

\mathcal{D}_n -CLASSES OF CANONICAL MATRICES OF G_6 WITH CARDINALITY
 $(q - 1)^6$

$$A_1 = I + E_{1,2} + E_{1,3} + E_{2,5} + E_{3,4} + E_{3,5} + E_{5,6}$$

\mathcal{D}_n -CLASSES OF CANONICAL MATRICES OF G_7 WITH CARDINALITY
 $(q - 1)^6$

$A_1 = I + E_{1,2} + E_{2,3} + E_{3,4} + E_{4,5} + E_{5,6} + E_{6,7}$	$A_{26} = I + E_{1,4} + E_{2,3} + E_{3,6} + E_{4,5} + E_{4,6} + E_{6,7}$
$A_2 = I + E_{1,2} + E_{1,3} + E_{3,4} + E_{4,5} + E_{5,6} + E_{6,7}$	$A_{27} = I + E_{1,2} + E_{2,4} + E_{3,6} + E_{4,5} + E_{4,6} + E_{6,7}$
$A_3 = I + E_{1,2} + E_{1,4} + E_{2,3} + E_{4,5} + E_{5,6} + E_{6,7}$	$A_{28} = I + E_{1,3} + E_{2,4} + E_{3,6} + E_{4,5} + E_{4,6} + E_{6,7}$
$A_4 = I + E_{1,2} + E_{2,3} + E_{2,4} + E_{4,5} + E_{5,6} + E_{6,7}$	$A_{29} = I + E_{1,2} + E_{1,3} + E_{1,4} + E_{3,6} + E_{4,5} + E_{6,7}$
$A_5 = I + E_{1,4} + E_{2,3} + E_{2,4} + E_{4,5} + E_{5,6} + E_{6,7}$	$A_{30} = I + E_{1,2} + E_{1,4} + E_{3,6} + E_{4,5} + E_{4,6} + E_{6,7}$
$A_6 = I + E_{1,2} + E_{2,3} + E_{2,5} + E_{3,4} + E_{5,6} + E_{6,7}$	$A_{31} = I + E_{1,2} + E_{1,3} + E_{3,6} + E_{4,5} + E_{4,6} + E_{6,7}$
$A_7 = I + E_{1,2} + E_{2,3} + E_{3,4} + E_{3,5} + E_{5,6} + E_{6,7}$	$A_{32} = I + E_{1,2} + E_{1,4} + E_{2,3} + E_{4,5} + E_{4,6} + E_{6,7}$
$A_8 = I + E_{1,5} + E_{2,3} + E_{2,5} + E_{3,4} + E_{5,6} + E_{6,7}$	$A_{33} = I + E_{1,2} + E_{2,3} + E_{2,4} + E_{4,5} + E_{4,6} + E_{6,7}$
$A_9 = I + E_{1,5} + E_{2,3} + E_{3,4} + E_{3,5} + E_{5,6} + E_{6,7}$	$A_{34} = I + E_{1,4} + E_{1,6} + E_{2,3} + E_{2,4} + E_{4,5} + E_{6,7}$
$A_{10} = I + E_{1,2} + E_{1,3} + E_{2,5} + E_{3,4} + E_{5,6} + E_{6,7}$	$A_{35} = I + E_{1,4} + E_{2,3} + E_{2,4} + E_{4,5} + E_{4,6} + E_{6,7}$
$A_{11} = I + E_{1,2} + E_{2,5} + E_{3,4} + E_{3,5} + E_{5,6} + E_{6,7}$	$A_{36} = I + E_{1,6} + E_{2,3} + E_{2,4} + E_{4,5} + E_{4,6} + E_{6,7}$
$A_{12} = I + E_{1,3} + E_{2,5} + E_{3,4} + E_{3,5} + E_{5,6} + E_{6,7}$	$A_{37} = I + E_{1,3} + E_{1,4} + E_{2,6} + E_{4,5} + E_{4,6} + E_{6,7}$
$A_{13} = I + E_{1,2} + E_{1,3} + E_{1,5} + E_{3,4} + E_{5,6} + E_{6,7}$	$A_{38} = I + E_{1,2} + E_{1,3} + E_{2,5} + E_{3,4} + E_{4,6} + E_{6,7}$
$A_{14} = I + E_{1,2} + E_{1,3} + E_{3,4} + E_{3,5} + E_{5,6} + E_{6,7}$	$A_{39} = I + E_{1,2} + E_{2,3} + E_{2,4} + E_{3,5} + E_{4,6} + E_{6,7}$
$A_{15} = I + E_{1,2} + E_{1,3} + E_{2,4} + E_{3,5} + E_{5,6} + E_{6,7}$	$A_{40} = I + E_{1,4} + E_{2,3} + E_{2,4} + E_{3,5} + E_{4,6} + E_{6,7}$
$A_{16} = I + E_{1,4} + E_{1,5} + E_{2,3} + E_{2,5} + E_{5,6} + E_{6,7}$	$A_{41} = I + E_{1,2} + E_{1,3} + E_{1,4} + E_{3,5} + E_{4,6} + E_{6,7}$
