1 BLT set 3 over GF(25)

Points on the quadric $x_0^2 + x_1x_2 + x_3x_4$:

$P_1 = (0, 1, 0, 0, 0)$

$P_2 = (0, 0, 1, 0, 0)$

$P_3 = (0, 1, 17, 4, 17)$

$P_4 = (0, 1, 13, 2, 21)$

$P_5 = (0, 1, 13, 3, 9)$

$P_6 = (1, 12, 7, 11, 20)$

$P_7 = (1, 24, 14, 17, 16)$

$P_8 = (1, 7, 8, 10, 2)$

$P_9 = (1, 10, 3, 7, 15)$

$P_{10} = (0, 1, 14, 21, 12)$

$P_{11} = (1, 11, 15, 15, 23)$

$P_{12} = (0, 1, 14, 9, 18)$

$P_{13} = (0, 1, 5, 10, 2)$

$P_{14} = (1, 13, 24, 6, 5)$

$P_{15} = (0, 1, 10, 6, 14)$

$P_{16} = (1, 22, 5, 12, 24)$

$P_{17} = (1, 13, 24, 8, 14)$

$P_{18} = (1, 24, 14, 24, 24)$

$P_{19} = (1, 10, 3, 19, 22)$

$P_{20} = (1, 11, 15, 12, 3)$

$P_{21} = (1, 12, 7, 22, 10)$

$P_{22} = (0, 1, 21, 16, 11)$

$P_{23} = (1, 22, 5, 17, 23)$

$P_{24} = (0, 1, 9, 7, 22)$

$P_{25} = (0, 1, 7, 8, 5)$

$P_{26} = (0, 1, 5, 15, 3)$

Stabilizer of order 2704 is generated by:

$$g_1 = \begin{pmatrix} 5 & 0 & 0 & 24 & 9 \\ 0 & 11 & 23 & 22 & 16 \\ 0 & 16 & 12 & 23 & 6 \\ 5 & 22 & 14 & 14 & 12 \\ 22 & 7 & 6 & 24 & 9 \end{pmatrix}, 1$$

with 6 fixed points

$$g_2 = \begin{pmatrix} 21 & 0 & 0 & 8 & 20 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 \\ 15 & 0 & 0 & 11 & 3 \\ 11 & 0 & 0 & 19 & 11 \end{pmatrix}, 0$$

with 26 fixed points

$$g_3 = \begin{pmatrix} 9 & 0 & 0 & 22 & 5 \\ 0 & 4 & 0 & 0 & 0 \\ 0 & 0 & 4 & 0 & 0 \\ 15 & 0 & 0 & 10 & 15 \\ 11 & 0 & 0 & 14 & 10 \end{pmatrix}, 0$$

with 626 fixed points

$$g_4 = \begin{pmatrix} 0 & 15 & 2 & 23 & 8 \\ 15 & 13 & 24 & 23 & 11 \\ 8 & 4 & 13 & 4 & 4 \\ 14 & 22 & 14 & 2 & 5 \\ 6 & 17 & 8 & 10 & 8 \end{pmatrix}, 0$$

with 0 fixed points

$$g_5 = \begin{pmatrix} 10 & 0 & 0 & 9 & 1 \\ 0 & 18 & 0 & 0 & 0 \\ 0 & 15 & 11 & 6 & 9 \\ 19 & 13 & 0 & 21 & 13 \\ 16 & 1 & 0 & 21 & 5 \end{pmatrix}, 1$$

with 6 fixed points The induced group has order 2704 and is generated by:

g_1 =(6)(3)(11, 18, 17, 20)(10, 13, 26, 12)(15, 24, 25, 22)(14, 16, 21, 19)(7, 9, 23, 8)(1, 4, 2, 5)

g_2 =(2)(1)(4)(5)(3)(10)(12)(13)(15)(22)(24)(25)(26)(6, 18, 8, 7, 21, 11, 19, 16, 17, 14, 23, 9, 20)

g_3 =(26)(4)(1)(5)(3)(22)(2)(10)(12)(13)(14)(15)(25)(24)(18, 21)(17, 23)(7, 8)(6, 11)(19, 20)(9, 16)

g_4 =(1, 6, 10, 11, 13, 23, 15, 8, 3, 16, 25, 20, 12, 21, 26, 14, 2, 18, 22, 19, 4, 9, 5, 7, 24, 17)

g_5 =(17)(1)(3, 12, 22, 26)(6, 16, 7, 14)(8, 21, 18, 20)(9, 23, 11, 19)(4, 13, 15, 5)(2, 24, 25, 10)

Kernel has order 1 and is generated by:

There are 1 orbits on the BLT set.

The orbit length are [26]

The orbits are:

$O_0 = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26\}$ (length 26)