$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 2 \cdot \chi_{11} + 2 \cdot \chi_{12} + 2 \cdot \chi_{13} \mid 80 \quad 8 \quad 8$

 $\mid 0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} \mid 16 \quad -2 \quad -2 \quad -2 * E(5) \widehat{} + 2 \cdot E(5) \widehat{} + 2 \cdot$

 $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 2 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} \mid 40 \quad 4 \quad 4$

 $\begin{vmatrix} 0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} \end{vmatrix} \begin{vmatrix} 8 & -1 & -1 & -E(5) - E(5) \\ 4 & -E(5) - 2 - E(5) - 3 \end{vmatrix} \begin{vmatrix} 8 & -1 & -1 & -E(5) - E(5) \\ 4 & -E(5) - 2 - E(5) - 3 \end{vmatrix} \begin{vmatrix} 0 & 0 & 0 & 0 \\ 0 & 0 & 0 \end{vmatrix} \begin{vmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \end{vmatrix} \begin{vmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \end{vmatrix} \end{vmatrix}$ $\boxed{1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} \mid 20 \quad 2 \quad 2}$

 $\begin{vmatrix} 0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 1 \cdot \chi_{13} \end{vmatrix} \ 48 \quad 0 \quad 6$ $0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 1 \cdot \chi_{13} = 48 \quad 6 \quad 0$

 $\begin{vmatrix} 0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} \end{vmatrix} 14 - 1$ $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} = 10 - 1 - 1$ 0 0 0 0

0 0 0 0 0 0 0

 $0 \qquad | 0 | 0 | 0 | 0 | 0 | 0$

1 2 0 0 0 2 2 0

-1 | 24 0 3 | -1 | -1 | 0 | 0 0 | 0 | 0 | 0 |

$\left \begin{array}{c cccccccccccccccccccccccccccccccccc$
$\begin{bmatrix} \chi_2 \\ \chi_3 \end{bmatrix}$ $\begin{bmatrix} 4 & -4 & -2 & 1 & 0 \\ & & & & \end{bmatrix}$ $\begin{bmatrix} -1 & & & & & & & & & & & & & & & & & & $
$\begin{array}{ c cccccccccccccccccccccccccccccccccc$
$\mid \chi_5 \mid 5 5 2 -1 1 \qquad 0 \qquad 0 \qquad 2 -1 \qquad -1 \qquad 0 \qquad 0 \qquad \mid$
$\left \begin{array}{cccccccccccccccccccccccccccccccccccc$
$\left \begin{array}{cccccccccccccccccccccccccccccccccccc$
$ \begin{vmatrix} \chi_8 & 8 & -8 & -1 & -1 & 0 & -E(5) \hat{} 2 - E(5) \hat{} 3 & -E(5) - E(5) \hat{} 4 & 1 & 1 & 0 & 0 & E(5) \hat{} 2 + E(5) \hat{} 3 & E(5) + E(5) \hat{} 4 & 1 & 1 & 0 & 0 \end{vmatrix} $
$\left \begin{array}{c cccccccccccccccccccccccccccccccccc$
$\mid \chi_{10} \mid 9 9 0 0 1 \qquad -1 \qquad -1 \qquad 0 0 \qquad 1 \qquad 1 \qquad -1 \qquad -1 \qquad \mid$
$\mid \chi_{11} \mid 10 10 1 1 -2 0 \qquad 0 \qquad 1 1 0 \qquad 0 \qquad 0 \qquad 0 \qquad \mid$
$\left \begin{array}{c cccccccccccccccccccccccccccccccccc$
$\left \begin{array}{cccccccccccccccccccccccccccccccccccc$
$\frac{1}{2}$

 $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot$ $\begin{vmatrix} 0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} \end{vmatrix} \ 14 \quad 2 \quad -1$

 $P_2 = Group([(1,4)(2,5)(3,11)(6,13)(7,14)(8,15)(9,12)(10,18)(16,17)(19,21)(20,24)(22,23)(25,29)(26,30)(27,28)(31,33)(32,34)(35,36)(37,39)(38,40)(41,42)(43,44)(45,47)(46,48)(49,51)(50,54)(52,53)(55,57)(56,58)(59,61)(60,64)(62,63)(65,66)(67,68)(69,71)(70,72)(73,75)(74,76)(77,78)(79,80)]) \\ \cong C_2(3,23)(2,33)(3,33)(3,23)(3,33)(3,23)(3,33)(3,23)(3,33)(3,23)(3,33)(3,23)(3,33)(3,23)(3,33)(3,23)(3,33)(3,23)(3,3$ =Group([(1,5,4,2)(3,58,11,56)(6,31,13,33)(7,46,14,48)(8,37,15,39)(9,19,12,21)(10,51,18,49)(16,27,17,28)(20,61,24,59)(22,33,36)(25,39,3

= Group([(1,65,2,68,4,66,5,67)(3,70,56,71,11,72,58,69)(6,44,33,60,13,43)(7,48,14,40)(8,39,15,37)(9,21,12,19)(10,49,18,51)(16,28,17,27)(20,59,24,61)(22,36,23,35)(25,26,29,30)(32,57,34,55)(38,45,40,47)(41,50,42,54)(43,54,44)(46,56,48,58)(50,60,54,40)(10,57,18,55)(16,62,17,63)(19,65,21,66)(20,45,24,47)(22,53,23,52)(27,74,28,76)(22,53,23,23,52)(27,74,28,76)(22,53,23,23,23,23)(27,74,28,24)(27,28,24)(27,28,24)(27,28,24)(27,28,24)(27,28,24)(27,28,24)(27,28,24)(27,28,24)(27,

 $=Group([1,3,10,13,4,11,18,6)(2,7,20,15,5,14,24,8)(9,25,19,30,12,29,21,26)(16,31,50,34,17,33,54,32)(22,37,60,40,23,39,64,38)(27,45,70,48,28,47,72,46)(35,55,79,58,36,57,80,56)(41,63,69,66,42,62,71,65)(43,53,78,68,44,52,77,67)(49,73,61,76,51,78,59,74),(1,2,4,5)(3,52,34,53)(37,59,39,61)(38,62,40,63)(45,69,47,71)(46,58,48,56)(50,64,54,60)(55,77,57,78)(65,68,66,67)(70,76,72,74)(73,80,75,79)] \\ \cong SL(2,9)$