$A_{17} = I + E_{1,2} + E_{2,3} + E_{3,4} + E_{4,5} + E_{4,6} + E_{6,7}$	$A_{42} = I + E_{1,5} + E_{1,6} + E_{2,3} + E_{3,4} + E_{3,6} + E_{6,7}$
$A_{18} = I + E_{1,6} + E_{2,3} + E_{3,4} + E_{4,5} + E_{4,6} + E_{6,7}$	$A_{43} = I + E_{1,2} + E_{1,3} + E_{2,5} + E_{2,6} + E_{3,4} + E_{6,7}$
$A_{19} = I + E_{1,2} + E_{1,3} + E_{2,6} + E_{3,4} + E_{4,5} + E_{6,7}$	$A_{44} = I + E_{1,2} + E_{1,3} + E_{2,5} + E_{3,4} + E_{3,6} + E_{6,7}$
$A_{20} = I + E_{1,2} + E_{2,6} + E_{3,4} + E_{4,5} + E_{4,6} + E_{6,7}$	$A_{45} = I + E_{1,2} + E_{2,5} + E_{2,6} + E_{3,4} + E_{3,6} + E_{6,7}$
$A_{21} = I + E_{1,3} + E_{2,6} + E_{3,4} + E_{4,5} + E_{4,6} + E_{6,7}$	$A_{46} = I + E_{1,3} + E_{2,5} + E_{2,6} + E_{3,4} + E_{3,6} + E_{6,7}$
$A_{22} = I + E_{1,2} + E_{1,3} + E_{3,4} + E_{4,5} + E_{4,6} + E_{6,7}$	$A_{47} = I + E_{1,6} + E_{2,5} + E_{2,6} + E_{3,4} + E_{3,6} + E_{6,7}$
$A_{23} = I + E_{1,2} + E_{2,3} + E_{2,4} + E_{3,6} + E_{4,5} + E_{6,7}$	$A_{48} = I + E_{1,2} + E_{1,3} + E_{2,4} + E_{3,5} + E_{3,6} + E_{6,7}$
$A_{24} = I + E_{1,2} + E_{2,3} + E_{3,6} + E_{4,5} + E_{4,6} + E_{6,7}$	$A_{49} = I + E_{1,2} + E_{1,3} + E_{2,7} + E_{3,4} + E_{4,5} + E_{5,6}$
$A_{25} = I + E_{1,4} + E_{2,3} + E_{2,4} + E_{3,6} + E_{4,5} + E_{6,7}$	$A_{50} = I + E_{1,2} + E_{1,4} + E_{2,3} + E_{3,7} + E_{4,5} + E_{5,6}$

$$\begin{aligned}
A_{51} &= I + E_{1,2} + E_{2,3} + E_{2,4} + E_{3,7} + E_{4,5} + E_{5,6} \\
A_{52} &= I + E_{1,4} + E_{2,3} + E_{2,4} + E_{3,7} + E_{4,5} + E_{5,6} \\
A_{53} &= I + E_{1,2} + E_{1,3} + E_{1,4} + E_{3,7} + E_{4,5} + E_{5,6} \\
A_{54} &= I + E_{1,2} + E_{2,3} + E_{3,4} + E_{3,5} + E_{4,7} + E_{5,6} \\
A_{55} &= I + E_{1,5} + E_{2,3} + E_{3,4} + E_{3,5} + E_{4,7} + E_{5,6} \\
A_{56} &= I + E_{1,2} + E_{1,3} + E_{2,5} + E_{3,4} + E_{4,7} + E_{5,6} \\
A_{57} &= I + E_{1,2} + E_{2,5} + E_{3,4} + E_{3,5} + E_{4,7} + E_{5,6} \\
A_{58} &= I + E_{1,3} + E_{2,5} + E_{3,4} + E_{3,5} + E_{4,7} + E_{5,6} \\
A_{59} &= I + E_{1,2} + E_{1,5} + E_{3,4} + E_{3,5} + E_{4,7} + E_{5,6} \\
A_{60} &= I + E_{1,2} + E_{1,3} + E_{3,4} + E_{3,5} + E_{4,7} + E_{5,6} \\
A_{61} &= I + E_{1,2} + E_{1,3} + E_{2,4} + E_{3,5} + E_{4,7} + E_{5,6} \\
A_{62} &= I + E_{1,2} + E_{2,3} + E_{2,4} + E_{2,5} + E_{4,7} + E_{5,6} \\
A_{63} &= I + E_{1,4} + E_{1,5} + E_{2,3} + E_{2,5} + E_{4,7} + E_{5,6} \\
A_{64} &= I + E_{1,4} + E_{1,5} + E_{2,3} + E_{2,4} + E_{4,7} + E_{5,6} \\
A_{65} &= I + E_{1,4} + E_{2,3} + E_{2,4} + E_{2,5} + E_{4,7} + E_{5,6} \\
