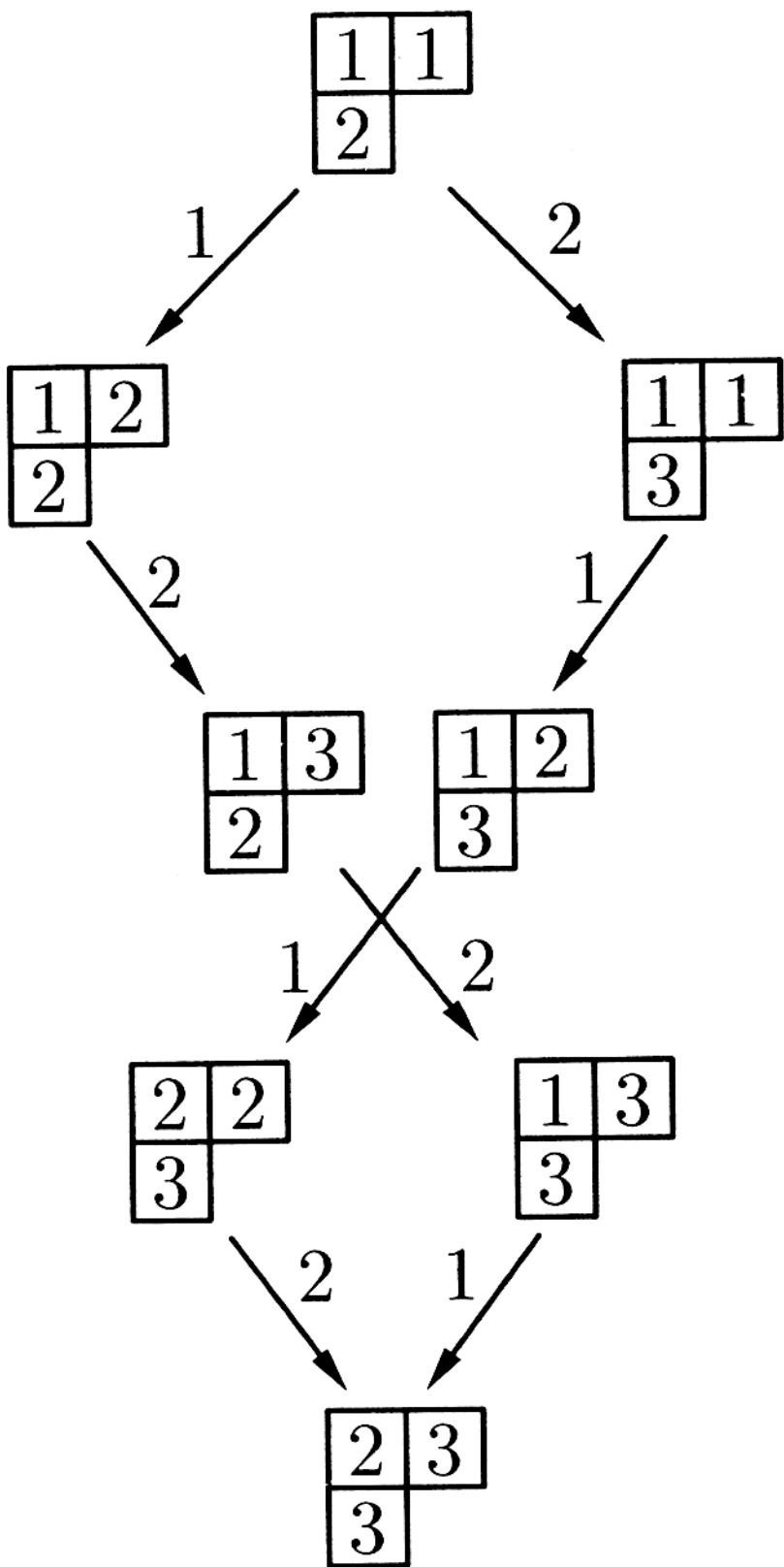
(4) Crystal graph $\mathcal{B}(\Lambda_3)$ for $B_3^{(1)}$:



(3) Crystal graph $\mathcal{B}(\Lambda_0)$ for $B_3^{(1)}$:







$$\lambda = 2\epsilon_1 + \epsilon_2$$