

Some factorizations of graphs into C_5 -Factors and 1-Factors

University of Queensland Research Report

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September 19, 2001

In [1], we show that K_{10n} can be factored into α C_5 -factors and β 1-factors for all non-negative integers α and β satisfying $2\alpha + \beta = 10n - 1$. The constructions in [1] rely on the existence of factorizations of certain graphs into C_5 -factors and 1-factors. In this research report we present the necessary factorizations, which were found computationally.

[1] Peter Adams, Darryn E. Bryant, Saad I. El-Zanati and Heather Gavlas, *Factorizations of the Complete Graph into C_5 -Factors and 1-Factors*, (submitted).

[2] D.G. Hoffman and P.J. Schellenberg, *The existence of C_k -factorizations of $K_{2n} - F$* , *Discrete Math.*, **97** (1991) 243–250.

[3] Jiuqiang Liu, *A generalization of the Oberwolfach problem and C_t -factorizations of complete equipartite graphs*, *J. Combin. Designs*, **8** (2000) 42–49.

*Research partially supported by an NSF-AWM Mentoring Travel Grant.

In this section, we show that the graphs K_{10} , K_{20} , $K_{3(10)}$, and $K_{4(10)}$ are completely $\{C_5, K_2\}$ -factorizable, that is, we show that for each d -regular graph $G \in \{K_{10}, K_{20}, K_{3(10)}, K_{4(10)}\}$, $G = \alpha C_5 + \beta K_2$ for all non-negative integers α, β satisfying $2\alpha + \beta = d$. We also give a factorization of $K_{3(4)}$ required in [1].

$\boxed{K_{10}}$ Let the vertex set be \mathbb{Z}_{10} . First, $K_{10} = 9K_2$ since a 1-factorization of K_{10} exists and $K_{10} = 4C_5 + K_2$ by [2]. For $1 \leq \alpha \leq 3$, the factorizations are:

$$\begin{aligned}
\alpha = 1, \beta = 7: & \quad ((0, 1, 2, 3, 4), (5, 6, 7, 8, 9)) & \quad ((0, 2), (1, 3), (4, 5), (6, 8), (7, 9)) \\
& \quad ((0, 3), (1, 4), (2, 7), (5, 8), (6, 9)) & \quad ((0, 5), (1, 6), (2, 8), (3, 7), (4, 9)) \\
& \quad ((0, 6), (1, 5), (2, 9), (3, 8), (4, 7)) & \quad ((0, 7), (1, 8), (2, 5), (3, 9), (4, 6)) \\
& \quad ((0, 8), (1, 9), (2, 4), (3, 6), (5, 7)) & \quad ((0, 9), (1, 7), (2, 6), (3, 5), (4, 8)) \\
\alpha = 2, \beta = 5: & \quad ((0, 1, 3, 6, 8), (2, 9, 4, 5, 7)) & \quad ((1, 2, 4, 7, 8), (0, 3, 9, 5, 6)) \\
& \quad ((0, 4), (1, 5), (2, 6), (3, 7), (8, 9)) & \quad ((0, 5), (1, 7), (2, 3), (4, 8), (6, 9)) \\
& \quad ((0, 7), (1, 9), (2, 5), (3, 8), (4, 6)) & \quad ((0, 2), (1, 6), (3, 4), (5, 8), (7, 9)) \\
& \quad ((0, 9), (1, 4), (2, 8), (3, 5), (6, 7)) & \\
\alpha = 3, \beta = 3: & \quad ((8, 0, 1, 3, 6), (9, 4, 5, 7, 2)) & \quad ((8, 1, 2, 4, 7), (9, 5, 6, 0, 3)) \\
& \quad ((9, 0, 5, 3, 7), (8, 4, 1, 6, 2)) & \quad ((0, 2), (1, 9), (3, 4), (5, 8), (6, 7)) \\
& \quad ((0, 7), (1, 5), (2, 3), (4, 6), (8, 9)) & \quad ((0, 4), (1, 7), (2, 5), (3, 8), (6, 9))
\end{aligned}$$

$\boxed{K_{20}}$ Let the vertex set of K_{20} be \mathbb{Z}_{20} . Since $K_{20} = K_{10} + K_{10,10} = \alpha C_5 + \beta K_2 + 10K_2 = \alpha C_5 + (\beta + 10)K_2$ for all α, β with $2\alpha + \beta = 9$, it follows that $K_{20} = \alpha C_5 + \beta K_2$ for $(\alpha, \beta) \in \{(0, 19), (1, 17), (2, 15), (3, 13), (4, 14)\}$. Also $K_{20} = 9C_5 + K_2$ by [2]. For $5 \leq \alpha \leq 9$, the factorizations are:

$$\begin{aligned}
\alpha = 5, \beta = 9: & \quad ((0, 10, 1, 11, 12), (2, 8, 16, 3, 14), (4, 15, 6, 9, 18), (5, 17, 7, 13, 19)) \\
& \quad ((0, 11, 4, 8, 17), (1, 13, 6, 12, 19), (2, 16, 9, 3, 18), (5, 10, 14, 7, 15)) \\
& \quad ((0, 13, 11, 6, 16), (1, 14, 5, 8, 18), (2, 17, 9, 4, 19), (3, 12, 7, 10, 15)) \\
& \quad ((0, 14, 6, 8, 19), (1, 15, 11, 7, 16), (2, 9, 5, 18, 12), (3, 13, 10, 4, 17)) \\
& \quad ((0, 15, 2, 13, 18), (1, 12, 10, 6, 17), (3, 8, 7, 9, 19), (4, 14, 11, 5, 16)) \\
& \quad ((0, 1), (2, 3), (4, 5), (6, 7), (8, 9), (10, 11), (12, 13), (14, 15), (16, 17), (18, 19)) \\
& \quad ((0, 2), (1, 3), (4, 6), (5, 7), (8, 10), (9, 11), (12, 14), (13, 15), (16, 18), (17, 19)) \\
& \quad ((0, 3), (1, 2), (4, 7), (5, 6), (8, 11), (9, 10), (12, 15), (13, 14), (16, 19), (17, 18)) \\
& \quad ((0, 4), (1, 5), (2, 6), (3, 7), (8, 12), (9, 13), (10, 16), (11, 17), (14, 18), (15, 19)) \\
& \quad ((0, 5), (1, 4), (2, 7), (3, 6), (8, 13), (9, 12), (10, 17), (11, 16), (14, 19), (15, 18)) \\
& \quad ((0, 6), (1, 7), (2, 4), (3, 5), (8, 14), (9, 15), (10, 18), (11, 19), (12, 16), (13, 17)) \\
& \quad ((0, 7), (1, 6), (2, 5), (3, 4), (8, 15), (9, 14), (10, 19), (11, 18), (12, 17), (13, 16)) \\
& \quad ((0, 8), (1, 9), (2, 10), (3, 11), (4, 12), (5, 13), (6, 18), (7, 19), (14, 16), (15, 17)) \\
& \quad ((0, 9), (1, 8), (2, 11), (3, 10), (4, 13), (5, 12), (6, 19), (7, 18), (14, 17), (15, 16)) \\
\alpha = 6, \beta = 7: & \quad ((0, 8, 1, 9, 16), (2, 10, 3, 11, 12), (4, 13, 18, 5, 14), (6, 15, 17, 7, 19)) \\
& \quad ((0, 9, 2, 8, 17), (1, 10, 4, 11, 13), (3, 12, 19, 5, 15), (6, 14, 16, 7, 18)) \\
& \quad ((0, 10, 12, 1, 14), (2, 11, 5, 13, 19), (3, 8, 7, 15, 16), (4, 17, 6, 9, 18)) \\
& \quad ((0, 11, 15, 1, 18), (2, 13, 3, 9, 17), (4, 16, 6, 8, 19), (5, 10, 14, 7, 12)) \\
& \quad ((0, 12, 18, 2, 15), (1, 17, 14, 3, 19), (4, 8, 16, 5, 9), (6, 11, 7, 10, 13)) \\
& \quad ((0, 13, 7, 9, 19), (1, 11, 14, 2, 16), (3, 17, 5, 8, 18), (4, 12, 6, 10, 15)) \\
& \quad ((0, 1), (2, 3), (4, 5), (6, 7), (8, 9), (10, 11), (12, 13), (14, 15), (16, 17), (18, 19)) \\
& \quad ((0, 2), (1, 3), (4, 6), (5, 7), (8, 10), (9, 11), (12, 14), (13, 15), (16, 18), (17, 19)) \\
& \quad ((0, 3), (1, 2), (4, 7), (5, 6), (8, 11), (9, 10), (12, 15), (13, 14), (16, 19), (17, 18)) \\
& \quad ((0, 4), (1, 5), (2, 6), (3, 7), (8, 12), (9, 13), (10, 16), (11, 17), (14, 18), (15, 19))
\end{aligned}$$

((0, 5), (1, 4), (2, 7), (3, 6), (8, 13), (9, 12), (10, 17), (11, 16), (14, 19), (15, 18))
 ((0, 6), (1, 7), (2, 4), (3, 5), (8, 14), (9, 15), (10, 18), (11, 19), (12, 16), (13, 17))
 ((0, 7), (1, 6), (2, 5), (3, 4), (8, 15), (9, 14), (10, 19), (11, 18), (12, 17), (13, 16))

$\alpha = 7, \beta = 5$:

((0, 2, 1, 3, 4), (5, 6, 8, 7, 10), (9, 11, 12, 14, 17), (13, 15, 16, 18, 19))
 ((0, 5, 1, 4, 6), (2, 7, 3, 9, 10), (8, 13, 14, 11, 15), (12, 18, 17, 16, 19))
 ((0, 7, 11, 1, 8), (2, 4, 9, 5, 15), (3, 13, 18, 14, 19), (6, 12, 17, 10, 16))
 ((0, 9, 1, 10, 14), (2, 5, 16, 7, 13), (3, 12, 15, 4, 17), (6, 11, 19, 8, 18))
 ((0, 10, 12, 7, 19), (1, 15, 6, 2, 17), (3, 11, 13, 9, 16), (4, 8, 14, 5, 18))
 ((0, 13, 5, 11, 17), (1, 16, 12, 4, 19), (2, 8, 10, 3, 18), (6, 9, 15, 7, 14))
 ((0, 15, 10, 4, 16), (1, 13, 6, 3, 14), (2, 9, 19, 5, 12), (7, 17, 8, 11, 18))
 ((19, 10), (7, 9), (6, 17), (16, 13), (12, 1), (5, 8), (4, 14), (0, 18), (11, 2), (15, 3))
 ((18, 9), (16, 11), (7, 4), (3, 8), (6, 1), (12, 0), (17, 5), (19, 2), (10, 13), (15, 14))
 ((12, 8), (7, 1), (19, 6), (17, 15), (13, 4), (0, 11), (9, 14), (5, 3), (2, 16), (10, 18))
 ((8, 16), (13, 17), (3, 0), (6, 10), (19, 15), (9, 12), (11, 4), (7, 5), (2, 14), (1, 18))
 ((0, 1), (2, 3), (4, 5), (6, 7), (8, 9), (10, 11), (12, 13), (14, 16), (15, 18), (17, 19))

$\alpha = 8, \beta = 3$:

((0, 2, 1, 4, 3), (5, 6, 9, 8, 7), (10, 12, 14, 11, 16), (13, 17, 18, 15, 19))
 ((0, 4, 2, 5, 9), (1, 6, 3, 7, 11), (8, 10, 13, 14, 18), (12, 17, 15, 16, 19))
 ((0, 5, 1, 7, 12), (2, 6, 10, 3, 16), (4, 8, 17, 14, 19), (9, 11, 15, 13, 18))
 ((0, 6, 11, 2, 7), (1, 8, 13, 3, 15), (4, 17, 9, 12, 18), (5, 16, 14, 10, 19))
 ((0, 10, 1, 9, 13), (2, 12, 15, 4, 14), (3, 8, 16, 6, 19), (5, 11, 18, 7, 17))
 ((0, 11, 8, 12, 16), (1, 14, 5, 3, 17), (2, 9, 15, 7, 19), (4, 10, 18, 6, 13))
 ((0, 15, 5, 10, 17), (1, 18, 2, 8, 19), (3, 9, 14, 6, 12), (4, 7, 16, 13, 11))
 ((0, 18, 3, 11, 19), (1, 12, 4, 9, 16), (2, 10, 15, 6, 17), (5, 8, 14, 7, 13))
 ((19, 9), (8, 0), (1, 13), (10, 7), (12, 11), (15, 2), (16, 17), (14, 3), (4, 6), (5, 18))
 ((8, 15), (14, 0), (13, 2), (4, 16), (1, 3), (12, 5), (7, 6), (17, 11), (19, 18), (10, 9))
 ((0, 1), (2, 3), (4, 5), (6, 8), (7, 9), (10, 11), (12, 13), (14, 15), (16, 18), (17, 19))

$K_{3(10)}$ Let the vertex set of $K_{3(10)}$ be \mathbb{Z}_{30} with the vertex partition $\{0, 1, \dots, 9\}$, $\{10, 11, \dots, 19\}$, and $\{20, 21, \dots, 29\}$. For all possible values of α , the factorizations are:

$\alpha = 0, \beta = 20$:

((28, 7), (25, 12), (19, 3), (8, 21), (16, 22), (2, 14), (13, 5), (29, 4), (24, 1), (9, 18),
 (20, 11), (15, 6), (10, 23), (0, 27), (17, 26))
 ((22, 0), (11, 24), (15, 9), (25, 10), (16, 7), (4, 21), (23, 8), (27, 13), (5, 17), (14, 29),
 (1, 28), (6, 19), (20, 12), (18, 3), (26, 2))
 ((12, 9), (7, 25), (17, 4), (16, 29), (28, 11), (20, 15), (27, 14), (22, 10), (6, 26), (23, 3),
 (13, 8), (1, 21), (18, 2), (19, 5), (0, 24))
 ((11, 1), (29, 15), (18, 4), (6, 23), (0, 28), (7, 12), (19, 20), (13, 2), (10, 5), (21, 16),
 (26, 3), (27, 9), (25, 8), (24, 14), (22, 17))
 ((25, 11), (5, 14), (19, 1), (20, 18), (21, 9), (4, 15), (29, 17), (10, 2), (16, 3), (28, 12),
 (26, 0), (7, 22), (6, 27), (8, 24), (23, 13))
 ((13, 29), (20, 2), (15, 3), (8, 26), (6, 28), (21, 18), (12, 23), (11, 4), (16, 9), (27, 17),
 (1, 25), (0, 14), (5, 24), (22, 19), (7, 10))
 ((12, 2), (22, 9), (15, 27), (28, 18), (10, 0), (29, 11), (24, 17), (3, 14), (7, 26), (13, 4),
 (6, 25), (20, 8), (21, 19), (23, 1), (16, 5))
 ((2, 16), (21, 6), (25, 0), (3, 12), (5, 26), (14, 28), (11, 23), (8, 22), (19, 4), (9, 29),
 (15, 7), (17, 20), (13, 1), (10, 24), (18, 27))
 ((24, 3), (0, 18), (1, 16), (27, 4), (21, 13), (7, 19), (20, 10), (11, 22), (23, 9), (8, 15),