A_{66} &= I + E_{1,5} + E_{2,3} + E_{2,4} + E_{2,5} + E_{4,7} + E_{5,6} \\
A_{67} &= I + E_{1,3} + E_{1,5} + E_{2,4} + E_{2,5} + E_{4,7} + E_{5,6} \\
A_{68} &= I + E_{1,2} + E_{1,3} + E_{2,7} + E_{3,4} + E_{3,5} + E_{5,6} \\
A_{69} &= I + E_{1,4} + E_{1,5} + E_{2,3} + E_{2,5} + E_{3,7} + E_{5,6} \\
A_{70} &= I + E_{1,2} + E_{1,3} + E_{2,6} + E_{3,4} + E_{4,5} + E_{5,7} \\
A_{71} &= I + E_{1,2} + E_{2,3} + E_{2,4} + E_{3,6} + E_{4,5} + E_{5,7} \\
A_{72} &= I + E_{1,4} + E_{2,3} + E_{2,4} + E_{3,6} + E_{4,5} + E_{5,7} \\
A_{73} &= I + E_{1,2} + E_{1,3} + E_{1,4} + E_{3,6} + E_{4,5} + E_{5,7} \\
A_{74} &= I + E_{1,2} + E_{1,3} + E_{2,5} + E_{3,4} + E_{4,6} + E_{5,7} \\
A_{75} &= I + E_{1,4} + E_{1,5} + E_{2,3} + E_{2,4} + E_{4,6} + E_{5,7} \\
A_{76} &= I + E_{1,2} + E_{1,3} + E_{2,6} + E_{3,4} + E_{3,5} + E_{5,7} \\
A_{77} &= I + E_{1,2} + E_{1,3} + E_{1,4} + E_{2,7} + E_{3,6} + E_{4,5}
\end{aligned}$$

\mathcal{D}_n -CLASSES OF CANONICAL MATRICES OF G_7 WITH CARDINALITY
 $(q - 1)^7$

$$\begin{aligned}
A_1 &= I + E_{1,2} + E_{1,3} + E_{2,5} + E_{3,4} + E_{3,5} + E_{5,6} + E_{6,7} \\
A_2 &= I + E_{1,2} + E_{1,3} + E_{2,6} + E_{3,4} + E_{4,5} + E_{4,6} + E_{6,7} \\
A_3 &= I + E_{1,2} + E_{2,3} + E_{2,4} + E_{3,6} + E_{4,5} + E_{4,6} + E_{6,7} \\
A_4 &= I + E_{1,4} + E_{2,3} + E_{2,4} + E_{3,6} + E_{4,5} + E_{4,6} + E_{6,7} \\
A_5 &= I + E_{1,2} + E_{1,3} + E_{1,4} + E_{3,6} + E_{4,5} + E_{4,6} + E_{6,7} \\
A_7 &= I + E_{1,2} + E_{1,3} + E_{2,5} + E_{3,4} + E_{3,5} + E_{4,7} + E_{5,6} \\
A_8 &= I + E_{1,4} + E_{1,5} + E_{2,3} + E_{2,4} + E_{2,5} + E_{4,7} + E_{5,6}
\end{aligned}$$

**\mathcal{D}_n -CLASSES OF CANONICAL MATRICES OF G_8 WITH CARDINALITY
 $(q - 1)^7$**

$$\begin{aligned}
 A_1 &= I + E_{12} + E_{23} + E_{34} + E_{45} + E_{56} + E_{67} + E_{78} & A_{35} &= I + E_{12} + E_{24} + E_{36} + E_{45} + E_{46} + E_{67} + E_{78} \\
 A_2 &= I + E_{12} + E_{13} + E_{34} + E_{45} + E_{56} + E_{67} + E_{78} & A_{36} &= I + E_{13} + E_{24} + E_{36} + E_{45} + E_{46} + E_{67} + E_{78} \\
 A_3 &= I + E_{12} + E_{14} + E_{23} + E_{45} + E_{56} + E_{67} + E_{78} & A_{37} &= I + E_{12} + E_{13} + E_{14} + E_{36} + E_{45} + E_{67} + E_{78} \\
 A_4 &= I + E_{12} + E_{23} + E_{24} + E_{45} + E_{56} + E_{67} + E_{78} & A_{38} &= I + E_{12} + E_{14} + E_{36} + E_{45} + E_{46} + E_{67} + E_{78} \\
 A_5 &= I + E_{14} + E_{23} + E_{24} + E_{45} + E_{56} + E_{67} + E_{78} & A_{39} &= I + E_{12} + E_{13} + E_{36} + E_{45} + E_{46} + E_{67} + E_{78} \\
