

1=C 4/4 bpm=120

(钢琴双手谱，如只演奏旋律请忽略低音伴奏谱)

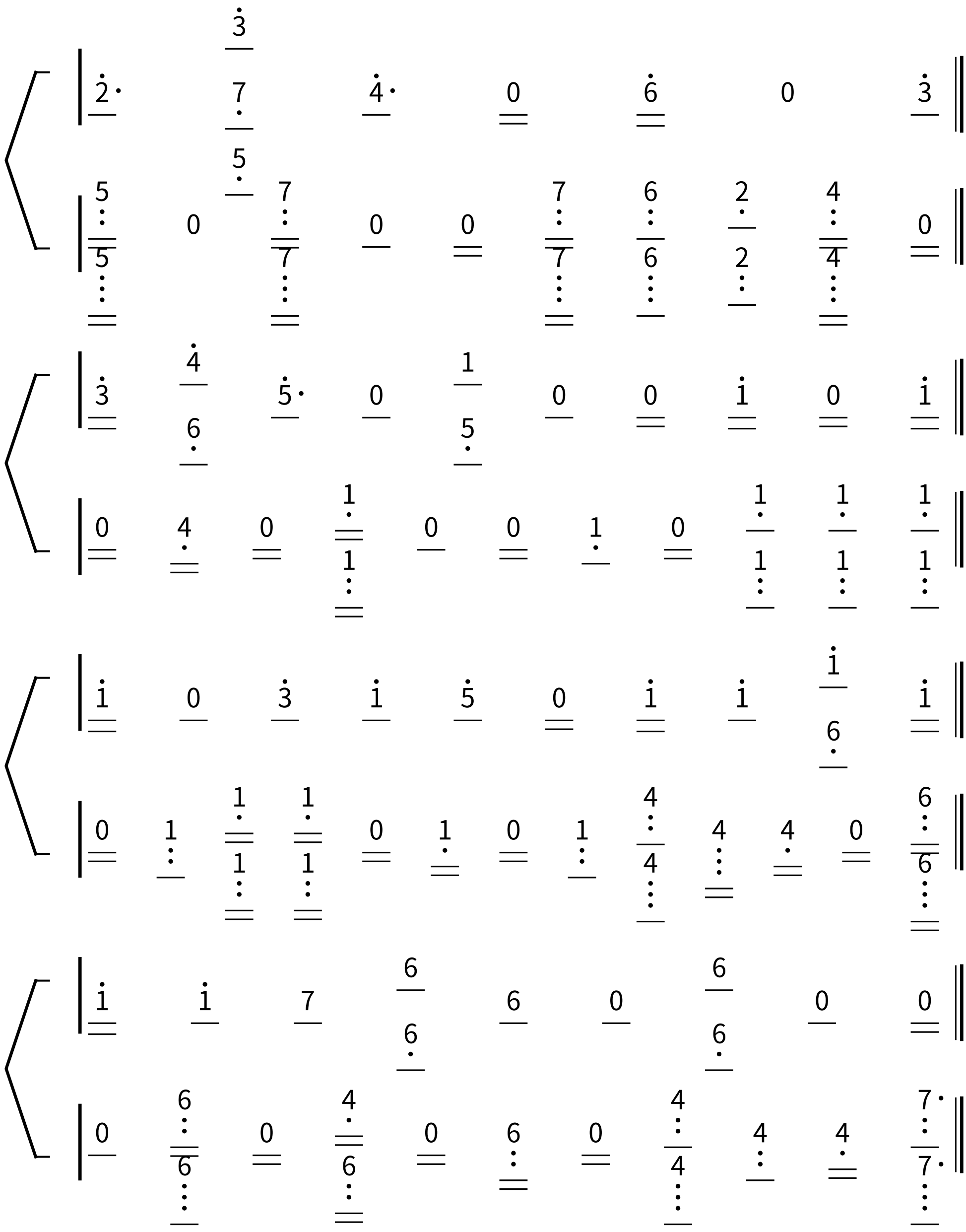
Figure 10: A diagram showing the decomposition of the tensor product of two irreducible representations of $SO(10)$ into irreducible representations of $SO(5) \times SO(5)$. The diagram is organized into four groups, each indicated by a large left-facing curly bracket. Each group contains two rows of representations. The representations are labeled with their highest weights in the $SO(10)$ Dynkin diagram basis, where the first four nodes are for $SO(5)$ and the last two are for $SO(5)$. The representations are connected by lines, indicating their decomposition into the product of two $SO(5)$ representations. The representations are labeled as follows:

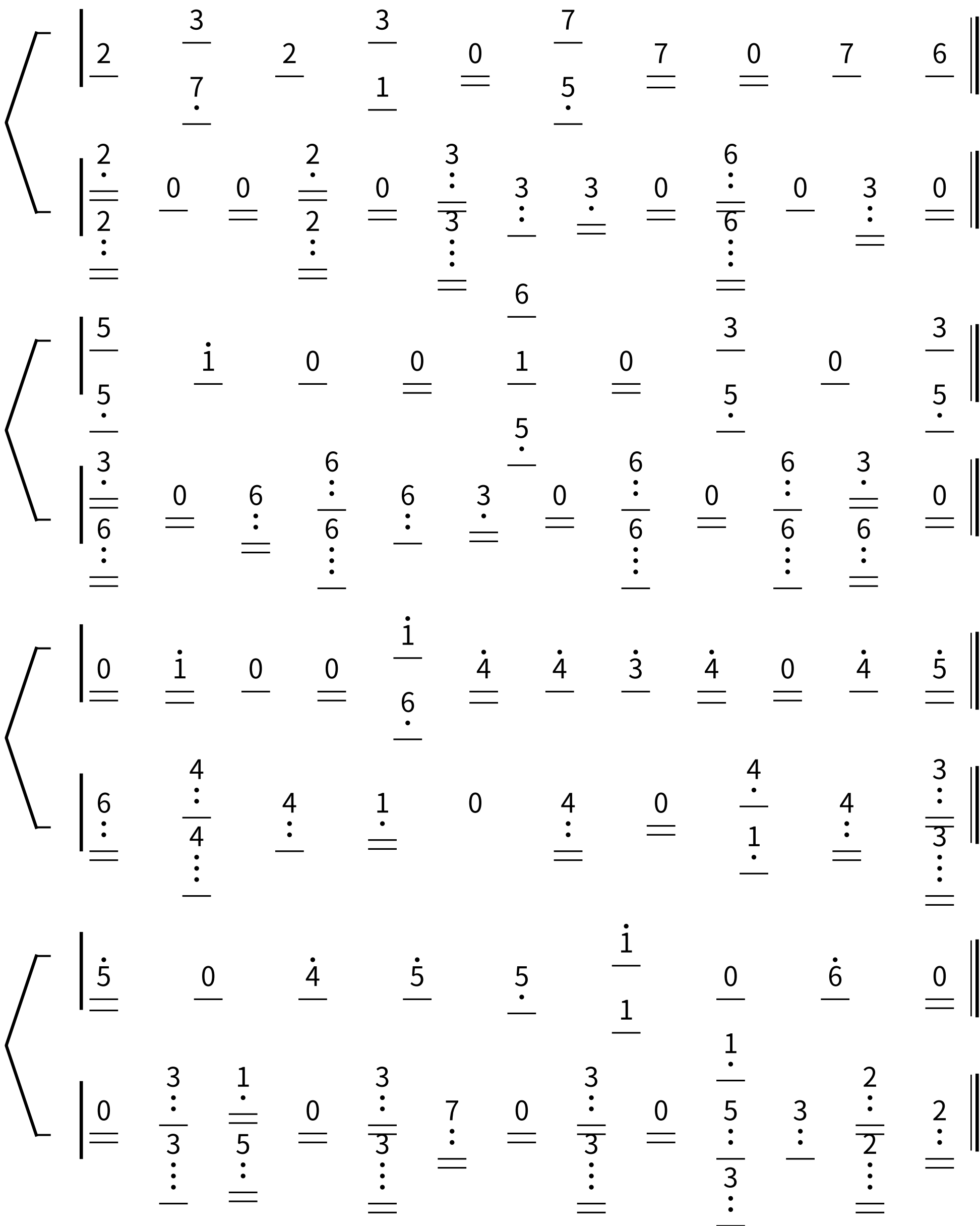
- Group 1 (top left):
 - Row 1: $\underline{5}$, $\underline{0}$, $\underline{\overset{2}{7}}$, $\underline{\overset{\cdot}{3}}$, $\underline{\overset{\cdot}{3}}$, $\underline{3}$, $\underline{\overset{7}{\cdot}}$, $\underline{\overset{\cdot}{2}}$, $\underline{5}$.
 - Row 2: $\underline{\overset{\cdot}{5}}$, $\underline{\overset{\cdot}{5}}$, $\underline{\overset{\cdot}{5}}$, $\underline{\overset{\cdot}{5}}$, $\underline{\overset{\cdot}{5}}$, $\underline{\overset{\cdot}{5}}$, $\underline{\overset{\cdot}{5}}$, $\underline{\overset{\cdot}{5}}$, $\underline{\overset{\cdot}{5}}$.
- Group 2 (middle left):
 - Row 1: $\underline{5}$, $\underline{0}$, $\underline{\overset{\cdot}{5}}$, $\underline{\overset{\cdot}{1}}$, $\underline{\overset{\cdot}{6}}$, $\underline{\overset{\cdot}{1}}$, $\underline{\overset{\cdot}{3}}$, $\underline{\overset{\cdot}{3}}$, $\underline{1}$.
 - Row 2: $\underline{0}$, $\underline{0}$, $\underline{\overset{\cdot}{2}}$, $\underline{\overset{\cdot}{0}}$, $\underline{\overset{\cdot}{2}}$, $\underline{\overset{\cdot}{0}}$, $\underline{\overset{\cdot}{1}}$, $\underline{\overset{\cdot}{1}}$, $\underline{\overset{\cdot}{5}}$.