((16, 23), (3, 13), (8, 11), (15, 2), (28, 10), (1, 27), (6, 22), (24, 12), (25, 19), (7, 14), (17, 25), (14, 26), (2, 29), (12, 6), (5, 28))
 (5, 18), (20, 4), (9, 26), (29, 0), (17, 21))
 ((17, 0), (4, 24), (21, 10), (23, 18), (20, 5), (15, 26), (2, 22), (9, 11), (12, 1), (6, 14), (27, 7), (25, 13), (28, 3), (8, 16), (19, 29))
 ((15, 5), (0, 20), (9, 17), (10, 1), (8, 19), (24, 6), (11, 21), (18, 22), (16, 4), (26, 12), (29, 7), (27, 2), (13, 28), (3, 25), (14, 23))
 ((29, 3), (0, 13), (27, 11), (6, 20), (23, 5), (2, 17), (15, 24), (25, 4), (28, 16), (22, 14), (7, 21), (10, 9), (8, 12), (18, 1), (26, 19))
 ((22, 5), (24, 7), (28, 15), (6, 10), (1, 14), (27, 19), (23, 2), (29, 18), (21, 3), (17, 8), (12, 4), (25, 9), (13, 20), (16, 0), (26, 11))
 ((26, 16), (23, 4), (15, 21), (10, 27), (9, 24), (20, 7), (19, 28), (3, 17), (18, 8), (5, 29), (22, 1), (25, 14), (2, 11), (13, 6), (0, 12))
 ((0, 11), (26, 10), (24, 19), (7, 13), (3, 27), (17, 23), (16, 25), (8, 29), (14, 20), (15, 1), (6, 18), (28, 9), (22, 4), (5, 12), (21, 2))
 ((24, 13), (4, 14), (25, 2), (5, 11), (8, 27), (12, 21), (26, 18), (15, 0), (22, 3), (23, 7), (16, 6), (1, 20), (29, 10), (17, 28), (9, 19))
 ((2, 19), (4, 28), (26, 1), (24, 18), (20, 16), (25, 15), (23, 0), (21, 14), (11, 3), (17, 7), (22, 12), (8, 10), (29, 6), (5, 27), (13, 9))
 ((15, 23), (17, 6), (24, 16), (20, 9), (11, 7), (22, 13), (8, 14), (3, 10), (12, 27), (0, 19), (25, 18), (2, 28), (5, 21), (4, 26), (1, 29))
 ((21, 0), (20, 3), (14, 9), (26, 13), (25, 5), (6, 11), (29, 12), (8, 28), (1, 17), (10, 4), (22, 15), (7, 18), (27, 16), (2, 24), (19, 23))

$\alpha = 1, \beta = 18$:

((27, 2, 11, 9, 16), (13, 25, 4, 10, 28), (17, 6, 19, 23, 8), (0, 18, 21, 3, 22), (1, 26, 7, 12, 24), (29, 14, 5, 20, 15))
 ((16, 25), (0, 14), (19, 22), (23, 4), (10, 3), (21, 13), (7, 20), (18, 27), (2, 28), (17, 9), (8, 29), (12, 6), (15, 1), (24, 11), (26, 5))
 ((6, 23), (14, 26), (24, 5), (7, 21), (22, 12), (19, 25), (15, 3), (1, 18), (8, 28), (2, 17), (13, 27), (11, 20), (9, 10), (29, 4), (0, 16))
 ((12, 3), (2, 21), (22, 16), (0, 25), (29, 11), (19, 27), (14, 28), (26, 13), (20, 1), (10, 7), (5, 18), (9, 23), (24, 6), (17, 4), (15, 8))
 ((4, 24), (7, 23), (22, 5), (28, 0), (6, 26), (27, 11), (16, 20), (21, 14), (8, 13), (18, 2), (3, 17), (25, 15), (12, 1), (10, 29), (9, 19))
 ((1, 27), (3, 11), (19, 8), (12, 28), (21, 9), (13, 29), (7, 15), (25, 2), (18, 20), (10, 22), (6, 16), (5, 23), (0, 17), (4, 26), (14, 24))
 ((15, 22), (13, 3), (17, 24), (20, 10), (26, 2), (29, 12), (0, 19), (9, 27), (16, 4), (7, 11), (1, 23), (25, 8), (5, 21), (18, 28), (14, 6))
 ((1, 13), (0, 10), (6, 25), (9, 20), (14, 2), (19, 7), (22, 11), (29, 16), (21, 12), (4, 18), (28, 3), (5, 27), (26, 17), (23, 15), (8, 24))
 ((26, 19), (0, 21), (15, 2), (9, 22), (11, 5), (27, 3), (18, 8), (14, 1), (6, 13), (7, 25), (24, 10), (12, 23), (4, 20), (29, 17), (16, 28))
 ((20, 12), (19, 21), (24, 3), (10, 8), (2, 23), (1, 25), (15, 4), (9, 14), (13, 0), (29, 6), (16, 7), (22, 18), (27, 17), (11, 26), (28, 5))
 ((0, 15), (25, 9), (1, 22), (14, 7), (17, 5), (4, 12), (18, 24), (20, 13), (10, 23), (16, 26), (3, 19), (28, 6), (27, 8), (11, 21), (2, 29))
 ((9, 15), (26, 3), (8, 11), (25, 14), (17, 28), (22, 13), (19, 1), (27, 12), (23, 18), (20, 2), (7, 24), (29, 0), (16, 5), (21, 4), (10, 6))
 ((2, 10), (29, 3), (15, 28), (4, 22), (23, 17), (18, 26), (9, 12), (21, 6), (25, 11), (7, 27), (13, 24), (16, 1), (5, 19), (8, 14), (20, 0))
 ((10, 26), (19, 2), (24, 0), (23, 11), (9, 18), (25, 17), (16, 3), (21, 1), (8, 12), (22, 6), (4, 28), (15, 27), (20, 14), (7, 13), (5, 29))
 ((22, 8), (2, 24), (7, 28), (16, 21), (0, 12), (10, 1), (17, 20), (29, 9), (23, 3), (26, 15), (14, 27), (5, 13), (19, 4), (25, 18), (11, 6))

((24, 16), (2, 22), (8, 20), (4, 27), (26, 0), (25, 3), (18, 7), (9, 13), (14, 23), (12, 5),
 (11, 28), (19, 29), (21, 10), (15, 6), (17, 1))
 ((23, 16), (15, 5), (19, 20), (21, 17), (27, 6), (14, 3), (13, 4), (1, 28), (0, 11), (9, 24),
 (8, 26), (18, 29), (2, 12), (7, 22), (25, 10))
 ((2, 16), (23, 13), (12, 25), (11, 4), (22, 14), (7, 17), (26, 9), (29, 1), (15, 24), (3, 20),
 (19, 28), (21, 8), (27, 0), (6, 18), (10, 5))
 ((0, 23), (1, 11), (2, 13), (3, 18), (4, 14), (5, 25), (6, 20), (7, 29), (8, 16), (9, 28),
 (10, 27), (12, 26), (15, 21), (17, 22), (19, 24))

$\alpha = 2, \beta = 16:$

((16, 3, 17, 8, 27), (22, 7, 15, 20, 9), (12, 24, 14, 25, 5), (28, 6, 23, 19, 4), (2, 11, 29, 1, 18), (10, 21, 13, 0, 26))
 ((4, 13, 6, 29, 14), (9, 15, 22, 11, 23), (7, 10, 20, 8, 26), (18, 0, 16, 1, 25), (24, 19, 27, 5, 17), (28, 2, 21, 12, 3))
 ((3, 19), (26, 2), (25, 11), (8, 22), (27, 18), (17, 1), (9, 12), (13, 5), (14, 21), (10, 4),
 (23, 7), (28, 16), (29, 15), (6, 24), (0, 20))
 ((18, 20), (2, 19), (12, 27), (11, 5), (15, 3), (16, 22), (13, 8), (10, 29), (6, 21), (23, 1),
 (14, 7), (17, 28), (26, 4), (24, 9), (0, 25))
 ((18, 24), (10, 0), (27, 4), (26, 15), (5, 22), (23, 14), (1, 12), (2, 29), (25, 7), (20, 17),
 (13, 3), (8, 11), (9, 21), (19, 28), (16, 6))
 ((11, 21), (22, 13), (1, 24), (28, 10), (25, 3), (14, 0), (4, 23), (15, 5), (18, 26), (29, 17),
 (27, 7), (8, 16), (12, 6), (9, 19), (2, 20))
 ((3, 18), (29, 9), (27, 13), (16, 7), (11, 0), (15, 4), (20, 12), (22, 14), (6, 19), (24, 8),
 (2, 23), (5, 28), (26, 17), (10, 25), (21, 1))
 ((1, 11), (12, 7), (23, 13), (14, 3), (22, 18), (2, 27), (29, 8), (21, 15), (19, 26), (25, 4),
 (10, 6), (17, 0), (16, 24), (5, 20), (9, 28))
 ((24, 7), (6, 25), (16, 2), (26, 11), (17, 23), (12, 8), (27, 10), (29, 3), (22, 4), (13, 28),
 (9, 18), (19, 1), (15, 0), (20, 14), (5, 21))
 ((10, 5), (23, 0), (1, 15), (9, 27), (14, 28), (11, 4), (16, 21), (19, 29), (26, 6), (12, 22),
 (3, 20), (2, 17), (24, 13), (7, 18), (8, 25))
 ((25, 15), (8, 14), (28, 0), (17, 9), (16, 23), (12, 4), (24, 3), (6, 20), (22, 10), (7, 11),
 (18, 29), (13, 2), (1, 27), (26, 5), (19, 21))
 ((22, 17), (8, 21), (10, 9), (19, 20), (0, 24), (27, 15), (12, 2), (14, 5), (1, 26), (23, 3),
 (29, 4), (18, 28), (25, 16), (11, 6), (13, 7))
 ((23, 8), (19, 25), (11, 9), (28, 12), (26, 14), (21, 17), (24, 15), (3, 22), (2, 10), (29, 0),
 (6, 27), (1, 13), (4, 18), (7, 20), (16, 5))
 ((16, 20), (17, 6), (10, 3), (7, 29), (8, 18), (11, 24), (25, 9), (13, 26), (23, 12), (2, 14),
 (28, 15), (21, 4), (1, 22), (27, 0), (19, 5))
 ((10, 24), (3, 21), (26, 9), (15, 23), (11, 27), (16, 4), (20, 13), (18, 6), (25, 12), (17, 7),
 (19, 0), (2, 22), (28, 8), (14, 1), (29, 5))
 ((19, 7), (11, 20), (10, 8), (4, 17), (2, 15), (14, 9), (16, 26), (5, 24), (0, 21), (18, 23),
 (28, 1), (6, 22), (13, 25), (27, 3), (12, 29))
 ((0, 12), (1, 20), (2, 25), (3, 26), (4, 24), (5, 18), (6, 14), (7, 21), (8, 15), (9, 13),
 (10, 23), (11, 28), (16, 29), (17, 27), (19, 22))
 ((0, 22), (1, 10), (2, 24), (3, 11), (4, 20), (5, 23), (6, 15), (7, 28), (8, 19), (9, 16),
 (12, 26), (13, 29), (14, 27), (17, 25), (18, 21))

$\alpha = 3, \beta = 14:$

((10, 29, 15, 2, 21), (5, 19, 3, 14, 28), (26, 4, 27, 1, 12), (22, 11, 6, 25, 8), (24, 9, 18, 23, 13), (7, 17, 0, 20, 16))
 ((3, 22, 7, 25, 12), (21, 9, 23, 11, 1), (16, 28, 19, 2, 27), (26, 15, 4, 24, 10), (14, 20, 6, 13, 0), (18, 5, 17, 8, 29))
 ((0, 16, 9, 14, 27), (29, 6, 19, 20, 4), (28, 10, 3, 25, 2), (12, 23, 15, 24, 5), (22, 17, 1, 26, 18), (7, 11, 21, 8, 13))
 ((21, 3), (0, 24), (26, 19), (29, 14), (17, 20), (12, 7), (13, 1), (10, 5), (4, 23), (15, 22),
 (2, 11), (16, 25), (6, 27), (9, 28), (8, 18))
 ((22, 0), (21, 5), (17, 6), (19, 25), (7, 15), (12, 24), (23, 3), (27, 13), (9, 11), (16, 26),
 (18, 1), (28, 4), (20, 10), (2, 29), (14, 8))
 ((6, 16), (8, 28), (15, 9), (1, 14), (25, 5), (19, 22), (4, 10), (11, 26), (20, 7), (12, 29),