 A_6 &= I + E_{12} + E_{15} + E_{23} + E_{34} + E_{56} + E_{67} + E_{78} & A_{40} &= I + E_{12} + E_{23} + E_{24} + E_{26} + E_{45} + E_{67} + E_{78} \\
 A_7 &= I + E_{12} + E_{23} + E_{25} + E_{34} + E_{56} + E_{67} + E_{78} & A_{41} &= I + E_{12} + E_{14} + E_{23} + E_{45} + E_{46} + E_{67} + E_{78} \\
 A_8 &= I + E_{12} + E_{23} + E_{34} + E_{35} + E_{56} + E_{67} + E_{78} & A_{42} &= I + E_{12} + E_{23} + E_{24} + E_{45} + E_{46} + E_{67} + E_{78} \\
 A_9 &= I + E_{15} + E_{23} + E_{25} + E_{34} + E_{56} + E_{67} + E_{78} & A_{43} &= I + E_{14} + E_{16} + E_{23} + E_{26} + E_{45} + E_{67} + E_{78} \\
 A_{10} &= I + E_{15} + E_{23} + E_{34} + E_{35} + E_{56} + E_{67} + E_{78} & A_{44} &= I + E_{14} + E_{16} + E_{23} + E_{24} + E_{45} + E_{67} + E_{78} \\
 A_{11} &= I + E_{12} + E_{13} + E_{25} + E_{34} + E_{56} + E_{67} + E_{78} & A_{45} &= I + E_{14} + E_{23} + E_{24} + E_{26} + E_{45} + E_{67} + E_{78} \\
 A_{12} &= I + E_{12} + E_{25} + E_{34} + E_{35} + E_{56} + E_{67} + E_{78} & A_{46} &= I + E_{14} + E_{23} + E_{24} + E_{45} + E_{46} + E_{67} + E_{78} \\
 A_{13} &= I + E_{13} + E_{25} + E_{34} + E_{35} + E_{56} + E_{67} + E_{78} & A_{47} &= I + E_{16} + E_{23} + E_{24} + E_{26} + E_{45} + E_{67} + E_{78} \\
 A_{14} &= I + E_{12} + E_{13} + E_{15} + E_{34} + E_{56} + E_{67} + E_{78} & A_{48} &= I + E_{16} + E_{23} + E_{24} + E_{45} + E_{46} + E_{67} + E_{78} \\
 A_{15} &= I + E_{12} + E_{13} + E_{34} + E_{35} + E_{56} + E_{67} + E_{78} & A_{49} &= I + E_{13} + E_{16} + E_{24} + E_{26} + E_{45} + E_{67} + E_{78} \\
 A_{16} &= I + E_{12} + E_{13} + E_{24} + E_{35} + E_{56} + E_{67} + E_{78} & A_{50} &= I + E_{13} + E_{14} + E_{26} + E_{45} + E_{46} + E_{67} + E_{78} \\
 A_{17} &= I + E_{14} + E_{15} + E_{23} + E_{25} + E_{56} + E_{67} + E_{78} & A_{51} &= I + E_{12} + E_{13} + E_{25} + E_{34} + E_{46} + E_{67} + E_{78} \\
 A_{18} &= I + E_{12} + E_{23} + E_{34} + E_{36} + E_{45} + E_{67} + E_{78} & A_{52} &= I + E_{12} + E_{14} + E_{23} + E_{35} + E_{46} + E_{67} + E_{78} \\
 A_{19} &= I + E_{12} + E_{23} + E_{34} + E_{45} + E_{46} + E_{67} + E_{78} & A_{53} &= I + E_{12} + E_{23} + E_{24} + E_{35} + E_{46} + E_{67} + E_{78} \\
 A_{20} &= I + E_{16} + E_{23} + E_{34} + E_{36} + E_{45} + E_{67} + E_{78} & A_{54} &= I + E_{14} + E_{23} + E_{24} + E_{35} + E_{46} + E_{67} + E_{78} \\
 A_{21} &= I + E_{16} + E_{23} + E_{34} + E_{45} + E_{46} + E_{67} + E_{78} & A_{55} &= I + E_{12} + E_{13} + E_{14} + E_{35} + E_{46} + E_{67} + E_{78} \\