- Group 3 (bottom left):
 - Row 1: $\underline{\overset{\cdot}{3}}$, $\underline{\overset{\cdot}{3}}$, $\underline{0}$, $\underline{1}$, $\underline{\overset{\cdot}{2}}$, $\underline{1}$, $\underline{5}$, $\underline{\overset{\cdot}{1}}$, $\underline{0}$.
 - Row 2: $\underline{0}$, $\underline{1}$, $\underline{\overset{\cdot}{3}}$, $\underline{0}$, $\underline{1}$, $\underline{\overset{\cdot}{3}}$, $\underline{0}$, $\underline{5}$, $\underline{\overset{\cdot}{1}}$.
- Group 4 (bottom right):
 - Row 1: $\underline{5}$, $\underline{0}$, $\underline{7}$, $\underline{\overset{\cdot}{6}}$, $\underline{\overset{\cdot}{1}}$, $\underline{\overset{\cdot}{3}}$, $\underline{\overset{\cdot}{3}}$, $\underline{1}$, $\underline{\overset{\cdot}{3}}$, $\underline{1}$.
 - Row 2: $\underline{0}$, $\underline{0}$, $\underline{1}$, $\underline{\overset{\cdot}{3}}$, $\underline{0}$, $\underline{1}$, $\underline{0}$, $\underline{\overset{\cdot}{1}}$, $\underline{0}$, $\underline{1}$.