((12, 20), (22, 5), (29, 1), (27, 15), (19, 0), (18, 24), (16, 4), (17, 23), (7, 21), (14, 26),
 (18, 27), (0, 23), (24, 3), (2, 17), (13, 21))
 (8, 10), (6, 28), (25, 9), (2, 13), (3, 11))
 ((6, 15), (19, 23), (13, 22), (9, 17), (18, 20), (16, 24), (11, 8), (1, 25), (29, 7), (21, 4),
 (3, 26), (0, 10), (2, 14), (12, 28), (27, 5))
 ((5, 20), (3, 29), (19, 4), (18, 7), (28, 17), (25, 13), (9, 27), (2, 26), (14, 22), (16, 1),
 (12, 6), (0, 11), (21, 15), (10, 23), (24, 8))
 ((0, 21), (20, 3), (2, 10), (9, 19), (6, 26), (5, 23), (12, 4), (28, 18), (27, 8), (22, 16),
 (7, 14), (13, 29), (15, 1), (24, 17), (25, 11))
 ((11, 29), (14, 23), (22, 10), (24, 7), (3, 17), (9, 20), (15, 5), (28, 1), (12, 0), (16, 8),
 (19, 27), (21, 6), (18, 2), (13, 26), (4, 25))
 ((13, 5), (28, 15), (12, 2), (23, 6), (20, 1), (22, 4), (29, 16), (10, 7), (9, 26), (3, 27),
 (11, 24), (18, 0), (19, 8), (21, 14), (25, 17))
 ((23, 7), (22, 6), (21, 12), (28, 3), (25, 10), (20, 13), (4, 18), (29, 9), (2, 16), (19, 1),
 (27, 17), (24, 14), (26, 8), (5, 11), (0, 15))
 ((27, 11), (25, 14), (19, 21), (1, 23), (18, 3), (9, 10), (2, 22), (24, 6), (15, 20), (8, 12),
 (26, 0), (17, 29), (16, 5), (4, 13), (7, 28))
 ((13, 28), (17, 4), (2, 24), (5, 26), (18, 21), (6, 14), (16, 3), (11, 20), (1, 10), (23, 8),
 (29, 0), (22, 9), (19, 7), (27, 12), (25, 15))
 ((28, 11), (19, 24), (4, 14), (21, 17), (10, 27), (25, 0), (13, 3), (7, 26), (12, 9), (16, 23),
 (18, 6), (20, 2), (8, 15), (5, 29), (22, 1))
 ((0, 28), (1, 24), (2, 23), (3, 15), (4, 11), (5, 14), (6, 10), (7, 27), (8, 20), (9, 13),
 (12, 22), (16, 21), (17, 26), (18, 25), (19, 29))

$\alpha = 4, \beta = 12$:

((27, 13, 21, 18, 7), (6, 26, 2, 28, 14), (12, 29, 10, 24, 4), (0, 19, 8, 15, 22), (17, 5, 11, 1, 25), (20, 9, 16, 23, 3))
 ((2, 16, 29, 5, 12), (21, 8, 20, 7, 11), (10, 1, 14, 25, 9), (17, 0, 28, 19, 27), (13, 26, 4, 22, 6), (23, 18, 24, 3, 15))
 ((10, 26, 16, 22, 5), (14, 2, 11, 20, 0), (17, 4, 21, 19, 3), (27, 15, 9, 24, 8), (13, 23, 7, 12, 25), (18, 6, 29, 1, 28))
 ((7, 10, 8, 17, 21), (16, 20, 5, 23, 0), (1, 15, 28, 6, 24), (19, 2, 29, 13, 9), (3, 25, 18, 22, 12), (26, 11, 27, 4, 14))
 ((23, 19), (7, 14), (1, 22), (9, 11), (12, 27), (25, 8), (21, 0), (26, 5), (20, 6), (4, 16),
 (18, 3), (13, 28), (10, 2), (15, 29), (24, 17))
 ((18, 9), (25, 5), (29, 11), (4, 13), (27, 14), (19, 20), (16, 1), (28, 17), (10, 22), (8, 12),
 (2, 15), (6, 23), (0, 24), (3, 21), (26, 7))
 ((15, 5), (8, 22), (3, 27), (1, 23), (13, 0), (21, 9), (14, 20), (4, 11), (24, 7), (26, 12),
 (18, 2), (16, 6), (29, 17), (10, 28), (25, 19))
 ((5, 13), (21, 15), (29, 14), (11, 8), (7, 22), (27, 10), (23, 12), (25, 0), (18, 26), (9, 28),
 (6, 19), (17, 1), (16, 3), (4, 20), (2, 24))
 ((0, 12), (29, 4), (19, 24), (8, 28), (23, 9), (15, 26), (16, 25), (17, 2), (18, 5), (7, 13),
 (21, 1), (6, 27), (14, 3), (10, 20), (22, 11))
 ((16, 8), (3, 26), (7, 25), (24, 15), (4, 28), (22, 14), (11, 23), (12, 21), (19, 29), (20, 2),
 (27, 5), (18, 0), (13, 1), (9, 17), (10, 6))
 ((0, 10), (26, 8), (2, 22), (14, 5), (20, 1), (23, 17), (29, 3), (25, 6), (15, 7), (13, 24),
 (9, 12), (11, 28), (4, 19), (21, 16), (27, 18))
 ((18, 8), (5, 21), (17, 22), (16, 24), (0, 26), (28, 3), (9, 29), (25, 10), (11, 6), (4, 15),
 (20, 13), (2, 27), (7, 19), (23, 14), (1, 12))
 ((18, 29), (10, 3), (20, 15), (19, 1), (21, 6), (25, 11), (12, 28), (17, 26), (13, 2), (22, 9),
 (14, 8), (4, 23), (16, 7), (5, 24), (27, 0))
 ((6, 12), (21, 10), (16, 27), (1, 18), (29, 7), (19, 26), (9, 14), (28, 5), (8, 13), (25, 4),
 (0, 15), (23, 2), (22, 3), (20, 17), (24, 11))
 ((13, 22), (16, 28), (7, 17), (8, 23), (26, 1), (14, 21), (25, 2), (20, 18), (5, 19), (6, 15),
 (9, 27), (11, 3), (4, 10), (24, 12), (0, 29))
 ((0, 11), (1, 27), (2, 21), (3, 13), (4, 18), (5, 16), (6, 17), (7, 28), (8, 29), (9, 26),
 (10, 23), (12, 20), (14, 24), (15, 25), (19, 22))

$\alpha = 5, \beta = 10$:

((5, 25, 2, 23, 12), (6, 22, 19, 21, 16), (13, 20, 4, 11, 24), (17, 1, 14, 28, 7), (26, 9, 18, 0, 10), (27, 3, 15, 29, 8))
 ((10, 25, 17, 5, 22), (2, 14, 24, 12, 26), (16, 9, 13, 0, 20), (4, 18, 28, 1, 15), (6, 19, 29, 7, 27), (23, 3, 11, 21, 8))
 ((20, 3, 25, 7, 10), (27, 11, 26, 4, 16), (18, 21, 5, 28, 6), (1, 23, 13, 8, 12), (15, 2, 29, 17, 24), (14, 22, 9, 19, 0))
 ((11, 23, 10, 5, 29), (2, 19, 28, 16, 24), (3, 26, 0, 27, 17), (25, 12, 4, 21, 9), (22, 1, 13, 6, 15), (8, 18, 20, 7, 14))
 ((0, 25, 8, 26, 15), (16, 2, 21, 14, 29), (11, 6, 17, 4, 28), (5, 24, 7, 13, 27), (12, 22, 18, 23, 9), (19, 3, 10, 1, 20))
 ((16, 8), (22, 11), (14, 26), (29, 4), (27, 12), (17, 9), (20, 5), (19, 23), (15, 7), (3, 13),
 (21, 6), (2, 10), (0, 28), (18, 25), (1, 24))
 ((23, 15), (19, 27), (16, 22), (7, 18), (9, 29), (6, 26), (10, 28), (5, 13), (11, 2), (4, 14),
 (25, 1), (8, 20), (0, 12), (17, 21), (24, 3))
 ((10, 27), (19, 7), (23, 4), (18, 2), (11, 5), (28, 15), (25, 16), (12, 21), (9, 24), (8, 17),
 (0, 22), (20, 6), (29, 1), (13, 26), (3, 14))
 ((15, 5), (17, 2), (13, 21), (9, 14), (1, 19), (11, 7), (10, 24), (16, 26), (22, 8), (23, 0),
 (25, 6), (27, 4), (29, 18), (28, 3), (12, 20))
 ((29, 6), (19, 24), (23, 7), (25, 11), (5, 26), (28, 17), (3, 21), (13, 22), (15, 8), (0, 16),
 (2, 12), (14, 27), (9, 20), (4, 10), (1, 18))
 ((8, 28), (22, 2), (14, 5), (3, 18), (10, 6), (13, 25), (19, 26), (9, 27), (0, 11), (7, 16),
 (17, 23), (24, 4), (21, 1), (29, 12), (20, 15))
 ((19, 25), (2, 27), (13, 4), (15, 21), (12, 7), (14, 6), (11, 20), (16, 23), (0, 24), (1, 26),
 (22, 17), (18, 5), (9, 28), (3, 29), (10, 8))
 ((26, 18), (4, 22), (12, 28), (8, 11), (25, 15), (27, 1), (21, 7), (24, 6), (0, 29), (17, 20),
 (14, 23), (19, 5), (9, 10), (3, 16), (13, 2))
 ((15, 9), (5, 16), (17, 26), (12, 3), (8, 24), (27, 18), (13, 28), (2, 20), (0, 21), (19, 4),
 (6, 23), (1, 11), (14, 25), (10, 29), (7, 22))
 ((0, 17), (1, 16), (2, 28), (3, 22), (4, 25), (5, 23), (6, 12), (7, 26), (8, 19), (9, 11),
 (10, 21), (13, 29), (14, 20), (15, 27), (18, 24))

$\alpha = 6, \beta = 8$:

((6, 26, 7, 21, 12), (9, 29, 13, 20, 16), (18, 4, 11, 1, 27), (25, 10, 5, 17, 2), (3, 23, 14, 28, 15), (24, 0, 22, 19, 8))
 ((4, 27, 8, 17, 24), (1, 19, 0, 23, 18), (25, 14, 2, 21, 13), (20, 5, 26, 12, 9), (11, 7, 15, 6, 28), (10, 3, 22, 16, 29))
 ((19, 24, 14, 26, 4), (17, 3, 11, 9, 27), (1, 25, 5, 18, 22), (13, 23, 8, 12, 7), (21, 15, 20, 10, 0), (29, 6, 16, 28, 2))
 ((4, 13, 27, 12, 28), (17, 20, 14, 5, 21), (10, 2, 24, 1, 26), (16, 3, 18, 29, 0), (23, 9, 15, 8, 11), (25, 6, 22, 7, 19))
 ((24, 13, 22, 5, 15), (8, 20, 18, 0, 14), (28, 1, 21, 9, 17), (29, 7, 27, 3, 19), (6, 23, 12, 4, 10), (16, 25, 11, 2, 26))
 ((27, 15, 23, 17, 0), (2, 12, 29, 8, 16), (20, 1, 13, 28, 3), (9, 10, 21, 18, 26), (22, 14, 7, 25, 4), (24, 6, 19, 5, 11))
 ((4, 29), (24, 12), (26, 0), (21, 11), (13, 6), (10, 22), (25, 17), (19, 23), (28, 9), (18, 8),
 (5, 27), (20, 7), (15, 2), (14, 3), (16, 1))
 ((19, 9), (10, 7), (4, 21), (26, 3), (18, 2), (29, 11), (23, 16), (1, 14), (28, 8), (20, 12),
 (17, 22), (25, 15), (24, 5), (13, 0), (27, 6))
 ((18, 28), (11, 6), (27, 2), (21, 19), (25, 3), (23, 7), (16, 4), (5, 12), (17, 1), (9, 13),
 (0, 20), (22, 15), (14, 29), (24, 10), (8, 26))
 ((2, 20), (28, 7), (3, 21), (10, 1), (14, 9), (0, 25), (12, 22), (11, 27), (15, 29), (13, 8),
 (5, 16), (18, 24), (6, 17), (26, 19), (4, 23))
 ((29, 5), (9, 22), (24, 16), (11, 0), (4, 17), (6, 20), (10, 27), (25, 8), (28, 19), (12, 1),
 (14, 21), (15, 26), (13, 3), (7, 18), (23, 2))
 ((26, 13), (18, 9), (21, 16), (17, 7), (20, 11), (22, 2), (10, 8), (14, 6), (15, 4), (29, 1),
 (23, 5), (0, 28), (19, 27), (12, 25), (3, 24))
 ((27, 14), (29, 17), (22, 8), (19, 2), (4, 20), (5, 13), (24, 9), (18, 25), (6, 21), (3, 12),
 (23, 1), (11, 26), (0, 15), (16, 7), (10, 28))
 ((0, 12), (1, 15), (2, 13), (3, 29), (4, 14), (5, 28), (6, 18), (7, 24), (8, 21), (9, 25),
 (10, 23), (11, 22), (16, 27), (17, 26), (19, 20))

$\alpha = 7, \beta = 6$:

((20, 12, 24, 9, 18), (5, 21, 19, 29, 16), (26, 1, 22, 17, 0), (3, 27, 8, 11, 25), (2, 13, 4, 14, 28), (7, 23, 15, 6, 10))
 ((7, 15, 29, 6, 13), (8, 16, 20, 3, 28), (17, 21, 14, 24, 1), (23, 9, 27, 12, 4), (22, 19, 26, 11, 5), (10, 0, 18, 2, 25))

((26, 5, 19, 24, 16), (9, 22, 13, 1, 15), (25, 7, 17, 29, 18), (11, 4, 27, 14, 0), (8, 20, 6, 28, 10), (23, 2, 21, 3, 12))
 ((24, 0, 21, 8, 13), (20, 1, 10, 4, 17), (12, 26, 3, 18, 28), (7, 29, 2, 27, 16), (22, 15, 25, 6, 11), (19, 9, 14, 5, 23))
 ((13, 25, 8, 22, 0), (5, 15, 3, 17, 24), (21, 4, 28, 16, 9), (12, 7, 26, 10, 2), (29, 1, 18, 23, 14), (20, 19, 6, 27, 11))
 ((4, 29, 12, 1, 19), (0, 15, 26, 8, 23), (14, 20, 2, 11, 7), (25, 5, 28, 13, 9), (16, 22, 18, 24, 3), (17, 27, 10, 21, 6))
 ((26, 18, 8, 29, 13), (4, 15, 21, 16, 25), (17, 28, 7, 20, 9), (12, 0, 19, 27, 5), (1, 14, 2, 24, 11), (23, 6, 22, 10, 3))
 ((11, 23), (7, 24), (14, 25), (5, 10), (13, 20), (4, 16), (0, 27), (9, 29), (6, 18), (1, 21),
 (8, 17), (19, 3), (22, 12), (26, 2), (28, 15))
 ((3, 11), (21, 13), (18, 27), (17, 5), (0, 29), (24, 10), (23, 16), (2, 15), (28, 9), (6, 12),
 (8, 19), (4, 20), (22, 7), (14, 26), (25, 1))
 ((29, 5), (21, 12), (17, 26), (6, 14), (24, 4), (23, 1), (8, 15), (2, 16), (20, 0), (25, 19),
 (3, 22), (28, 11), (7, 18), (9, 10), (27, 13))
 ((13, 23), (18, 4), (28, 0), (17, 25), (14, 3), (26, 9), (27, 15), (1, 16), (6, 24), (11, 21),
 (5, 20), (12, 8), (7, 19), (29, 10), (22, 2))
 ((9, 12), (15, 20), (29, 11), (25, 0), (28, 19), (5, 18), (21, 7), (4, 26), (1, 27), (13, 3),
 (16, 6), (22, 14), (17, 2), (23, 10), (24, 8))
 ((0, 16), (23, 17), (15, 24), (2, 19), (4, 22), (18, 21), (5, 13), (7, 27), (8, 14), (1, 28),
 (26, 6), (3, 29), (25, 12), (20, 10), (11, 9))

