

#MAGMA

K := FiniteField(2);

**C := LinearCode<K, 10 | [1,0,0,0,1,1,1,1,1,0],[0,1,0,0,1,1,0,0,0,1],[0,0,1,0,1,0,0,1,1,0],[0,0,0,1,1,1,1,1,0,1],
[1,1,1,1,1,1,1,1,1,1]>;**

G2 := AutomorphismGroup(C);

G2;

WeightDistribution(C);

Permutation group G2 acting on a set of cardinality 10

Order = 720 = 2⁴ * 3² * 5

(1, 8)(3, 4)(7, 9)

(2, 8)(3, 6)(9, 10)

(1, 4)(2, 6)(3, 8)

(1, 6, 2, 3, 7, 9)(4, 8, 5)

(2, 5)(3, 7)(4, 9)

(2, 3)(5, 7)(6, 8)

[<0, 1>, <4, 15>, <6, 15>, <10, 1>]

#SAGE MATH

G = PermutationGroup([[(1, 8), (3, 4), (7, 9)], [(2, 8), (3, 6), (9, 10)], [(1, 4), (2, 6), (3, 8)], [(1, 6, 2, 3, 7, 9), (4, 8, 5)], [(2, 5), (3, 7), (4, 9)], [(2, 3), (5, 7), (6, 8)]])

G.structure_description()