 A_{22} &= I + E_{12} + E_{13} + E_{26} + E_{34} + E_{45} + E_{67} + E_{78} & A_{56} &= I + E_{15} + E_{16} + E_{23} + E_{26} + E_{34} + E_{67} + E_{78} \\
 A_{23} &= I + E_{12} + E_{26} + E_{34} + E_{36} + E_{45} + E_{67} + E_{78} & A_{57} &= I + E_{15} + E_{16} + E_{23} + E_{34} + E_{36} + E_{67} + E_{78} \\
 A_{24} &= I + E_{12} + E_{26} + E_{34} + E_{45} + E_{46} + E_{67} + E_{78} & A_{58} &= I + E_{12} + E_{13} + E_{16} + E_{25} + E_{34} + E_{67} + E_{78} \\
 A_{25} &= I + E_{13} + E_{26} + E_{34} + E_{36} + E_{45} + E_{67} + E_{78} & A_{59} &= I + E_{12} + E_{13} + E_{25} + E_{26} + E_{34} + E_{67} + E_{78} \\
 A_{26} &= I + E_{13} + E_{26} + E_{34} + E_{45} + E_{46} + E_{67} + E_{78} & A_{60} &= I + E_{12} + E_{13} + E_{25} + E_{34} + E_{36} + E_{67} + E_{78} \\
 A_{27} &= I + E_{12} + E_{16} + E_{34} + E_{36} + E_{45} + E_{67} + E_{78} & A_{61} &= I + E_{12} + E_{25} + E_{26} + E_{34} + E_{36} + E_{67} + E_{78} \\
 A_{28} &= I + E_{12} + E_{13} + E_{34} + E_{36} + E_{45} + E_{67} + E_{78} & A_{62} &= I + E_{13} + E_{25} + E_{26} + E_{34} + E_{36} + E_{67} + E_{78} \\
 A_{29} &= I + E_{12} + E_{13} + E_{34} + E_{45} + E_{46} + E_{67} + E_{78} & A_{63} &= I + E_{16} + E_{25} + E_{26} + E_{34} + E_{36} + E_{67} + E_{78} \\
 A_{30} &= I + E_{12} + E_{23} + E_{24} + E_{36} + E_{45} + E_{67} + E_{78} & A_{64} &= I + E_{14} + E_{16} + E_{23} + E_{26} + E_{35} + E_{67} + E_{78} \\
 A_{31} &= I + E_{12} + E_{23} + E_{36} + E_{45} + E_{46} + E_{67} + E_{78} & A_{65} &= I + E_{12} + E_{13} + E_{24} + E_{35} + E_{36} + E_{67} + E_{78} \\
 A_{32} &= I + E_{14} + E_{23} + E_{24} + E_{36} + E_{45} + E_{67} + E_{78} & A_{66} &= I + E_{12} + E_{23} + E_{34} + E_{45} + E_{56} + E_{57} + E_{78} \\
 A_{33} &= I + E_{14} + E_{23} + E_{36} + E_{45} + E_{46} + E_{67} + E_{78} & A_{67} &= I + E_{17} + E_{23} + E_{34} + E_{45} + E_{56} + E_{57} + E_{78} \\
 A_{34} &= I + E_{12} + E_{13} + E_{24} + E_{36} + E_{45} + E_{67} + E_{78} & A_{68} &= I + E_{12} + E_{13} + E_{27} + E_{34} + E_{45} + E_{56} + E_{78}
 \end{aligned}$$

$A_{273}=I+E_{14}+E_{16}+E_{23}+E_{24}+E_{45}+E_{58}+E_{67}$	$A_{307}=I+E_{12}+E_{13}+E_{34}+E_{35}+E_{36}+E_{58}+E_{67}$
$A_{274}=I+E_{14}+E_{23}+E_{26}+E_{45}+E_{46}+E_{58}+E_{67}$	$A_{308}=I+E_{14}+E_{16}+E_{23}+E_{35}+E_{36}+E_{58}+E_{67}$
$A_{275}=I+E_{14}+E_{23}+E_{24}+E_{45}+E_{46}+E_{58}+E_{67}$	$A_{309}=I+E_{12}+E_{13}+E_{24}+E_{26}+E_{35}+E_{58}+E_{67}$
$A_{276}=I+E_{16}+E_{23}+E_{26}+E_{45}+E_{46}+E_{58}+E_{67}$	$A_{310}=I+E_{12}+E_{13}+E_{24}+E_{35}+E_{36}+E_{58}+E_{67}$