$\alpha = 8, \beta = 4:$

((1, 10, 7, 22, 15), (13, 8, 11, 20, 4), (23, 14, 3, 29, 6), (17, 25, 5, 16, 24), (27, 0, 19, 26, 12), (18, 2, 21, 9, 28))
 ((19, 7, 27, 13, 29), (11, 0, 26, 5, 28), (21, 18, 23, 8, 10), (6, 20, 15, 9, 14), (16, 4, 17, 22, 2), (3, 24, 1, 25, 12))
 ((7, 12, 8, 15, 28), (5, 21, 1, 13, 24), (29, 4, 23, 17, 0), (3, 27, 19, 22, 16), (9, 11, 6, 26, 10), (25, 2, 14, 20, 18))
 ((11, 26, 16, 21, 4), (1, 28, 6, 25, 14), (0, 24, 10, 23, 13), (8, 19, 3, 15, 27), (18, 29, 5, 17, 7), (22, 9, 20, 2, 12))
 ((8, 28, 10, 0, 18), (29, 11, 22, 6, 12), (2, 13, 25, 3, 23), (20, 16, 9, 19, 1), (26, 4, 24, 7, 14), (21, 17, 27, 5, 15))
 ((9, 23, 19, 4, 27), (22, 18, 26, 17, 1), (25, 10, 29, 2, 15), (13, 6, 16, 28, 3), (20, 8, 24, 11, 7), (21, 12, 5, 14, 0))
 ((20, 13, 22, 3, 17), (18, 24, 14, 28, 4), (5, 11, 27, 2, 10), (12, 1, 16, 23, 0), (7, 15, 29, 9, 26), (8, 21, 6, 19, 25))
 ((6, 10, 3, 18, 27), (25, 0, 20, 12, 9), (19, 28, 17, 2, 24), (13, 26, 1, 11, 21), (14, 8, 16, 7, 29), (15, 4, 22, 5, 23))
 ((28, 0), (14, 4), (2, 19), (24, 12), (16, 25), (23, 11), (13, 5), (22, 8), (7, 21), (1, 29),
 (9, 18), (27, 10), (3, 20), (17, 6), (26, 15))
 ((28, 2), (21, 3), (24, 15), (11, 25), (20, 10), (0, 16), (7, 23), (8, 26), (4, 12), (17, 29),
 (6, 18), (14, 22), (19, 5), (13, 9), (1, 27))
 ((21, 19), (16, 29), (1, 18), (6, 15), (14, 27), (23, 12), (8, 17), (20, 5), (13, 28), (26, 2),
 (11, 3), (9, 24), (22, 0), (10, 4), (7, 25))
 ((6, 24), (26, 3), (12, 28), (15, 0), (19, 20), (8, 29), (10, 22), (9, 17), (14, 21), (27, 16),
 (2, 11), (1, 23), (4, 25), (18, 5), (13, 7))

$\alpha = 9, \beta = 2:$

((20, 7, 15, 9, 10), (3, 14, 24, 6, 26), (21, 0, 29, 5, 11), (13, 28, 8, 16, 25), (23, 19, 27, 1, 12), (4, 22, 18, 2, 17))
 ((6, 23, 10, 5, 14), (20, 11, 29, 8, 15), (12, 21, 1, 17, 26), (2, 24, 18, 3, 13), (16, 9, 25, 4, 27), (22, 7, 28, 19, 0))
 ((5, 25, 6, 20, 12), (24, 8, 18, 21, 13), (27, 17, 9, 23, 2), (26, 14, 4, 10, 0), (22, 11, 1, 28, 15), (19, 7, 29, 16, 3))
 ((20, 9, 18, 1, 16), (5, 26, 2, 11, 23), (4, 29, 14, 0, 24), (13, 7, 12, 8, 27), (15, 21, 17, 3, 25), (10, 28, 6, 19, 22))
 ((7, 27, 11, 28, 14), (25, 17, 0, 12, 2), (22, 9, 21, 8, 13), (4, 18, 26, 1, 23), (16, 6, 15, 5, 24), (29, 10, 3, 20, 19))
 ((25, 19, 24, 10, 8), (20, 14, 23, 7, 17), (26, 9, 29, 1, 13), (22, 12, 6, 21, 5), (27, 15, 4, 11, 3), (2, 16, 0, 18, 28))
 ((14, 9, 19, 5, 27), (17, 24, 12, 4, 28), (10, 6, 13, 0, 25), (8, 11, 26, 16, 23), (7, 21, 2, 20, 18), (1, 22, 3, 29, 15))
 ((0, 11, 7, 24, 15), (1, 10, 26, 4, 20), (2, 14, 25, 12, 29), (3, 23, 13, 9, 28), (5, 17, 6, 27, 18), (8, 19, 21, 16, 22))
 ((0, 20, 13, 5, 28), (1, 14, 8, 26, 19), (2, 15, 23, 17, 22), (3, 12, 27, 9, 24), (4, 16, 7, 10, 21), (6, 11, 25, 18, 29))
 ((0, 23), (1, 24), (2, 19), (3, 21), (4, 13), (5, 16), (6, 18), (7, 25), (8, 20), (9, 11),
 (10, 27), (12, 28), (14, 22), (15, 26), (17, 29))
 ((0, 27), (1, 25), (2, 10), (3, 15), (4, 19), (5, 20), (6, 22), (7, 26), (8, 17), (9, 12),
 (11, 24), (13, 29), (14, 21), (16, 28), (18, 23))

$\alpha = 10, \beta = 0:$

((0, 10, 1, 12, 20), (2, 14, 5, 11, 21), (3, 15, 22, 4, 25), (6, 13, 24, 7, 26), (8, 17, 23, 18, 29), (9, 16, 28, 19, 27))
 ((1, 11, 2, 13, 21), (3, 10, 6, 12, 22), (4, 16, 23, 0, 26), (7, 14, 20, 8, 27), (9, 18, 24, 19, 25), (5, 17, 29, 15, 28))

$((2, 12, 3, 14, 22), (4, 11, 7, 13, 23), (0, 17, 24, 1, 27), (8, 10, 21, 9, 28), (5, 19, 20, 15, 26), (6, 18, 25, 16, 29))$
 $((3, 13, 4, 10, 23), (0, 12, 8, 14, 24), (1, 18, 20, 2, 28), (9, 11, 22, 5, 29), (6, 15, 21, 16, 27), (7, 19, 26, 17, 25))$
 $((4, 14, 0, 11, 24), (1, 13, 9, 10, 20), (2, 19, 21, 3, 29), (5, 12, 23, 6, 25), (7, 16, 22, 17, 28), (8, 15, 27, 18, 26))$
 $((0, 13, 20, 4, 28), (1, 19, 22, 9, 23), (2, 18, 3, 17, 27), (5, 15, 24, 8, 16), (6, 11, 25, 12, 21), (7, 10, 26, 14, 29))$
 $((1, 14, 21, 0, 29), (2, 15, 23, 5, 24), (3, 19, 4, 18, 28), (6, 16, 20, 9, 17), (7, 12, 26, 13, 22), (8, 11, 27, 10, 25))$
 $((2, 10, 22, 1, 25), (3, 16, 24, 6, 20), (4, 15, 0, 19, 29), (7, 17, 21, 5, 18), (8, 13, 27, 14, 23), (9, 12, 28, 11, 26))$
 $((3, 11, 23, 2, 26), (4, 17, 20, 7, 21), (0, 16, 1, 15, 25), (8, 18, 22, 6, 19), (9, 14, 28, 10, 24), (5, 13, 29, 12, 27))$
 $((4, 12, 24, 3, 27), (0, 18, 21, 8, 22), (1, 17, 2, 16, 26), (9, 19, 23, 7, 15), (5, 10, 29, 11, 20), (6, 14, 25, 13, 28))$

$\boxed{K_{4(10)}}$ Let the vertex set of $K_{4(10)}$ be \mathbb{Z}_{40} with vertex partition $\{0, 1, \dots, 9\}, \{10, 11, \dots, 19\}, \{20, \dots, 29\}$, and $\{30, 31, \dots, 39\}$. Since a 1-factorization of K_4 and of $K_{10,10}$ exists, clearly, $K_{4(10)} = 30K_2$. Also, by [3], $K_{4(10)} = 15C_5$. For $1 \leq \alpha \leq 14$, the factorizations are:

$\alpha = 1, \beta = 28$:

$((3, 18, 35, 8, 37), (1, 17, 34, 6, 22), (4, 31, 21, 7, 11), (10, 33, 23, 15, 39), (30, 2, 25, 38, 20),$
 $(36, 12, 24, 14, 5), (13, 29, 0, 16, 28), (9, 26, 19, 32, 27))$
 $((32, 16), (12, 3), (20, 18), (28, 9), (13, 5), (23, 4), (17, 30), (0, 33), (6, 39), (14, 31), (2, 29), (26, 8),$
 $(1, 35), (38, 7), (24, 15), (34, 11), (19, 27), (37, 21), (10, 25), (22, 36))$
 $((28, 14), (12, 33), (35, 16), (34, 7), (10, 31), (11, 38), (23, 18), (19, 1), (4, 15), (36, 13), (24, 8), (5, 26),$
 $(32, 29), (6, 30), (2, 37), (22, 3), (39, 25), (0, 27), (21, 17), (20, 9))$
 $((23, 5), (27, 37), (17, 29), (1, 34), (21, 30), (33, 28), (6, 12), (15, 9), (35, 10), (24, 31), (19, 20), (13, 25),$
 $(0, 11), (18, 38), (22, 4), (2, 14), (36, 16), (32, 3), (26, 7), (8, 39))$
 $((0, 23), (38, 1), (28, 17), (33, 24), (39, 16), (11, 22), (25, 4), (37, 13), (36, 6), (21, 35), (10, 32), (34, 18),$
 $(8, 19), (29, 5), (12, 9), (7, 20), (15, 30), (27, 2), (14, 3), (26, 31))$
 $((3, 29), (35, 4), (28, 7), (0, 12), (24, 38), (20, 14), (13, 6), (5, 18), (19, 2), (39, 22), (17, 33), (11, 1),$
 $(25, 32), (23, 30), (9, 21), (26, 34), (16, 27), (15, 37), (8, 31), (10, 36))$
 $((19, 9), (24, 0), (14, 34), (18, 37), (1, 28), (20, 35), (13, 22), (7, 31), (3, 16), (27, 12), (5, 17), (30, 8),$
 $(25, 11), (10, 23), (33, 2), (32, 21), (36, 29), (4, 39), (15, 6), (26, 38))$
 $((18, 8), (13, 7), (29, 14), (10, 21), (3, 28), (33, 5), (27, 1), (36, 2), (9, 35), (26, 30), (22, 0), (19, 37),$
 $(38, 16), (6, 20), (34, 4), (15, 25), (31, 23), (17, 24), (39, 12), (11, 32))$
 $((19, 28), (8, 33), (2, 31), (10, 29), (4, 16), (15, 0), (7, 27), (5, 37), (35, 14), (34, 20), (23, 36), (18, 22),$
 $(24, 32), (12, 26), (39, 17), (21, 1), (25, 6), (9, 30), (13, 38), (11, 3))$
 $((28, 5), (27, 10), (25, 7), (33, 15), (3, 17), (35, 0), (12, 2), (32, 26), (31, 22), (8, 11), (18, 1), (34, 21),$
 $(9, 37), (30, 16), (13, 23), (14, 6), (38, 4), (24, 36), (29, 19), (20, 39))$
 $((11, 36), (15, 31), (25, 18), (6, 16), (10, 26), (28, 30), (19, 35), (27, 17), (1, 29), (32, 0), (13, 3), (21, 33),$
 $(24, 34), (14, 23), (2, 39), (5, 38), (12, 8), (9, 22), (4, 20), (37, 7))$
 $((22, 16), (13, 9), (36, 15), (31, 6), (19, 3), (5, 32), (23, 17), (33, 29), (14, 39), (0, 21), (11, 26), (38, 27),$
 $(10, 37), (2, 34), (20, 1), (30, 18), (12, 28), (8, 25), (4, 24), (7, 35))$
 $((19, 7), (8, 10), (12, 34), (20, 36), (15, 32), (4, 33), (24, 3), (21, 6), (18, 27), (30, 25), (5, 22), (1, 31),$
 $(17, 37), (13, 26), (39, 9), (14, 0), (35, 28), (23, 11), (29, 38), (2, 16))$
 $((29, 12), (22, 37), (24, 9), (31, 27), (2, 13), (36, 17), (16, 25), (38, 8), (11, 39), (1, 14), (28, 15), (20, 5),$
 $(21, 4), (26, 18), (7, 33), (19, 34), (30, 3), (10, 0), (32, 6), (23, 35))$
 $((17, 35), (32, 28), (24, 6), (39, 3), (27, 11), (22, 7), (26, 4), (18, 36), (19, 38), (2, 15), (34, 29), (13, 30),$
 $(5, 10), (25, 1), (37, 23), (20, 33), (21, 12), (14, 9), (16, 8), (0, 31))$
 $((19, 33), (5, 16), (35, 27), (18, 28), (23, 2), (13, 34), (11, 21), (4, 36), (37, 24), (17, 9), (20, 15), (3, 38),$
 $(0, 30), (7, 14), (22, 8), (32, 12), (6, 26), (29, 39), (1, 10), (25, 31))$
 $((35, 3), (32, 8), (17, 31), (13, 4), (18, 6), (14, 26), (19, 39), (20, 0), (30, 24), (1, 12), (21, 16), (33, 27),$
 $(11, 2), (34, 23), (9, 29), (37, 25), (38, 22), (7, 10), (5, 15), (36, 28))$
 $((34, 15), (24, 13), (35, 2), (22, 30), (21, 19), (8, 14), (27, 6), (12, 23), (18, 29), (33, 1), (39, 7), (38, 28),$
 $(32, 20), (16, 26), (31, 5), (10, 3), (0, 17), (4, 37), (11, 9), (36, 25))$
 $((32, 13), (29, 35), (38, 0), (36, 8), (33, 22), (20, 2), (4, 28), (6, 37), (39, 26), (10, 30), (15, 1), (27, 3),$
 $(18, 24), (12, 5), (11, 31), (17, 7), (23, 19), (16, 34), (14, 21), (25, 9))$

