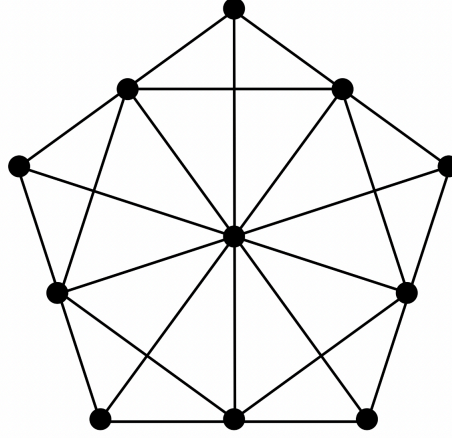# The Code length 11

Figure 1: The graph for the code

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

Aut
$3840 = 2^8 \cdot 3 \cdot 5$ Weight distribution

$< 0, 1 >< 1, 1 >< 2, 5 >< 3, 5 >< 4, 10 >< 5, 42 > | < 6, 42 >< 7, 10 >< 8, 5 >, < 9, 5 >< 10, 1 >< 11, 1 >$

Permutation Representation

$$\langle (5,7), (4,6), (3,7)(5,10), (3,10), (2,4)(6,9), (2,5)(7,9), (2,9), (1,8), (1,10,8,3) \rangle$$

Group Structure
$$C_2 \times ((C_2 \times C_2 \times C_2 \times C_2) : S_5)$$

The theta of The lattice spanned by above is

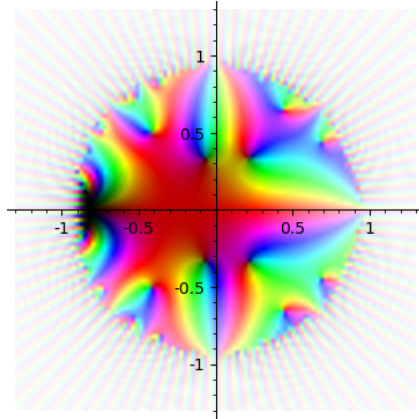$$\Theta(q) = 1 + 2q + 10q^2 + 20q^3 + 42q^4 + 144q^5 + 228q^6 + 160q^7 + 170q^8 + \cdots$$

Figure 2: The theta series

1,
2,
10,
20,
42,
144,
228,
160,
170,
630,
914,
248,
440,
1880,
2036,
960,
882,
3140,
3810,
1088,
1584,
5736,
6540,
2880,
2788,
8690,
9284,
2800,
3900,
12184,
13248,
6400,
5170,
17160,
19356

⋮