$A_{277}=I+E_{16}+E_{23}+E_{24}+E_{45}+E_{46}+E_{58}+E_{67}$	$A_{311}=I+E_{12}+E_{24}+E_{26}+E_{35}+E_{36}+E_{58}+E_{67}$
$A_{278}=I+E_{13}+E_{16}+E_{24}+E_{45}+E_{46}+E_{58}+E_{67}$	$A_{312}=I+E_{13}+E_{24}+E_{26}+E_{35}+E_{36}+E_{58}+E_{67}$
$A_{279}=I+E_{13}+E_{14}+E_{26}+E_{45}+E_{46}+E_{58}+E_{67}$	$A_{313}=I+E_{16}+E_{24}+E_{26}+E_{35}+E_{36}+E_{58}+E_{67}$
$A_{280}=I+E_{12}+E_{13}+E_{25}+E_{34}+E_{46}+E_{58}+E_{67}$	$A_{314}=I+E_{12}+E_{13}+E_{24}+E_{25}+E_{36}+E_{58}+E_{67}$
$A_{281}=I+E_{12}+E_{23}+E_{24}+E_{35}+E_{46}+E_{58}+E_{67}$	$A_{315}=I+E_{14}+E_{15}+E_{16}+E_{23}+E_{26}+E_{58}+E_{67}$
$A_{282}=I+E_{14}+E_{23}+E_{24}+E_{35}+E_{46}+E_{58}+E_{67}$	$A_{316}=I+E_{14}+E_{15}+E_{16}+E_{23}+E_{25}+E_{58}+E_{67}$
$A_{283}=I+E_{12}+E_{13}+E_{14}+E_{35}+E_{46}+E_{58}+E_{67}$	$A_{317}=I+E_{14}+E_{16}+E_{23}+E_{25}+E_{26}+E_{58}+E_{67}$
$A_{284}=I+E_{12}+E_{14}+E_{23}+E_{25}+E_{46}+E_{58}+E_{67}$	$A_{318}=I+E_{14}+E_{15}+E_{23}+E_{25}+E_{26}+E_{58}+E_{67}$
$A_{285}=I+E_{14}+E_{15}+E_{23}+E_{24}+E_{46}+E_{58}+E_{67}$	$A_{319}=I+E_{13}+E_{16}+E_{24}+E_{25}+E_{26}+E_{58}+E_{67}$
$A_{286}=I+E_{12}+E_{23}+E_{34}+E_{35}+E_{36}+E_{58}+E_{67}$	$A_{320}=I+E_{12}+E_{13}+E_{28}+E_{34}+E_{45}+E_{46}+E_{67}$
$A_{287}=I+E_{15}+E_{16}+E_{23}+E_{34}+E_{36}+E_{58}+E_{67}$	$A_{321}=I+E_{12}+E_{13}+E_{14}+E_{28}+E_{36}+E_{45}+E_{67}$
$A_{288}=I+E_{15}+E_{16}+E_{23}+E_{34}+E_{35}+E_{58}+E_{67}$	$A_{322}=I+E_{12}+E_{14}+E_{28}+E_{36}+E_{45}+E_{46}+E_{67}$
$A_{289}=I+E_{15}+E_{23}+E_{34}+E_{35}+E_{36}+E_{58}+E_{67}$	$A_{323}=I+E_{12}+E_{13}+E_{28}+E_{36}+E_{45}+E_{46}+E_{67}$
$A_{290}=I+E_{16}+E_{23}+E_{34}+E_{35}+E_{36}+E_{58}+E_{67}$	$A_{324}=I+E_{12}+E_{14}+E_{23}+E_{38}+E_{45}+E_{46}+E_{67}$
$A_{291}=I+E_{12}+E_{13}+E_{25}+E_{26}+E_{34}+E_{58}+E_{67}$	$A_{325}=I+E_{12}+E_{23}+E_{24}+E_{38}+E_{45}+E_{46}+E_{67}$
$A_{292}=I+E_{12}+E_{13}+E_{25}+E_{34}+E_{36}+E_{58}+E_{67}$	$A_{326}=I+E_{14}+E_{16}+E_{23}+E_{24}+E_{38}+E_{45}+E_{67}$
$A_{293}=I+E_{12}+E_{25}+E_{26}+E_{34}+E_{36}+E_{58}+E_{67}$	$A_{327}=I+E_{14}+E_{23}+E_{24}+E_{38}+E_{45}+E_{46}+E_{67}$
$A_{294}=I+E_{12}+E_{25}+E_{26}+E_{34}+E_{35}+E_{58}+E_{67}$	$A_{328}=I+E_{16}+E_{23}+E_{24}+E_{38}+E_{45}+E_{46}+E_{67}$
$A_{295}=I+E_{12}+E_{25}+E_{34}+E_{35}+E_{36}+E_{58}+E_{67}$	$A_{329}=I+E_{13}+E_{14}+E_{26}+E_{38}+E_{45}+E_{46}+E_{67}$
$A_{296}=I+E_{13}+E_{25}+E_{26}+E_{34}+E_{36}+E_{58}+E_{67}$	$A_{330}=I+E_{12}+E_{13}+E_{14}+E_{38}+E_{45}+E_{46}+E_{67}$
$A_{297}=I+E_{13}+E_{25}+E_{26}+E_{34}+E_{35}+E_{58}+E_{67}$	$A_{331}=I+E_{12}+E_{13}+E_{14}+E_{28}+E_{35}+E_{46}+E_{67}$