((14, 32), (21, 15), (4, 17), (1, 16), (13, 39), (0, 19), (24, 10), (18, 9), (22, 35), (27, 8), (7, 23), (30, 12),
 (20, 31), (6, 29), (34, 5), (11, 28), (25, 33), (3, 36), (2, 38), (37, 26))
 ((15, 26), (36, 9), (3, 23), (8, 17), (25, 12), (29, 4), (18, 21), (35, 24), (37, 11), (22, 34), (20, 10), (14, 38),
 (39, 0), (16, 31), (33, 6), (30, 19), (5, 27), (13, 1), (2, 28), (32, 7))
 ((35, 12), (13, 21), (11, 20), (2, 24), (22, 19), (29, 8), (18, 33), (16, 37), (38, 23), (15, 3), (0, 26), (36, 7),
 (6, 17), (9, 31), (25, 14), (34, 27), (28, 39), (1, 32), (10, 4), (30, 5))
 ((30, 1), (10, 6), (12, 4), (28, 0), (23, 16), (33, 13), (34, 8), (31, 29), (18, 7), (36, 14), (15, 27), (32, 22),
 (39, 5), (3, 26), (20, 37), (35, 11), (2, 21), (25, 17), (9, 38), (24, 19))
 ((9, 23), (2, 17), (35, 15), (26, 1), (24, 16), (21, 3), (38, 10), (8, 13), (34, 0), (28, 31), (4, 32), (29, 37),
 (39, 18), (7, 30), (6, 19), (14, 22), (27, 36), (11, 33), (12, 20), (5, 25))
 ((18, 4), (38, 15), (11, 5), (25, 3), (26, 36), (34, 10), (29, 7), (21, 8), (9, 16), (31, 19), (6, 35), (33, 14),
 (2, 32), (12, 22), (24, 39), (37, 28), (23, 1), (27, 30), (0, 13), (20, 17))
 ((12, 31), (29, 11), (23, 8), (4, 19), (32, 9), (35, 5), (1, 36), (27, 13), (25, 34), (6, 38), (37, 0), (17, 26),
 (14, 30), (16, 33), (3, 20), (22, 15), (28, 10), (24, 7), (39, 21), (18, 2))
 ((15, 29), (34, 28), (13, 31), (14, 4), (1, 24), (36, 19), (20, 8), (3, 33), (25, 0), (9, 10), (26, 35), (37, 12),
 (27, 39), (16, 7), (30, 11), (32, 18), (5, 21), (17, 38), (2, 22), (23, 6))
 ((31, 3), (37, 14), (10, 2), (25, 19), (33, 26), (35, 13), (5, 24), (23, 32), (20, 16), (22, 17), (1, 39), (38, 12),
 (30, 29), (27, 4), (34, 9), (36, 21), (15, 7), (28, 8), (0, 18), (6, 11))
 ((0, 36), (1, 37), (2, 26), (3, 34), (4, 30), (5, 19), (6, 28), (7, 12), (8, 15), (9, 33), (10, 22), (11, 24),
 (13, 20), (14, 27), (16, 29), (17, 32), (18, 31), (21, 38), (23, 39), (25, 35))

$\alpha = 2, \beta = 26$:

((11, 5, 29, 9, 36), (35, 25, 12, 6, 13), (34, 23, 8, 28, 1), (27, 39, 20, 19, 0), (37, 14, 38, 17, 22),
 (7, 21, 4, 26, 18), (15, 33, 24, 30, 2), (32, 10, 31, 3, 16))
 ((12, 24, 10, 29, 32), (11, 35, 9, 19, 21), (28, 4, 15, 37, 3), (38, 23, 0, 16, 5), (31, 1, 39, 17, 20),
 (27, 13, 30, 26, 2), (18, 22, 36, 6, 25), (34, 7, 14, 33, 8))
 ((32, 20), (13, 24), (29, 4), (34, 9), (7, 25), (30, 28), (18, 37), (6, 38), (5, 15), (3, 10), (2, 22), (21, 0),
 (17, 33), (1, 26), (14, 23), (39, 16), (27, 19), (11, 31), (35, 8), (36, 12))
 ((8, 19), (37, 11), (32, 5), (12, 20), (28, 31), (10, 21), (3, 24), (36, 7), (35, 15), (23, 2), (25, 17), (9, 39),
 (13, 1), (16, 34), (0, 22), (30, 18), (14, 6), (33, 26), (4, 27), (38, 29))
 ((24, 1), (9, 13), (31, 7), (8, 30), (28, 14), (25, 0), (18, 29), (17, 37), (26, 32), (39, 2), (3, 34), (27, 11),
 (4, 36), (35, 6), (12, 38), (20, 16), (5, 10), (15, 21), (22, 33), (19, 23))
 ((10, 30), (20, 7), (33, 12), (25, 15), (24, 32), (35, 28), (21, 18), (23, 39), (14, 0), (17, 5), (29, 13), (3, 26),
 (22, 1), (34, 27), (31, 19), (36, 2), (8, 11), (38, 4), (6, 16), (37, 9))
 ((24, 18), (3, 36), (25, 32), (19, 29), (35, 1), (27, 5), (39, 26), (38, 2), (30, 23), (28, 16), (10, 20), (37, 12),
 (13, 8), (34, 17), (6, 22), (4, 14), (0, 31), (15, 7), (21, 33), (9, 11))
 ((11, 6), (29, 15), (35, 4), (8, 26), (13, 2), (32, 14), (36, 20), (18, 28), (22, 5), (21, 31), (37, 27), (23, 7),
 (9, 24), (16, 30), (10, 33), (0, 17), (25, 34), (38, 3), (39, 19), (12, 1))
 ((23, 36), (35, 24), (14, 2), (7, 32), (22, 3), (0, 38), (28, 9), (13, 26), (17, 4), (20, 11), (12, 39), (31, 5),
 (10, 34), (21, 8), (30, 19), (37, 25), (16, 27), (18, 1), (33, 29), (6, 15))
 ((7, 11), (32, 2), (21, 6), (13, 20), (37, 23), (31, 4), (30, 27), (24, 16), (36, 29), (17, 26), (39, 3), (19, 1),
 (15, 28), (10, 35), (22, 34), (8, 12), (5, 18), (38, 25), (33, 0), (14, 9))
 ((21, 12), (22, 10), (27, 14), (9, 25), (29, 16), (33, 1), (19, 32), (8, 36), (18, 35), (7, 28), (2, 24), (11, 0),
 (39, 4), (5, 37), (6, 23), (20, 3), (30, 17), (34, 26), (15, 31), (38, 13))
 ((22, 19), (8, 25), (0, 10), (9, 38), (3, 18), (29, 12), (37, 21), (5, 24), (15, 36), (34, 13), (2, 17), (27, 32),
 (35, 26), (28, 6), (16, 7), (30, 20), (33, 4), (39, 11), (31, 14), (23, 1))
 ((12, 0), (32, 4), (34, 6), (8, 10), (26, 5), (24, 11), (29, 3), (13, 37), (16, 23), (31, 9), (19, 33), (7, 39),
 (18, 2), (17, 27), (38, 28), (30, 25), (14, 20), (15, 22), (21, 35), (36, 1))
 ((2, 19), (17, 9), (10, 7), (21, 30), (33, 3), (26, 15), (29, 35), (25, 36), (31, 12), (16, 4), (13, 32), (14, 1),
 (22, 38), (37, 0), (11, 34), (8, 24), (20, 5), (27, 6), (18, 23), (39, 28))
 ((19, 34), (29, 8), (7, 13), (1, 25), (2, 11), (0, 24), (14, 26), (5, 30), (32, 17), (23, 3), (4, 18), (39, 10),
 (6, 33), (38, 15), (22, 35), (37, 20), (28, 12), (9, 27), (21, 36), (16, 31))
 ((39, 21), (19, 3), (10, 23), (29, 34), (30, 11), (15, 0), (16, 22), (27, 12), (7, 24), (37, 28), (32, 6), (25, 4),
 (36, 26), (31, 13), (20, 8), (1, 38), (17, 35), (18, 9), (2, 33), (14, 5))

((30, 1), (39, 0), (11, 28), (33, 27), (32, 22), (23, 12), (24, 4), (3, 13), (9, 26), (18, 34), (10, 37), (35, 16),
 (7, 19), (15, 8), (29, 31), (5, 36), (2, 21), (6, 17), (14, 25), (38, 20))
 ((24, 15), (39, 29), (13, 5), (12, 35), (25, 11), (9, 30), (34, 2), (31, 18), (38, 16), (19, 28), (22, 8), (0, 20),
 (14, 3), (6, 10), (21, 32), (37, 4), (1, 27), (26, 7), (23, 33), (17, 36))
 ((37, 16), (15, 23), (22, 11), (9, 32), (13, 0), (5, 19), (12, 7), (25, 39), (28, 34), (2, 29), (24, 38), (36, 18),
 (3, 35), (8, 27), (14, 21), (10, 4), (30, 6), (1, 17), (33, 20), (26, 31))
 ((4, 23), (39, 22), (11, 38), (28, 17), (14, 24), (32, 18), (16, 21), (25, 13), (20, 2), (30, 29), (9, 33), (7, 35),
 (15, 1), (6, 31), (19, 36), (0, 34), (3, 27), (5, 12), (10, 26), (37, 8))
 ((23, 35), (32, 1), (25, 2), (18, 6), (33, 13), (26, 37), (3, 21), (12, 4), (27, 15), (20, 9), (7, 22), (5, 34),
 (24, 39), (29, 11), (0, 30), (17, 31), (36, 16), (38, 19), (28, 10), (8, 14))
 ((36, 24), (19, 6), (9, 15), (17, 7), (2, 35), (38, 21), (14, 34), (30, 4), (1, 20), (29, 37), (3, 12), (10, 27),
 (31, 22), (5, 23), (33, 18), (32, 0), (11, 26), (13, 28), (8, 39), (16, 25))
 ((28, 33), (34, 24), (38, 18), (23, 17), (12, 22), (13, 4), (0, 29), (3, 32), (39, 14), (26, 6), (35, 5), (25, 31),
 (27, 36), (30, 7), (19, 37), (16, 8), (10, 2), (20, 15), (1, 11), (21, 9))
 ((22, 13), (24, 17), (8, 18), (20, 6), (35, 27), (30, 15), (33, 25), (0, 36), (37, 7), (39, 5), (10, 1), (19, 4),
 (11, 3), (16, 2), (32, 28), (29, 14), (31, 23), (12, 9), (34, 21), (38, 26))
 ((25, 10), (6, 39), (35, 14), (12, 34), (28, 36), (24, 19), (15, 32), (5, 21), (0, 18), (38, 27), (13, 23), (2, 31),
 (20, 4), (37, 1), (29, 7), (33, 11), (9, 22), (16, 26), (8, 17), (3, 30))
 ((37, 24), (20, 35), (13, 39), (38, 10), (14, 36), (27, 18), (17, 3), (0, 28), (30, 22), (9, 16), (34, 15), (12, 2),
 (4, 11), (29, 6), (7, 33), (23, 32), (8, 31), (1, 21), (25, 5), (19, 26))
 ((1, 29), (36, 13), (11, 23), (12, 30), (24, 6), (15, 39), (7, 38), (33, 16), (19, 35), (26, 0), (27, 31), (3, 25),
 (22, 14), (18, 20), (17, 21), (34, 4), (37, 2), (10, 9), (32, 8), (5, 28))
 ((0, 35), (1, 16), (2, 28), (3, 15), (4, 22), (5, 33), (6, 37), (7, 27), (8, 38), (9, 23), (10, 36), (11, 32),
 (12, 26), (13, 21), (14, 30), (17, 29), (18, 39), (19, 25), (20, 34), (24, 31))

$\alpha = 3, \beta = 24$:

((13, 9, 28, 30, 26), (37, 19, 35, 27, 4), (10, 1, 33, 17, 0), (8, 11, 3, 15, 23), (5, 24, 2, 21, 32),
 (22, 16, 7, 34, 6), (36, 25, 39, 14, 29), (31, 12, 38, 20, 18))
 ((29, 5, 30, 19, 7), (16, 3, 14, 34, 20), (12, 24, 18, 21, 37), (2, 17, 38, 15, 28), (33, 25, 1, 39, 10),
 (8, 22, 11, 6, 13), (27, 32, 26, 36, 0), (35, 9, 31, 23, 4))
 ((34, 24, 39, 2, 27), (11, 28, 35, 23, 7), (12, 33, 21, 31, 0), (4, 10, 5, 20, 36), (38, 25, 16, 32, 29),
 (1, 15, 8, 14, 37), (13, 22, 3, 18, 30), (6, 17, 26, 9, 19))
 ((24, 32), (1, 21), (4, 13), (0, 35), (23, 12), (16, 30), (29, 37), (18, 8), (14, 33), (11, 9), (10, 20), (26, 2),
 (17, 3), (39, 19), (34, 28), (6, 15), (36, 22), (27, 7), (25, 31), (38, 5))
 ((32, 1), (0, 24), (11, 38), (31, 3), (17, 9), (27, 19), (30, 23), (10, 21), (8, 20), (18, 5), (22, 34), (28, 13),
 (29, 4), (33, 26), (15, 7), (12, 35), (25, 37), (6, 39), (16, 2), (14, 36))
 ((5, 34), (12, 28), (13, 25), (2, 37), (27, 30), (7, 32), (35, 26), (10, 6), (0, 33), (14, 22), (11, 31), (38, 23),
 (20, 15), (9, 36), (19, 4), (18, 29), (8, 24), (16, 1), (17, 21), (3, 39))
 ((34, 9), (11, 32), (31, 6), (14, 5), (30, 17), (10, 35), (21, 15), (39, 0), (37, 24), (18, 28), (16, 23), (12, 8),
 (4, 26), (3, 29), (27, 36), (19, 20), (25, 2), (33, 7), (38, 13), (1, 22))
 ((35, 15), (6, 38), (18, 37), (7, 24), (21, 16), (8, 17), (3, 30), (9, 27), (12, 4), (10, 22), (29, 0), (14, 1),
 (13, 36), (26, 5), (23, 33), (28, 39), (11, 34), (25, 32), (2, 19), (31, 20))
 ((26, 18), (39, 11), (30, 25), (8, 34), (20, 14), (0, 32), (22, 38), (19, 1), (5, 15), (31, 4), (9, 10), (24, 17),
 (28, 16), (21, 36), (2, 29), (3, 35), (23, 37), (6, 33), (7, 12), (27, 13))
 ((33, 19), (29, 35), (25, 0), (28, 7), (37, 6), (38, 27), (5, 17), (15, 34), (16, 31), (8, 30), (14, 9), (36, 11),
 (3, 20), (2, 12), (22, 18), (21, 4), (39, 23), (24, 1), (26, 10), (13, 32))
 ((1, 13), (28, 3), (38, 19), (8, 36), (27, 5), (10, 23), (30, 21), (33, 16), (9, 37), (32, 2), (7, 25), (11, 26),
 (14, 6), (12, 20), (35, 22), (4, 24), (15, 39), (29, 34), (18, 0), (31, 17))
 ((13, 3), (33, 5), (21, 38), (20, 39), (30, 22), (8, 32), (28, 10), (7, 36), (16, 37), (31, 2), (15, 25), (29, 11),
 (18, 27), (34, 0), (17, 35), (23, 9), (1, 26), (24, 19), (14, 4), (6, 12))
 ((39, 12), (6, 16), (31, 22), (35, 11), (7, 14), (32, 10), (23, 2), (0, 19), (33, 9), (37, 5), (3, 25), (38, 18),
 (26, 34), (27, 17), (8, 28), (1, 20), (13, 21), (36, 24), (15, 4), (29, 30))
 ((2, 35), (9, 38), (19, 29), (36, 12), (13, 31), (11, 20), (1, 28), (37, 3), (8, 27), (15, 26), (24, 16), (33, 18),
 (39, 5), (22, 7), (30, 10), (21, 6), (32, 23), (25, 17), (0, 14), (34, 4))