[illegible]

$\left\langle \begin{array}{c} \text{ } \\ \text{ } \end{array} \right.$	$\left \begin{array}{c} \underline{\underline{6}} \\ \underline{\underline{0}} \end{array} \right.$	$\underline{\underline{1}}$	$\underline{\underline{\dot{6}}}$	$\underline{\underline{4}}$	$\underline{\underline{\dot{4}}}$	$\underline{\underline{4}}$	$\underline{\underline{4}}$	$\underline{\underline{3}}$	$\underline{\underline{2}}$	$\underline{\underline{7}}$	$\parallel$	
	$\underline{\underline{0}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{4}}}$	0	$\underline{\underline{\dot{1}}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{4}}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{1}}}$	$\parallel$
$\left\langle \begin{array}{c} \text{ } \\ \text{ } \end{array} \right.$	$\left \begin{array}{c} \underline{\underline{7}} \\ \underline{\underline{0}} \end{array} \right.$	$\underline{\underline{\dot{2}}}$	$\underline{\underline{\dot{7}}}$	$\underline{\underline{2}}$	$\underline{\underline{5}}$	$\underline{\underline{7}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{\dot{2}}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{2}}}$	$\parallel$	
	$\underline{\underline{0}}$	$\underline{\underline{\dot{5}}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{5}}}$	$\underline{\underline{0}}$	$\underline{\underline{5}}$	$\underline{\underline{0}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{5}}}$	$\underline{\underline{\dot{5}}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{5}}}$
$\left\langle \begin{array}{c} \text{ } \\ \text{ } \end{array} \right.$	$\left \begin{array}{c} \underline{\underline{\dot{2}}} \\ \underline{\underline{0}} \end{array} \right.$	$\underline{\underline{\dot{2}}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{1}}}$	0	$\underline{\underline{0}}$	$\underline{\underline{\dot{5}}}$	$\underline{\underline{0}}$	$\underline{\underline{0}}$	$\underline{\underline{0}}$	$\parallel$	
	$\underline{\underline{0}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{\dot{5}}}$	$\underline{\underline{\dot{1}}}$	$\parallel$	
$\left\langle \begin{array}{c} \text{ } \\ \text{ } \end{array} \right.$	$\left \begin{array}{c} \underline{\underline{\dot{1}}} \\ \underline{\underline{1}} \end{array} \right.$	$\underline{\underline{0}}$	$\underline{\underline{\dot{3}}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{5}}}$	$\underline{\underline{\dot{5}}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{\dot{1}}}$	$\parallel$	
	$\underline{\underline{\dot{1}}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{\dot{4}}}$	$\underline{\underline{0}}$	$\underline{\underline{\dot{1}}}$	$\underline{\underline{0}}$	$\parallel$

[illegible]





$$\left\langle \begin{array}{c} \left| \begin{array}{ccccccccccc} \underline{\underline{0}} & \underline{\underline{\dot{7}}} & \underline{\underline{\dot{1}}} & \underline{\underline{0}} & \underline{\underline{\dot{2}}} & \underline{\underline{0}} & \underline{\underline{0}} & \underline{\underline{\dot{1}}} & \underline{\underline{0}} & \underline{\underline{\dot{2}}} \end{array} \right| \\ \left| \begin{array}{ccccccccccc} \underline{\underline{2}} & \underline{\underline{\dot{5}}} & \underline{\underline{2}} & \underline{\underline{\dot{4}}} & \underline{\underline{2}} & \underline{\underline{0}} & \underline{\underline{\dot{2}}} & \underline{\underline{2}} & \underline{\underline{\dot{5}}} & \underline{\underline{5}} & \underline{\underline{2}} \end{array} \right| \end{array} \right.$$

$$\left\langle \begin{array}{c} \left| \begin{array}{ccccccccccc} \underline{\underline{\dot{1}}} & \underline{\underline{5}} & \underline{\underline{\dot{7}}} & \underline{\underline{5}} & \underline{\underline{5}} & \underline{\underline{\dot{1}}} & \underline{\underline{0}} & \underline{\underline{\dot{3}}} & \underline{\underline{\dot{1}}} \end{array} \right| \\ \left| \begin{array}{ccccccccccc} \underline{\underline{5}} & \underline{\underline{0}} & \underline{\underline{2}} & \underline{\underline{0}} & \underline{\underline{5}} & \underline{\underline{0}} & \underline{\underline{2}} & \underline{\underline{2}} & \underline{\underline{0}} & \underline{\underline{1}} & \underline{\underline{0}} & \underline{\underline{1}} & \underline{\underline{3}} & \underline{\underline{1}} & \underline{\underline{0}} \end{array} \right| \end{array} \right.$$

$$\left\langle \begin{array}{c} \left| \begin{array}{ccccccc} \underline{\underline{\dot{3}}} & \underline{\underline{\dot{1}}} & \underline{\underline{\dot{3}}} & \underline{\underline{\dot{1}}} & 0 & 0 & \underline{\underline{0}} \end{array} \right| \\ \left| \begin{array}{ccccccc} \underline{\underline{5}} & \underline{\underline{5}} & \underline{\underline{5}} & \underline{\underline{5}} & 0 & 0 & \underline{\underline{0}} \end{array} \right| \end{array} \right.$$