$A_{298}=I+E_{13}+E_{25}+E_{34}+E_{35}+E_{36}+E_{58}+E_{67}$	$A_{332}=I+E_{15}+E_{16}+E_{23}+E_{34}+E_{36}+E_{48}+E_{67}$
$A_{299}=I+E_{16}+E_{25}+E_{26}+E_{34}+E_{36}+E_{58}+E_{67}$	$A_{333}=I+E_{12}+E_{13}+E_{25}+E_{26}+E_{34}+E_{48}+E_{67}$
$A_{300}=I+E_{16}+E_{25}+E_{26}+E_{34}+E_{35}+E_{58}+E_{67}$	$A_{334}=I+E_{12}+E_{13}+E_{25}+E_{34}+E_{36}+E_{48}+E_{67}$
$A_{301}=I+E_{16}+E_{25}+E_{34}+E_{35}+E_{36}+E_{58}+E_{67}$	$A_{335}=I+E_{12}+E_{25}+E_{26}+E_{34}+E_{36}+E_{48}+E_{67}$
$A_{302}=I+E_{12}+E_{13}+E_{26}+E_{34}+E_{35}+E_{58}+E_{67}$	$A_{336}=I+E_{13}+E_{25}+E_{26}+E_{34}+E_{36}+E_{48}+E_{67}$
$A_{303}=I+E_{12}+E_{26}+E_{34}+E_{35}+E_{36}+E_{58}+E_{67}$	$A_{337}=I+E_{16}+E_{25}+E_{26}+E_{34}+E_{36}+E_{48}+E_{67}$
$A_{304}=I+E_{13}+E_{26}+E_{34}+E_{35}+E_{36}+E_{58}+E_{67}$	$A_{338}=I+E_{12}+E_{13}+E_{24}+E_{35}+E_{36}+E_{48}+E_{67}$
$A_{305}=I+E_{15}+E_{26}+E_{34}+E_{35}+E_{36}+E_{58}+E_{67}$	$A_{339}=I+E_{15}+E_{16}+E_{23}+E_{24}+E_{26}+E_{48}+E_{67}$
$A_{306}=I+E_{12}+E_{16}+E_{34}+E_{35}+E_{36}+E_{58}+E_{67}$	$A_{340}=I+E_{12}+E_{13}+E_{27}+E_{34}+E_{45}+E_{56}+E_{68}$

$A_{341}=I+E_{12}+E_{14}+E_{23}+E_{37}+E_{45}+E_{56}+E_{68}$	$A_{373}=I+E_{13}+E_{25}+E_{26}+E_{34}+E_{35}+E_{57}+E_{68}$
$A_{342}=I+E_{12}+E_{23}+E_{24}+E_{37}+E_{45}+E_{56}+E_{68}$	$A_{374}=I+E_{16}+E_{25}+E_{26}+E_{34}+E_{35}+E_{57}+E_{68}$
$A_{343}=I+E_{14}+E_{23}+E_{24}+E_{37}+E_{45}+E_{56}+E_{68}$	$A_{375}=I+E_{12}+E_{13}+E_{26}+E_{34}+E_{35}+E_{57}+E_{68}$
$A_{344}=I+E_{12}+E_{13}+E_{14}+E_{37}+E_{45}+E_{56}+E_{68}$	$A_{376}=I+E_{12}+E_{13}+E_{24}+E_{26}+E_{35}+E_{57}+E_{68}$
$A_{345}=I+E_{12}+E_{23}+E_{34}+E_{35}+E_{47}+E_{56}+E_{68}$	$A_{377}=I+E_{14}+E_{15}+E_{16}+E_{23}+E_{25}+E_{57}+E_{68}$
$A_{346}=I+E_{15}+E_{23}+E_{34}+E_{35}+E_{47}+E_{56}+E_{68}$	$A_{378}=I+E_{12}+E_{13}+E_{27}+E_{34}+E_{45}+E_{46}+E_{68}$
$A_{347}=I+E_{12}+E_{13}+E_{25}+E_{34}+E_{47}+E_{56}+E_{68}$	$A_{379}=I+E_{12}+E_{13}+E_{14}+E_{27}+E_{36}+E_{45}+E_{68}$
$A_{348}=I+E_{12}+E_{25}+E_{34}+E_{35}+E_{47}+E_{56}+E_{68}$	$A_{380}=I+E_{12}+E_{14}+E_{27}+E_{36}+E_{45}+E_{46}+E_{68}$
$A_{349}=I+E_{13}+E_{25}+E_{34}+E_{35}+E_{47}+E_{56}+E_{68}$	$A_{381}=I+E_{12}+E_{13}+E_{27}+E_{36}+E_{45}+E_{46}+E_{68}$
$A_{350}=I+E_{12}+E_{15}+E_{34}+E_{35}+E_{47}+E_{56}+E_{68}$	$A_{382}=I+E_{12}+E_{23}+E_{24}+E_{37}+E_{45}+E_{46}+E_{68}$
$A_{351}=I+E_{12}+E_{13}+E_{34}+E_{35}+E_{47}+E_{56}+E_{68}$	$A_{383}=I+E_{14}+E_{23}+E_{24}+E_{37}+E_{45}+E_{46}+E_{68}$