((1, 31), (29, 16), (35, 18), (30, 11), (9, 12), (4, 32), (34, 13), (15, 27), (36, 17), (6, 28), (10, 37), (19, 3),
 (25, 5), (38, 24), (23, 0), (7, 21), (33, 20), (39, 8), (14, 26), (2, 22))
 ((27, 14), (0, 28), (37, 11), (8, 10), (4, 17), (19, 25), (15, 31), (36, 23), (39, 21), (16, 35), (32, 22), (30, 1),
 (2, 18), (26, 6), (3, 34), (7, 38), (20, 9), (33, 24), (13, 29), (12, 5))
 ((28, 31), (4, 39), (6, 20), (37, 15), (36, 16), (24, 10), (5, 11), (3, 38), (32, 9), (14, 2), (13, 35), (23, 19),
 (0, 26), (34, 21), (22, 12), (27, 33), (17, 29), (25, 8), (30, 7), (1, 18))
 ((3, 33), (13, 20), (25, 6), (9, 22), (18, 36), (26, 39), (31, 19), (7, 35), (34, 10), (12, 30), (27, 16), (17, 37),
 (4, 38), (0, 21), (32, 14), (24, 11), (15, 2), (29, 8), (23, 1), (28, 5))
 ((15, 0), (11, 25), (16, 8), (14, 21), (20, 30), (4, 22), (19, 5), (6, 24), (7, 31), (28, 33), (12, 34), (2, 13),
 (39, 27), (32, 18), (3, 36), (1, 35), (37, 26), (17, 23), (29, 9), (38, 10))
 ((12, 1), (25, 18), (6, 23), (10, 31), (2, 36), (33, 11), (24, 30), (8, 19), (3, 32), (15, 29), (26, 38), (7, 13),
 (27, 37), (14, 28), (16, 0), (35, 21), (39, 9), (20, 4), (5, 22), (17, 34))
 ((9, 25), (6, 36), (4, 28), (29, 33), (12, 3), (34, 18), (5, 13), (19, 26), (15, 30), (35, 14), (24, 31), (11, 23),
 (22, 37), (1, 27), (17, 32), (0, 20), (39, 16), (21, 8), (2, 38), (10, 7))
 ((13, 33), (21, 3), (39, 17), (27, 31), (25, 12), (32, 28), (9, 18), (8, 38), (1, 36), (11, 0), (30, 4), (10, 29),
 (5, 16), (37, 20), (19, 22), (26, 7), (14, 23), (35, 6), (24, 15), (34, 2))
 ((8, 35), (28, 37), (9, 21), (39, 22), (20, 17), (10, 2), (0, 38), (1, 29), (33, 15), (30, 6), (4, 11), (26, 31),
 (36, 19), (32, 12), (34, 16), (13, 24), (23, 5), (18, 7), (14, 25), (27, 3))
 ((15, 22), (23, 18), (31, 8), (33, 4), (7, 17), (2, 30), (34, 19), (5, 21), (0, 37), (14, 24), (36, 10), (38, 28),
 (39, 13), (9, 16), (29, 6), (35, 25), (26, 3), (27, 12), (11, 1), (20, 32))
 ((10, 27), (21, 11), (22, 17), (14, 30), (6, 32), (20, 2), (9, 24), (29, 31), (26, 12), (18, 39), (28, 19), (13, 0),
 (38, 16), (37, 7), (23, 3), (35, 5), (34, 1), (36, 15), (4, 25), (8, 33))
 ((0, 22), (37, 13), (15, 32), (6, 18), (19, 21), (11, 27), (9, 30), (39, 7), (17, 1), (2, 33), (35, 20), (16, 4),
 (26, 8), (23, 34), (36, 28), (38, 14), (3, 24), (25, 10), (12, 29), (31, 5))
 ((0, 30), (1, 38), (2, 11), (3, 10), (4, 18), (5, 36), (6, 27), (7, 20), (8, 37), (9, 15), (12, 21), (13, 23),
 (14, 31), (16, 26), (17, 28), (19, 32), (22, 33), (24, 35), (25, 34), (29, 39))

$\alpha = 4, \beta = 22$:

((37, 18, 9, 38, 7), (19, 25, 32, 16, 1), (36, 17, 27, 10, 8), (34, 4, 15, 20, 0), (21, 31, 23, 3, 39),
 (13, 24, 12, 2, 35), (6, 33, 22, 30, 29), (5, 11, 26, 14, 28))
 ((36, 23, 2, 14, 6), (11, 25, 4, 10, 22), (17, 5, 16, 21, 1), (13, 32, 24, 8, 38), (35, 3, 27, 34, 7),
 (9, 29, 0, 26, 37), (31, 20, 18, 30, 15), (33, 12, 28, 39, 19))
 ((2, 13, 0, 23, 34), (16, 35, 28, 10, 9), (15, 26, 36, 1, 27), (8, 19, 20, 30, 25), (32, 21, 6, 39, 17),
 (4, 33, 3, 31, 14), (7, 11, 37, 24, 18), (12, 5, 29, 38, 22))
 ((12, 23, 6, 15, 35), (32, 27, 37, 19, 7), (26, 18, 5, 21, 2), (8, 34, 20, 33, 29), (3, 30, 17, 28, 36),
 (10, 24, 11, 1, 31), (14, 39, 25, 13, 9), (0, 38, 16, 4, 22))
 ((34, 11), (36, 7), (35, 19), (21, 15), (22, 13), (20, 4), (31, 8), (24, 30), (23, 38), (17, 9), (14, 37), (2, 39),
 (12, 6), (18, 25), (10, 29), (3, 28), (0, 16), (27, 5), (1, 33), (26, 32))
 ((19, 6), (20, 13), (15, 22), (33, 24), (5, 31), (1, 39), (35, 26), (32, 18), (7, 17), (25, 16), (10, 36), (34, 29),
 (27, 9), (8, 23), (37, 21), (12, 30), (0, 14), (4, 11), (3, 38), (28, 2))
 ((8, 16), (18, 28), (33, 15), (25, 34), (35, 23), (2, 10), (6, 32), (36, 19), (26, 5), (12, 1), (29, 14), (11, 0),
 (37, 4), (20, 17), (24, 9), (30, 27), (22, 39), (31, 7), (3, 13), (38, 21))
 ((7, 22), (10, 1), (18, 23), (5, 25), (26, 38), (34, 19), (37, 6), (28, 13), (12, 8), (15, 2), (29, 16), (21, 33),
 (39, 20), (17, 31), (27, 35), (14, 3), (32, 11), (4, 36), (24, 0), (30, 9))
 ((12, 29), (22, 32), (18, 31), (17, 6), (7, 30), (13, 26), (24, 1), (36, 0), (10, 35), (11, 28), (3, 37), (25, 15),
 (8, 27), (5, 39), (2, 20), (14, 21), (38, 19), (16, 33), (23, 4), (34, 9))
 ((38, 14), (30, 28), (24, 6), (3, 17), (36, 9), (32, 4), (31, 22), (0, 27), (2, 18), (11, 20), (16, 7), (12, 39),
 (25, 10), (34, 5), (21, 19), (1, 26), (8, 35), (13, 29), (23, 33), (15, 37))
 ((37, 1), (9, 28), (19, 22), (18, 3), (2, 27), (30, 8), (39, 10), (17, 0), (31, 11), (25, 14), (12, 26), (34, 24),
 (7, 33), (13, 36), (38, 20), (29, 35), (23, 32), (16, 6), (21, 4), (5, 15))
 ((18, 0), (35, 21), (31, 24), (38, 5), (33, 27), (36, 11), (7, 28), (3, 10), (34, 14), (23, 39), (26, 6), (12, 37),
 (17, 25), (30, 19), (32, 8), (22, 1), (16, 2), (29, 15), (9, 20), (4, 13))
 ((32, 2), (7, 23), (1, 30), (25, 3), (39, 9), (15, 38), (36, 20), (22, 8), (27, 16), (13, 33), (4, 31), (12, 34),
 (18, 35), (26, 10), (19, 5), (24, 14), (0, 37), (6, 28), (11, 21), (29, 17))

((36, 16), (30, 4), (18, 29), (27, 31), (21, 9), (14, 33), (13, 1), (11, 23), (7, 20), (32, 10), (15, 24), (2, 38),
 (8, 39), (0, 12), (5, 37), (35, 17), (25, 6), (28, 34), (19, 26), (22, 3))
 ((6, 10), (5, 32), (9, 19), (16, 3), (12, 38), (34, 13), (37, 23), (17, 2), (26, 30), (20, 8), (24, 36), (29, 11),
 (18, 21), (28, 31), (1, 25), (0, 33), (15, 7), (4, 35), (22, 14), (27, 39))
 ((32, 28), (22, 17), (25, 7), (29, 36), (15, 3), (4, 18), (27, 38), (5, 24), (20, 1), (19, 23), (26, 39), (11, 33),
 (14, 35), (2, 37), (30, 16), (21, 10), (34, 6), (0, 31), (13, 8), (9, 12))
 ((5, 13), (20, 14), (19, 29), (37, 28), (38, 18), (27, 7), (10, 33), (26, 9), (30, 21), (2, 24), (23, 17), (11, 6),
 (35, 25), (12, 3), (1, 34), (36, 22), (15, 8), (31, 16), (39, 4), (32, 0))
 ((25, 9), (27, 13), (32, 19), (16, 20), (21, 12), (39, 7), (22, 2), (38, 10), (30, 0), (36, 15), (35, 11), (26, 33),
 (3, 34), (18, 8), (5, 23), (28, 4), (1, 14), (37, 29), (17, 24), (31, 6))
 ((9, 23), (30, 10), (14, 5), (3, 29), (34, 26), (31, 25), (36, 27), (18, 6), (24, 38), (32, 15), (8, 11), (28, 1),
 (4, 17), (21, 13), (33, 2), (37, 20), (19, 0), (22, 35), (39, 16), (12, 7))
 ((5, 35), (21, 36), (33, 8), (24, 19), (39, 18), (25, 12), (29, 1), (31, 9), (37, 10), (7, 13), (38, 6), (22, 16),
 (26, 3), (20, 32), (23, 15), (34, 17), (28, 0), (30, 14), (11, 2), (4, 27))
 ((10, 20), (36, 2), (37, 22), (9, 33), (12, 27), (17, 8), (32, 29), (1, 18), (28, 16), (5, 30), (13, 23), (4, 26),
 (14, 7), (39, 24), (0, 15), (25, 38), (19, 31), (34, 21), (35, 6), (11, 3))
 ((16, 34), (17, 26), (3, 21), (14, 36), (38, 4), (30, 11), (1, 15), (37, 8), (2, 29), (6, 20), (9, 32), (23, 10),
 (12, 31), (5, 22), (27, 18), (0, 35), (39, 13), (19, 28), (25, 33), (7, 24))
 ((37, 25), (12, 20), (26, 16), (21, 8), (13, 31), (27, 14), (17, 33), (32, 3), (35, 24), (15, 28), (6, 22), (9, 11),
 (19, 2), (0, 39), (18, 34), (30, 23), (36, 5), (7, 10), (1, 38), (4, 29))
 ((3, 24), (35, 9), (29, 39), (32, 12), (21, 7), (31, 26), (11, 27), (8, 14), (13, 6), (4, 19), (38, 17), (23, 1),
 (33, 28), (0, 10), (36, 25), (5, 20), (2, 30), (16, 37), (15, 34), (18, 22))
 ((37, 17), (14, 23), (10, 34), (19, 3), (7, 26), (31, 29), (33, 5), (30, 13), (25, 2), (9, 22), (12, 4), (0, 21),
 (20, 35), (15, 39), (28, 8), (27, 6), (1, 32), (18, 36), (16, 24), (11, 38))
 ((0, 25), (1, 35), (2, 31), (3, 20), (4, 24), (5, 10), (6, 30), (7, 29), (8, 26), (9, 15), (11, 39), (12, 36),
 (13, 37), (14, 32), (16, 23), (17, 21), (18, 33), (19, 27), (22, 34), (28, 38))

$\alpha = 5, \beta = 20$:

((24, 1, 34, 11, 38), (7, 12, 36, 23, 16), (30, 26, 37, 21, 19), (32, 15, 28, 2, 17), (25, 0, 33, 13, 8),
 (4, 29, 35, 27, 10), (6, 14, 39, 3, 20), (31, 18, 5, 22, 9))
 ((16, 8, 29, 12, 4), (2, 13, 25, 37, 14), (9, 34, 22, 1, 26), (0, 18, 27, 32, 11), (36, 6, 24, 31, 17),
 (39, 7, 28, 33, 5), (3, 19, 38, 15, 21), (20, 35, 23, 10, 30))
 ((12, 28, 13, 26, 6), (9, 30, 21, 2, 33), (39, 19, 22, 35, 8), (27, 1, 31, 29, 11), (16, 37, 18, 7, 34),
 (24, 3, 36, 25, 5), (14, 20, 32, 10, 38), (4, 15, 23, 0, 17))
 ((32, 0, 34, 14, 22), (37, 12, 3, 30, 6), (9, 29, 2, 26, 39), (19, 8, 15, 31, 4), (20, 11, 5, 35, 10),
 (28, 16, 24, 17, 1), (25, 18, 36, 27, 33), (23, 38, 13, 21, 7))
 ((19, 0, 39, 22, 37), (15, 24, 4, 13, 1), (25, 38, 18, 34, 10), (14, 23, 31, 11, 33), (9, 27, 5, 21, 12),
 (16, 29, 6, 35, 3), (32, 2, 36, 8, 26), (7, 20, 17, 28, 30))
 ((38, 3), (0, 20), (7, 35), (2, 15), (31, 14), (30, 25), (27, 8), (23, 12), (5, 26), (19, 1), (34, 24), (21, 10),
 (4, 39), (22, 13), (11, 28), (33, 18), (16, 9), (6, 32), (37, 17), (29, 36))
 ((18, 28), (24, 19), (1, 14), (20, 15), (4, 22), (37, 23), (9, 36), (3, 31), (11, 30), (27, 12), (0, 10), (16, 35),
 (17, 29), (34, 25), (6, 13), (5, 32), (39, 2), (38, 26), (33, 7), (8, 21))
 ((36, 15), (24, 35), (25, 12), (31, 27), (28, 34), (5, 38), (14, 8), (22, 11), (33, 29), (37, 13), (19, 23), (30, 4),
 (6, 21), (18, 2), (20, 1), (3, 17), (32, 9), (26, 0), (39, 16), (7, 10))
 ((21, 32), (29, 3), (18, 4), (13, 31), (9, 23), (35, 25), (7, 26), (2, 38), (6, 11), (5, 34), (37, 0), (12, 1),
 (8, 20), (19, 27), (22, 15), (33, 17), (36, 14), (28, 10), (16, 30), (39, 24))
 ((25, 11), (20, 9), (1, 18), (31, 26), (4, 23), (30, 17), (39, 27), (6, 34), (10, 8), (22, 2), (0, 12), (19, 29),
 (3, 32), (24, 14), (13, 5), (15, 37), (28, 35), (21, 33), (7, 38), (36, 16))
 ((23, 2), (18, 26), (1, 35), (25, 14), (10, 33), (27, 34), (20, 12), (39, 13), (36, 5), (28, 37), (38, 17), (30, 8),
 (0, 29), (31, 21), (3, 22), (32, 24), (4, 11), (6, 16), (15, 7), (9, 19))
 ((31, 7), (20, 19), (32, 13), (3, 34), (16, 27), (17, 21), (12, 39), (38, 9), (29, 37), (10, 2), (0, 22), (24, 33),
 (4, 35), (15, 26), (18, 8), (23, 1), (5, 30), (28, 14), (36, 11), (25, 6))
 ((4, 38), (29, 15), (5, 28), (2, 16), (23, 17), (35, 9), (0, 36), (14, 27), (13, 30), (12, 8), (6, 39), (33, 20),
 (32, 25), (19, 31), (24, 10), (18, 21), (3, 37), (26, 34), (22, 7), (11, 1))

((37, 10), (35, 18), (4, 34), (0, 24), (11, 23), (1, 16), (15, 39), (30, 2), (25, 19), (9, 21), (29, 32), (22, 17),
 (5, 20), (26, 3), (36, 28), (14, 7), (38, 12), (31, 8), (6, 33), (13, 27))
 ((36, 7), (27, 6), (20, 4), (23, 3), (26, 12), (37, 24), (14, 35), (16, 21), (1, 33), (15, 5), (25, 9), (10, 31),
 (19, 32), (11, 39), (34, 2), (17, 8), (30, 29), (13, 0), (18, 22), (38, 28))
 ((27, 15), (8, 23), (31, 0), (6, 22), (35, 26), (10, 5), (37, 9), (20, 39), (33, 12), (29, 38), (11, 2), (13, 36),
 (30, 1), (28, 19), (7, 17), (34, 21), (3, 25), (14, 4), (16, 32), (18, 24))
 ((15, 3), (6, 19), (14, 5), (2, 20), (26, 36), (32, 28), (25, 16), (10, 22), (39, 23), (38, 0), (21, 35), (33, 8),
 (9, 17), (1, 29), (27, 7), (13, 34), (37, 4), (31, 12), (18, 30), (11, 24))
 ((28, 39), (3, 13), (37, 5), (22, 16), (1, 38), (8, 34), (19, 26), (25, 15), (29, 14), (27, 0), (20, 31), (21, 36),
 (24, 30), (12, 2), (10, 6), (9, 18), (17, 35), (4, 33), (11, 7), (32, 23))
 ((14, 3), (39, 21), (12, 5), (17, 6), (26, 16), (30, 23), (18, 32), (27, 2), (36, 24), (8, 11), (22, 31), (33, 19),
 (4, 25), (20, 38), (1, 37), (9, 28), (29, 10), (13, 7), (0, 35), (15, 34))
 ((20, 13), (29, 5), (28, 3), (17, 39), (4, 36), (8, 38), (15, 6), (32, 1), (30, 0), (21, 11), (33, 16), (18, 23),
 (19, 34), (31, 25), (24, 7), (10, 9), (27, 37), (26, 14), (12, 22), (35, 2))
 ((3, 33), (27, 30), (7, 19), (16, 5), (36, 20), (9, 24), (15, 35), (39, 25), (26, 17), (22, 8), (14, 32), (11, 37),
 (4, 28), (12, 34), (0, 21), (38, 6), (13, 23), (1, 10), (18, 29), (2, 31))
 ((21, 1), (2, 24), (36, 19), (15, 30), (8, 37), (9, 14), (0, 28), (33, 22), (35, 12), (18, 39), (11, 3), (25, 7),
 (5, 23), (27, 17), (20, 34), (16, 38), (26, 10), (13, 29), (31, 6), (4, 32))
 ((20, 16), (9, 13), (7, 37), (3, 18), (14, 0), (28, 31), (19, 35), (39, 10), (15, 33), (26, 11), (25, 2), (38, 27),
 (5, 17), (34, 29), (36, 1), (24, 8), (30, 22), (23, 6), (12, 32), (21, 4))
 ((14, 21), (7, 32), (30, 12), (25, 1), (22, 38), (2, 19), (5, 31), (13, 24), (0, 16), (15, 9), (20, 37), (3, 27),
 (10, 36), (4, 26), (34, 17), (6, 18), (29, 39), (23, 33), (11, 35), (8, 28))
 ((0, 15), (1, 39), (2, 37), (3, 10), (4, 27), (5, 19), (6, 28), (7, 29), (8, 32), (9, 11), (12, 24), (13, 35),
 (14, 30), (16, 31), (17, 25), (18, 20), (21, 38), (22, 36), (23, 34), (26, 33))

$\alpha = 6, \beta = 18$:

((3, 21, 33, 0, 20), (9, 36, 27, 12, 22), (24, 8, 25, 2, 11), (39, 4, 10, 5, 29), (37, 17, 38, 14, 26),
 (15, 31, 23, 7, 35), (28, 32, 13, 34, 19), (30, 6, 16, 1, 18))
 ((34, 25, 9, 21, 2), (19, 5, 31, 28, 33), (1, 35, 18, 8, 27), (26, 15, 4, 30, 17), (0, 29, 12, 6, 11),
 (13, 22, 14, 32, 20), (16, 24, 36, 3, 38), (23, 37, 7, 39, 10))
 ((6, 27, 7, 25, 32), (12, 31, 4, 34, 8), (16, 22, 0, 38, 23), (17, 24, 3, 33, 9), (29, 35, 28, 14, 1),
 (11, 5, 13, 2, 20), (10, 37, 21, 19, 30), (18, 36, 15, 39, 26))
 ((37, 2, 15, 8, 20), (31, 9, 30, 22, 7), (23, 13, 3, 14, 0), (21, 17, 34, 18, 5), (12, 4, 25, 39, 1),
 (36, 11, 28, 16, 26), (29, 32, 27, 38, 19), (24, 33, 6, 10, 35))
 ((8, 16, 4, 37, 13), (27, 34, 6, 23, 15), (39, 18, 9, 38, 12), (29, 33, 17, 1, 36), (28, 2, 10, 20, 5),
 (21, 11, 35, 22, 31), (24, 0, 30, 26, 19), (32, 3, 25, 14, 7))
 ((23, 12, 21, 4, 19), (22, 18, 28, 34, 1), (30, 11, 25, 16, 29), (37, 5, 24, 15, 9), (14, 8, 26, 32, 2),
 (6, 31, 3, 39, 20), (27, 10, 38, 7, 33), (0, 13, 35, 17, 36))
 ((12, 0), (25, 31), (28, 15), (3, 18), (14, 24), (34, 20), (22, 39), (9, 10), (5, 30), (4, 35), (32, 1), (36, 23),
 (6, 37), (11, 26), (13, 21), (7, 29), (38, 2), (16, 33), (17, 8), (19, 27))
 ((5, 38), (26, 12), (6, 28), (20, 18), (1, 13), (21, 8), (35, 0), (9, 24), (31, 2), (17, 32), (11, 4), (33, 23),
 (36, 22), (14, 39), (27, 30), (34, 15), (7, 16), (37, 3), (29, 10), (25, 19))
 ((16, 34), (4, 13), (27, 2), (28, 1), (25, 37), (15, 7), (31, 29), (22, 5), (3, 26), (9, 23), (14, 36), (24, 39),
 (35, 8), (21, 38), (19, 32), (17, 20), (12, 30), (33, 11), (10, 0), (6, 18))
 ((0, 32), (37, 22), (28, 7), (13, 36), (33, 26), (8, 11), (35, 14), (30, 15), (23, 4), (34, 24), (20, 9), (2, 12),
 (21, 18), (38, 6), (10, 3), (25, 5), (17, 29), (19, 39), (1, 31), (16, 27))
 ((12, 3), (13, 28), (21, 35), (30, 23), (9, 39), (33, 14), (0, 17), (1, 10), (4, 29), (38, 26), (19, 20), (6, 24),
 (37, 8), (5, 16), (7, 11), (36, 2), (31, 27), (32, 15), (25, 18), (22, 34))
 ((17, 5), (16, 31), (19, 9), (37, 24), (33, 1), (39, 13), (14, 4), (20, 15), (3, 30), (28, 0), (23, 11), (27, 18),
 (32, 8), (22, 2), (26, 35), (21, 6), (10, 25), (12, 34), (36, 7), (38, 29))
 ((16, 20), (28, 10), (22, 8), (25, 33), (18, 7), (13, 6), (14, 34), (4, 24), (3, 23), (29, 9), (0, 39), (5, 26),
 (19, 2), (27, 35), (31, 17), (32, 21), (15, 38), (30, 1), (11, 37), (12, 36))
 ((4, 20), (11, 9), (28, 17), (36, 8), (6, 29), (15, 21), (19, 31), (25, 12), (33, 18), (32, 23), (34, 3), (2, 30),
 (5, 39), (35, 16), (27, 0), (24, 7), (14, 37), (22, 10), (26, 13), (38, 1))

((33, 22), (5, 27), (31, 13), (16, 39), (38, 28), (26, 2), (19, 7), (32, 24), (10, 8), (4, 17), (0, 34), (20, 35),
 (29, 37), (12, 9), (3, 15), (14, 6), (25, 36), (21, 30), (1, 11), (23, 18))
 ((12, 33), (27, 37), (11, 39), (2, 17), (23, 35), (4, 38), (25, 6), (29, 34), (24, 13), (32, 22), (14, 20), (5, 36),
 (8, 31), (18, 0), (9, 16), (10, 26), (15, 1), (28, 30), (21, 7), (19, 3))
 ((0, 26), (27, 13), (1, 24), (8, 19), (35, 25), (17, 6), (9, 14), (10, 36), (22, 3), (29, 2), (7, 12), (20, 30),
 (11, 31), (38, 18), (37, 15), (28, 39), (23, 34), (21, 16), (4, 32), (33, 5))
 ((24, 2), (38, 22), (34, 21), (29, 3), (19, 37), (7, 13), (31, 18), (4, 36), (25, 0), (27, 11), (33, 8), (15, 5),
 (30, 16), (35, 12), (28, 9), (20, 1), (32, 10), (17, 39), (14, 23), (6, 26))
 ((39, 23), (2, 18), (17, 27), (29, 8), (13, 38), (1, 37), (19, 36), (26, 9), (33, 10), (31, 14), (24, 30), (22, 11),
 (28, 4), (12, 32), (15, 25), (0, 21), (7, 20), (35, 6), (34, 5), (16, 3))
 ((22, 19), (26, 7), (14, 21), (11, 34), (18, 24), (36, 28), (25, 30), (27, 4), (8, 39), (3, 17), (31, 10), (9, 35),
 (2, 33), (1, 23), (0, 16), (38, 20), (5, 32), (15, 6), (29, 13), (12, 37))
 ((35, 3), (36, 20), (8, 28), (25, 1), (32, 16), (37, 0), (10, 21), (33, 15), (29, 18), (30, 13), (9, 34), (17, 7),
 (6, 19), (38, 11), (14, 5), (2, 23), (24, 12), (39, 27), (31, 26), (22, 4))
 ((39, 21), (5, 23), (27, 9), (20, 12), (2, 16), (11, 3), (30, 7), (28, 37), (0, 15), (36, 6), (22, 17), (24, 31),
 (4, 33), (1, 26), (10, 34), (14, 29), (8, 38), (19, 35), (25, 13), (32, 18))
 ((16, 36), (19, 0), (37, 18), (38, 25), (20, 31), (11, 29), (3, 28), (12, 5), (23, 17), (32, 9), (33, 13), (22, 15),
 (4, 26), (6, 39), (24, 10), (2, 35), (14, 27), (7, 34), (1, 21), (8, 30))
 ((0, 31), (1, 19), (2, 39), (3, 27), (4, 18), (5, 35), (6, 22), (7, 10), (8, 23), (9, 13), (11, 32), (12, 28),
 (14, 30), (15, 29), (16, 37), (17, 25), (20, 33), (21, 36), (24, 38), (26, 34))

