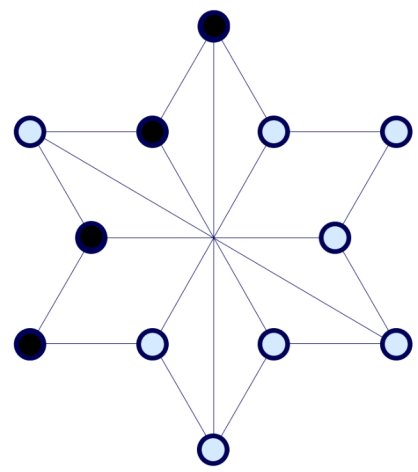

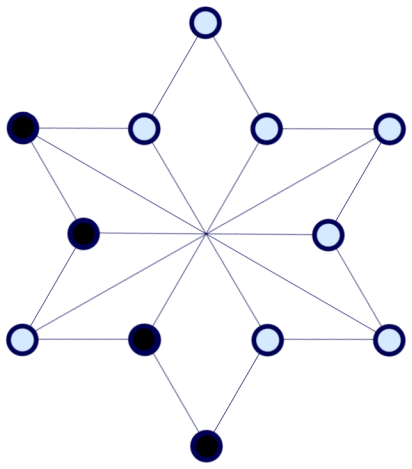

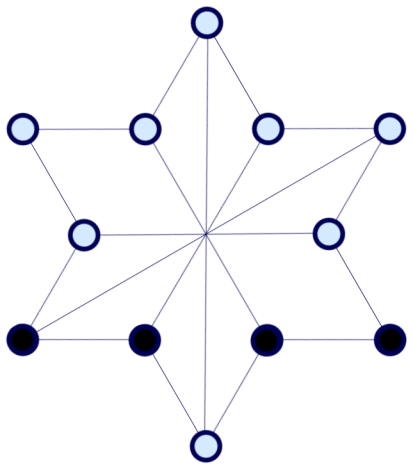

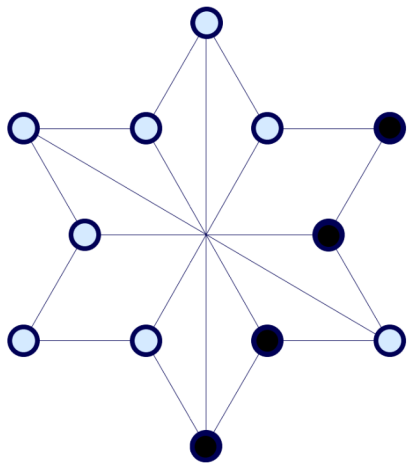

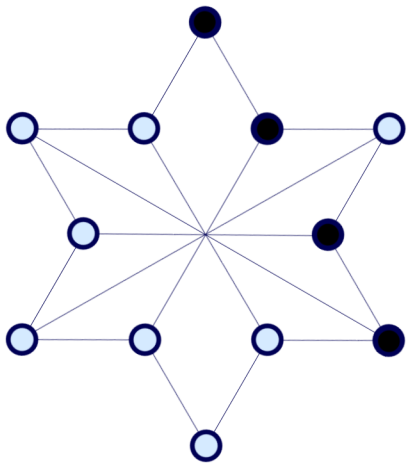

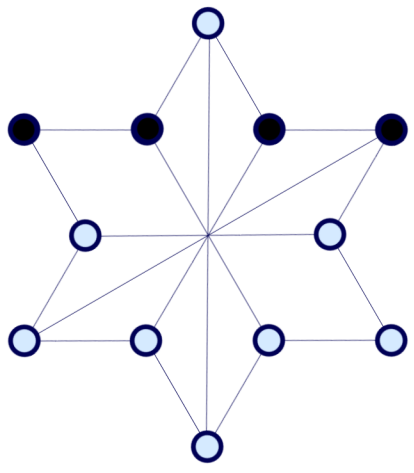

#関数の定義

```
def inp(k):
    inp_B = np.array([0 for i in range(12)])
    for l in range(len(k)):
        inp_B[k[l]] = 1
    return list(inp_B)
```

#線型空間の定義

```
V = VectorSpace(GF(2),12)
S = V.subspace([inp([0,6,7,2]),inp([1,7,8,3]),inp([2,8,9,4]),inp([3,9,10,5]),inp([4,10,11,0]),inp([1,6,11,5]),
            [1,1,1,1,1,1,1,1,1,1,1,1]])
show(S)
```

****

$$\begin{pmatrix} 1 & 0 & 0 & 0 & 0 & 1 & 0 & 1 & 0 & 1 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 1 & 0 & 1 & 1 & 1 & 1 & 0 \\ 0 & 0 & 1 & 0 & 0 & 1 & 0 & 1 & 1 & 0 & 1 & 1 \\ 0 & 0 & 0 & 1 & 0 & 1 & 0 & 0 & 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 0 & 1 & 1 & 0 & 1 & 0 & 1 & 1 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 1 & 1 \end{pmatrix}$$

****

```
G = PermutationGroup([[(1, 3),(2, 5),(4, 6),(7, 8),(10, 11)],[(1, 5, 3, 8, 12, 10),(2, 6, 11, 9, 7, 4)],[(1, 8),(4, 11)],[(2,
9),(5, 12)],[(1, 11),(4, 8)],[(1, 3),(4, 6),(7, 8),(9, 12),(10, 11)],[(3, 7),(6, 10)],[(3, 10),(6, 7)]])
G.structure_description()
```

****

```
#'(C2 x C2 x ((C2 x C2 x C2 x C2) : C3)) : C2'
```

****

#MAGMA

```
K := FiniteField(2);

C := LinearCode<K, 12 | [1,0,0,0,0,1,0,1,0,1,0,0],[0,1,0,0,0,1,0,1,1,1,1,0],[0,0,1,0,0,1,0,1,1,0,1,1],
[0,0,0,1,0,1,0,0,0,1,1,0],[0,0,0,0,1,1,0,1,0,1,1,1],[0,0,0,0,0,0,1,1,1,1,1,1]>;
G2 := AutomorphismGroup(C);
G2;
WeightDistribution(C);
```

****

```
Permutation group G2 acting on a set of cardinality 12
Order = 384 = 2^7 * 3
    (1, 3)(2, 5)(4, 6)(7, 8)(10, 11)
    (1, 5, 3, 8, 12, 10)(2, 6, 11, 9, 7, 4)
    (1, 8)(4, 11)
    (2, 9)(5, 12)
    (1, 11)(4, 8)
    (1, 3)(4, 6)(7, 8)(9, 12)(10, 11)
    (3, 7)(6, 10)
    (3, 10)(6, 7)
[ <0, 1>, <4, 15>, <6, 32>, <8, 15>, <12, 1> ]
```