1 BLT set 10 over GF(47)

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

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

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

$P_3 = (0, 1, 28, 46, 28)$

$P_4 = (0, 1, 27, 23, 7)$

$P_5 = (1, 25, 4, 40, 1)$

$P_6 = (1, 1, 7, 27, 38)$

$P_7 = (1, 31, 30, 25, 6)$

$P_8 = (1, 10, 39, 19, 19)$

$P_9 = (1, 30, 10, 4, 7)$

$P_{10} = (1, 24, 18, 14, 6)$

$P_{11} = (1, 16, 37, 5, 13)$

$P_{12} = (1, 35, 29, 35, 22)$

$P_{13} = (1, 32, 6, 8, 17)$

$P_{14} = (1, 9, 9, 24, 24)$

$P_{15} = (1, 28, 9, 34, 5)$

$P_{16} = (1, 46, 23, 4, 29)$

$P_{17} = (1, 15, 15, 22, 41)$

$P_{18} = (1, 31, 19, 45, 13)$

$P_{19} = (1, 21, 18, 34, 40)$

$P_{20} = (1, 2, 36, 10, 35)$

$P_{21} = (1, 27, 2, 14, 33)$

$P_{22} = (1, 33, 15, 32, 8)$

$P_{23} = (1, 31, 38, 27, 19)$

$P_{24} = (1, 38, 23, 18, 1)$

$P_{25} = (1, 2, 4, 25, 41)$

$P_{26} = (1, 32, 36, 9, 39)$

$P_{27} = (1, 18, 4, 3, 7)$

$P_{28} = (1, 34, 8, 24, 18)$

$P_{29} = (1, 35, 45, 28, 31)$

$P_{30} = (1, 18, 17, 2, 11)$

$P_{31} = (1, 42, 32, 32, 27)$

$P_{32} = (1, 9, 1, 22, 38)$

$P_{33} = (1, 4, 21, 19, 45)$

$P_{34} = (1, 28, 18, 41, 45)$

$P_{35} = (1, 28, 36, 3, 24)$

$P_{36} = (1, 2, 3, 35, 28)$

$P_{37} = (1, 3, 17, 31, 15)$

$P_{38} = (1, 38, 33, 37, 8)$

$P_{39} = (1, 17, 27, 9, 22)$

$P_{40} = (1, 18, 9, 41, 35)$

$P_{41} = (1, 5, 13, 10, 31)$

$P_{42} = (1, 40, 29, 45, 40)$

$P_{43} = (1, 20, 29, 2, 15)$

$P_{44} = (1, 9, 42, 37, 5)$

$P_{45} = (1, 19, 15, 7, 33)$

$P_{46} = (1, 37, 34, 18, 11)$

$P_{47} = (1, 43, 20, 7, 18)$

$P_{48} = (1, 38, 40, 8, 39)$

Stabilizer of order 103776 is generated by:

$$g_1 = \begin{pmatrix} 27 & 0 & 0 & 18 & 17 \\ 0 & 1 & 27 & 23 & 7 \\ 0 & 0 & 1 & 0 & 0 \\ 32 & 0 & 7 & 33 & 6 \\ 9 & 0 & 23 & 36 & 33 \end{pmatrix}$$

$$g_2 = \begin{pmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 4 & 18 & 43 & 18 \\ 0 & 28 & 4 & 33 & 8 \\ 0 & 8 & 18 & 43 & 36 \\ 0 & 33 & 43 & 14 & 43 \end{pmatrix}$$

$$g_3 = \begin{pmatrix} 8 & 24 & 0 & 34 & 41 \\ 0 & 1 & 0 & 0 & 0 \\ 12 & 18 & 1 & 10 & 12 \\ 44 & 12 & 0 & 19 & 2 \\ 17 & 10 & 0 & 12 & 19 \end{pmatrix}$$

$$g_4 = \begin{pmatrix} 28 & 0 & 0 & 7 & 9 \\ 0 & 9 & 0 & 0 & 0 \\ 0 & 0 & 21 & 0 & 0 \\ 33 & 0 & 0 & 19 & 7 \\ 40 & 0 & 0 & 21 & 29 \end{pmatrix}$$

The induced group has order 103776 and is generated by:

g_1 =(1, 4)(3, 5)(6, 9)(7, 39)(8, 29)(10, 20)(11, 41)(12, 13)(14, 30)(15, 31)(16, 21)(17, 34)(18, 35)(19, 44)(22, 23)(25, 40)(26, 33)(27, 48)(28, 36)(32, 42)(37, 43)(38, 47)(45, 46)

g_2 =(1, 3)(2, 4)(5, 6)(7, 16)(8, 23)(9, 41)(10, 39)(11, 27)(12, 18)(13, 34)(14, 37)(15, 25)(17, 29)(19, 40)(20, 31)(21, 36)(22, 24)(26, 33)(28, 30)(32, 46)(35, 44)(38, 48)(42, 43)(45, 47)

g_3 =(2, 5)(3, 11)(4, 9)(6, 48)(7, 15)(8, 12)(10, 40)(13, 19)(14, 16)(17, 35)(18, 25)(20, 21)(22, 34)(24, 29)(26, 33)(27, 46)(28, 39)(30, 32)(31, 44)(36, 43)(37, 45)(38, 42)(41, 47)

g_4 =(3, 5, 14, 8, 27, 7, 12, 23, 42, 46, 21, 11, 40, 13, 32, 15, 10, 37, 35, 31, 6, 39, 38, 45, 24, 17, 20, 47, 34, 36, 4, 9, 48, 30, 33, 16, 22, 19, 25, 44, 18, 29, 28, 26, 43, 41)

Kernel has order 1 and is generated by:

There are 1 orbits on the BLT set.

The orbit length are [48]

The orbits are:

$O_0 = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34,$

(length 48)