$A_{352}=I+E_{12}+E_{13}+E_{24}+E_{35}+E_{47}+E_{56}+E_{68}$	$A_{384}=I+E_{16}+E_{23}+E_{24}+E_{37}+E_{45}+E_{46}+E_{68}$
$A_{353}=I+E_{12}+E_{23}+E_{24}+E_{25}+E_{47}+E_{56}+E_{68}$	$A_{385}=I+E_{13}+E_{14}+E_{26}+E_{37}+E_{45}+E_{46}+E_{68}$
$A_{354}=I+E_{14}+E_{15}+E_{23}+E_{25}+E_{47}+E_{56}+E_{68}$	$A_{386}=I+E_{12}+E_{13}+E_{14}+E_{37}+E_{45}+E_{46}+E_{68}$
$A_{355}=I+E_{14}+E_{15}+E_{23}+E_{24}+E_{47}+E_{56}+E_{68}$	$A_{387}=I+E_{12}+E_{13}+E_{14}+E_{27}+E_{35}+E_{46}+E_{68}$
$A_{356}=I+E_{14}+E_{23}+E_{24}+E_{25}+E_{47}+E_{56}+E_{68}$	$A_{388}=I+E_{12}+E_{13}+E_{25}+E_{26}+E_{34}+E_{47}+E_{68}$
$A_{357}=I+E_{15}+E_{23}+E_{24}+E_{25}+E_{47}+E_{56}+E_{68}$	$A_{389}=I+E_{12}+E_{13}+E_{14}+E_{28}+E_{37}+E_{45}+E_{56}$
$A_{358}=I+E_{13}+E_{15}+E_{24}+E_{25}+E_{47}+E_{56}+E_{68}$	$A_{390}=I+E_{12}+E_{15}+E_{28}+E_{34}+E_{35}+E_{47}+E_{56}$
$A_{359}=I+E_{12}+E_{13}+E_{15}+E_{27}+E_{34}+E_{56}+E_{68}$	$A_{391}=I+E_{12}+E_{13}+E_{28}+E_{34}+E_{35}+E_{47}+E_{56}$
$A_{360}=I+E_{12}+E_{13}+E_{27}+E_{34}+E_{35}+E_{56}+E_{68}$	$A_{392}=I+E_{12}+E_{23}+E_{24}+E_{25}+E_{38}+E_{47}+E_{56}$
$A_{361}=I+E_{14}+E_{15}+E_{23}+E_{25}+E_{37}+E_{56}+E_{68}$	$A_{393}=I+E_{14}+E_{15}+E_{23}+E_{25}+E_{38}+E_{47}+E_{56}$
$A_{362}=I+E_{12}+E_{13}+E_{26}+E_{34}+E_{45}+E_{57}+E_{68}$	$A_{394}=I+E_{14}+E_{15}+E_{23}+E_{24}+E_{38}+E_{47}+E_{56}$
$A_{363}=I+E_{12}+E_{23}+E_{24}+E_{36}+E_{45}+E_{57}+E_{68}$	$A_{395}=I+E_{14}+E_{23}+E_{24}+E_{25}+E_{38}+E_{47}+E_{56}$
$A_{364}=I+E_{14}+E_{23}+E_{24}+E_{36}+E_{45}+E_{57}+E_{68}$	$A_{396}=I+E_{15}+E_{23}+E_{24}+E_{25}+E_{38}+E_{47}+E_{56}$
$A_{365}=I+E_{12}+E_{13}+E_{14}+E_{36}+E_{45}+E_{57}+E_{68}$	$A_{397}=I+E_{13}+E_{15}+E_{24}+E_{25}+E_{38}+E_{47}+E_{56}$
$A_{366}=I+E_{12}+E_{14}+E_{23}+E_{26}+E_{45}+E_{57}+E_{68}$	$A_{398}=I+E_{12}+E_{13}+E_{14}+E_{15}+E_{38}+E_{47}+E_{56}$
$A_{367}=I+E_{14}+E_{16}+E_{23}+E_{24}+E_{45}+E_{57}+E_{68}$	$A_{399}=I+E_{12}+E_{13}+E_{27}+E_{34}+E_{35}+E_{48}+E_{56}$
$A_{368}=I+E_{12}+E_{13}+E_{25}+E_{34}+E_{46}+E_{57}+E_{68}$	$A_{400}=I+E_{14}+E_{15}+E_{23}+E_{25}+E_{37}+E_{48}+E_{56}$
$A_{369}=I+E_{14}+E_{15}+E_{23}+E_{24}+E_{46}+E_{57}+E_{68}$	$A_{401}=I+E_{12}+E_{13}+E_{14}+E_{28}+E_{36}+E_{45}+E_{57}$
$A_{370}=I+E_{15}+E_{16}+E_{23}+E_{34}+E_{35}+E_{57}+E_{68}$	$A_{402}=I+E_{14}+E_{15}+E_{23}+E_{24}+E_{38}+E_{46}+E_{57}$
$A_{371}=I+E_{12}+E_{13}+E_{25}+E_{34}+E_{36}+E_{57}+E_{68}$	$A_{403}=I+E_{12}+E_{13}+E_{26}+E_{34}+E_{35}+E_{48}+E_{57}$
$A_{372}=I+E_{12}+E_{25}+E_{26}+E_{34}+E_{35}+E_{57}+E_{68}$	$A_{404}=I+E_{12}+E_{13}+E_{14}+E_{27}+E_{36}+E_{45}+E_{58}$