$\alpha = 7, \beta = 16:$

((12, 39, 20, 2, 33), (3, 25, 32, 16, 27), (14, 5, 10, 1, 29), (36, 24, 31, 28, 9), (19, 35, 7, 34, 22),
 (13, 4, 11, 23, 30), (18, 6, 17, 8, 26), (21, 15, 38, 0, 37))
 ((36, 4, 16, 37, 6), (26, 32, 20, 31, 17), (27, 1, 11, 5, 30), (12, 23, 18, 34, 2), (28, 33, 24, 14, 3),
 (19, 39, 0, 22, 7), (8, 15, 29, 35, 21), (10, 9, 13, 25, 38))
 ((36, 25, 31, 14, 7), (39, 8, 37, 20, 13), (38, 23, 4, 26, 9), (27, 15, 30, 11, 35), (21, 32, 2, 19, 3),
 (18, 24, 1, 12, 5), (0, 16, 28, 6, 10), (22, 17, 34, 29, 33))
 ((27, 6, 35, 8, 10), (32, 24, 30, 28, 19), (16, 1, 26, 3, 33), (25, 18, 9, 39, 4), (11, 38, 14, 21, 0),
 (20, 7, 23, 34, 12), (5, 29, 17, 37, 13), (22, 31, 15, 36, 2))
 ((27, 0, 12, 9, 32), (20, 19, 33, 26, 36), (38, 17, 23, 3, 13), (15, 25, 11, 28, 5), (10, 2, 16, 31, 29),
 (7, 21, 30, 4, 37), (1, 34, 8, 18, 22), (24, 35, 14, 39, 6))
 ((12, 31, 2, 21, 38), (33, 18, 20, 5, 23), (36, 1, 28, 39, 17), (7, 24, 34, 3, 15), (26, 11, 9, 25, 19),
 (4, 10, 22, 37, 27), (16, 8, 14, 0, 35), (6, 13, 32, 29, 30))
 ((8, 31, 1, 32, 22), (15, 6, 38, 3, 20), (16, 5, 27, 11, 34), (0, 17, 7, 18, 30), (35, 23, 2, 14, 4),
 (19, 24, 13, 36, 21), (9, 29, 12, 25, 33), (37, 26, 39, 10, 28))
 ((25, 34), (29, 8), (15, 4), (19, 9), (39, 1), (0, 33), (12, 24), (10, 30), (6, 11), (3, 36), (35, 22), (28, 2),
 (23, 13), (32, 5), (26, 7), (38, 16), (21, 31), (18, 37), (27, 17), (14, 20))
 ((6, 32), (26, 10), (7, 13), (3, 30), (17, 2), (14, 33), (29, 39), (22, 36), (38, 4), (24, 37), (18, 1), (28, 15),
 (25, 16), (5, 19), (34, 9), (27, 8), (21, 11), (31, 23), (12, 35), (0, 20))
 ((13, 1), (17, 9), (24, 8), (34, 14), (31, 18), (39, 7), (26, 5), (36, 19), (0, 29), (37, 25), (28, 38), (23, 6),
 (16, 21), (22, 11), (3, 32), (20, 4), (30, 12), (35, 15), (27, 2), (33, 10))
 ((22, 30), (23, 32), (19, 27), (13, 8), (26, 12), (9, 37), (10, 35), (31, 4), (25, 39), (11, 3), (0, 28), (29, 36),
 (17, 5), (15, 34), (21, 1), (14, 6), (18, 38), (33, 20), (7, 16), (24, 2))
 ((6, 22), (18, 28), (4, 19), (24, 3), (39, 2), (37, 15), (23, 10), (35, 20), (1, 17), (8, 36), (30, 9), (14, 26),
 (32, 11), (21, 33), (12, 27), (16, 29), (5, 25), (34, 13), (0, 31), (7, 38))
 ((16, 9), (22, 4), (31, 11), (14, 1), (34, 5), (2, 26), (19, 8), (12, 7), (17, 20), (32, 15), (36, 18), (37, 23),
 (13, 29), (27, 38), (21, 39), (28, 35), (6, 33), (25, 30), (10, 3), (24, 0))
 ((34, 28), (32, 18), (6, 29), (15, 1), (23, 39), (33, 11), (13, 0), (7, 25), (5, 37), (12, 36), (4, 17), (20, 8),
 (10, 24), (21, 9), (16, 26), (27, 14), (38, 22), (35, 2), (19, 30), (3, 31))
 ((29, 7), (17, 25), (22, 15), (11, 24), (6, 19), (3, 16), (12, 21), (36, 23), (27, 33), (20, 9), (28, 13), (35, 1),
 (18, 0), (26, 34), (38, 8), (10, 31), (2, 30), (5, 39), (32, 4), (14, 37))
 ((39, 11), (2, 18), (7, 28), (0, 23), (25, 10), (12, 8), (33, 5), (24, 16), (27, 36), (26, 35), (15, 9), (37, 29),
 (20, 6), (4, 34), (32, 14), (17, 21), (1, 30), (31, 13), (22, 3), (38, 19))

((9, 27), (6, 12), (25, 8), (19, 37), (34, 21), (5, 36), (3, 39), (15, 2), (35, 18), (11, 29), (30, 26), (31, 7),
 (28, 4), (20, 10), (38, 1), (14, 22), (23, 16), (33, 13), (32, 0), (17, 24))
 ((34, 0), (23, 14), (21, 6), (25, 1), (32, 10), (33, 8), (27, 13), (26, 31), (28, 12), (20, 16), (17, 35), (29, 19),
 (22, 9), (11, 36), (38, 5), (4, 24), (39, 15), (2, 37), (3, 18), (30, 7))
 ((26, 13), (30, 8), (15, 0), (35, 25), (38, 2), (7, 27), (33, 4), (39, 24), (9, 14), (37, 10), (11, 20), (29, 18),
 (22, 16), (17, 3), (34, 6), (31, 19), (23, 1), (12, 32), (36, 28), (21, 5))
 ((36, 10), (9, 31), (28, 14), (20, 38), (25, 6), (5, 24), (17, 33), (32, 7), (8, 23), (1, 37), (21, 4), (15, 26),
 (27, 34), (18, 39), (2, 11), (30, 16), (3, 29), (12, 22), (0, 19), (35, 13))
 ((3, 35), (39, 27), (16, 6), (25, 2), (23, 15), (9, 24), (29, 38), (33, 7), (36, 14), (19, 1), (0, 26), (8, 11),
 (34, 20), (30, 17), (28, 32), (18, 4), (22, 13), (37, 12), (10, 21), (31, 5))
 ((10, 34), (31, 6), (3, 37), (9, 35), (27, 18), (24, 15), (2, 29), (17, 32), (39, 16), (1, 33), (5, 22), (7, 11),
 (19, 23), (4, 12), (26, 38), (36, 0), (14, 25), (30, 20), (28, 8), (21, 13))
 ((0, 25), (1, 20), (2, 13), (3, 12), (4, 29), (5, 35), (6, 26), (7, 10), (8, 32), (9, 23), (11, 37), (14, 30),
 (15, 33), (16, 36), (17, 28), (18, 21), (19, 34), (22, 39), (24, 38), (27, 31))

$\alpha = 8, \beta = 14$:

((14, 2, 31, 24, 9), (19, 1, 20, 4, 35), (17, 37, 27, 8, 39), (28, 30, 15, 7, 18), (22, 10, 33, 6, 16),
 (26, 11, 38, 13, 36), (23, 32, 0, 21, 3), (29, 12, 5, 25, 34))
 ((17, 38, 0, 22, 1), (4, 30, 10, 20, 14), (27, 16, 26, 5, 34), (6, 24, 19, 32, 25), (31, 3, 29, 33, 8),
 (28, 2, 37, 13, 9), (11, 23, 12, 7, 36), (15, 21, 39, 18, 35))
 ((15, 1, 29, 37, 24), (33, 21, 31, 26, 12), (23, 38, 22, 13, 7), (20, 5, 39, 27, 0), (30, 2, 10, 28, 11),
 (36, 14, 34, 4, 17), (9, 19, 8, 18, 25), (3, 16, 32, 6, 35))
 ((12, 37, 11, 1, 24), (2, 26, 10, 5, 21), (16, 7, 22, 17, 8), (23, 31, 15, 33, 18), (14, 3, 34, 19, 27),
 (28, 6, 39, 4, 32), (0, 36, 29, 35, 25), (38, 9, 30, 13, 20))
 ((35, 28, 5, 33, 27), (36, 6, 12, 38, 8), (22, 37, 10, 3, 19), (34, 18, 20, 15, 9), (17, 21, 4, 26, 7),
 (32, 2, 16, 39, 13), (30, 25, 14, 23, 1), (24, 11, 31, 29, 0))
 ((24, 39, 29, 2, 33), (0, 13, 28, 34, 26), (5, 11, 3, 22, 36), (38, 4, 18, 30, 14), (15, 23, 6, 17, 32),
 (25, 19, 21, 9, 10), (35, 8, 37, 7, 20), (1, 12, 27, 31, 16))
 ((32, 10, 6, 14, 7), (24, 8, 26, 35, 16), (19, 36, 9, 33, 4), (22, 18, 0, 30, 5), (28, 31, 13, 23, 37),
 (3, 25, 2, 12, 20), (17, 34, 21, 11, 27), (38, 1, 39, 15, 29))
 ((2, 22, 35, 12, 36), (5, 15, 34, 0, 23), (14, 24, 3, 37, 1), (32, 18, 6, 21, 8), (11, 20, 9, 27, 7),
 (33, 25, 39, 26, 13), (16, 4, 31, 10, 38), (30, 29, 17, 28, 19))
 ((6, 19), (9, 31), (30, 8), (15, 3), (26, 37), (29, 5), (21, 16), (13, 27), (22, 11), (32, 24), (35, 10), (25, 7),
 (0, 14), (23, 39), (17, 2), (4, 12), (18, 38), (1, 34), (33, 28), (36, 20))
 ((26, 18), (11, 29), (13, 3), (9, 35), (28, 38), (14, 8), (34, 2), (20, 39), (19, 23), (22, 12), (10, 24), (37, 5),
 (25, 4), (27, 1), (16, 36), (6, 15), (21, 32), (30, 7), (17, 31), (33, 0))
 ((27, 2), (38, 7), (4, 36), (3, 17), (28, 15), (29, 14), (19, 26), (18, 1), (11, 25), (30, 24), (13, 8), (39, 0),
 (33, 22), (23, 35), (34, 20), (37, 6), (5, 31), (16, 9), (10, 21), (32, 12))
 ((21, 18), (33, 14), (16, 28), (5, 13), (39, 9), (37, 19), (17, 26), (34, 11), (4, 23), (32, 29), (6, 22), (36, 25),
 (10, 7), (15, 0), (12, 8), (31, 1), (38, 3), (20, 2), (30, 27), (24, 35))
 ((34, 10), (8, 23), (13, 1), (24, 4), (11, 35), (18, 27), (28, 39), (15, 25), (6, 31), (21, 36), (20, 37), (12, 0),
 (26, 33), (2, 38), (29, 16), (22, 14), (19, 7), (32, 5), (30, 3), (9, 17))
 ((12, 25), (22, 31), (10, 23), (33, 1), (19, 39), (32, 11), (35, 0), (6, 34), (30, 21), (27, 4), (15, 8), (14, 5),
 (36, 28), (17, 20), (18, 3), (13, 2), (7, 24), (38, 26), (37, 16), (29, 9))
 ((7, 35), (1, 28), (11, 4), (12, 30), (2, 24), (36, 23), (38, 5), (20, 33), (17, 25), (6, 29), (22, 39), (10, 8),
 (34, 13), (14, 21), (32, 26), (18, 9), (37, 15), (31, 19), (0, 16), (27, 3))
 ((6, 11), (19, 38), (24, 17), (21, 7), (14, 28), (13, 4), (18, 36), (23, 2), (39, 10), (30, 20), (31, 0), (22, 15),
 (32, 3), (25, 37), (8, 29), (35, 1), (34, 12), (26, 9), (27, 5), (16, 33))
 ((27, 36), (14, 32), (8, 11), (5, 24), (33, 7), (4, 10), (21, 37), (34, 22), (30, 16), (15, 38), (23, 9), (17, 35),
 (31, 20), (0, 19), (1, 25), (39, 2), (3, 26), (18, 29), (12, 28), (6, 13))
 ((14, 35), (24, 18), (22, 8), (21, 1), (20, 19), (5, 16), (6, 38), (37, 0), (32, 27), (25, 31), (28, 4), (30, 26),
 (34, 7), (15, 2), (29, 13), (3, 33), (11, 39), (17, 23), (36, 10), (9, 12))
 ((12, 3), (28, 0), (26, 15), (33, 17), (20, 16), (39, 7), (30, 22), (4, 29), (21, 38), (10, 1), (18, 31), (19, 5),
 (11, 2), (32, 9), (14, 37), (25, 8), (6, 27), (23, 34), (36, 24), (35, 13))

((0, 17), (38, 27), (24, 34), (3, 39), (32, 20), (25, 13), (22, 9), (36, 1), (15, 4), (7, 31), (26, 14), (23, 16),
 (6, 30), (29, 10), (18, 37), (33, 11), (19, 2), (12, 21), (28, 8), (35, 5))
 ((11, 0), (23, 30), (39, 14), (15, 36), (37, 9), (25, 38), (8, 20), (29, 7), (12, 31), (21, 35), (17, 5), (33, 19),
 (27, 10), (3, 28), (13, 24), (34, 16), (26, 6), (4, 22), (2, 18), (1, 32))
 ((0, 10), (1, 26), (2, 35), (3, 36), (4, 37), (5, 18), (6, 20), (7, 28), (8, 34), (9, 11), (12, 39), (13, 21),
 (14, 31), (15, 27), (16, 25), (17, 30), (19, 29), (22, 32), (23, 33), (24, 38))

$\alpha = 9, \beta = 12$:

((25, 5, 12, 22, 7), (6, 35, 21, 11, 32), (29, 4, 18, 33, 0), (24, 3, 39, 28, 8), (15, 31, 19, 30, 23),
 (16, 1, 27, 14, 34), (9, 10, 26, 38, 17), (2, 36, 13, 20, 37))
 ((23, 38, 0, 26, 18), (15, 7, 10, 28, 32), (29, 13, 22, 9, 34), (20, 36, 24, 30, 17), (31, 1, 35, 12, 8),
 (3, 21, 5, 39, 11), (16, 6, 27, 33, 2), (19, 4, 14, 25, 37))
 ((8, 14, 23, 2, 18), (24, 4, 27, 16, 37), (36, 11, 20, 38, 19), (34, 7, 21, 39, 17), (15, 22, 30, 6, 29),
 (31, 28, 1, 32, 9), (0, 13, 26, 33, 12), (25, 3, 10, 5, 35))
 ((3, 37, 1, 30, 20), (12, 6, 39, 2, 32), (28, 7, 27, 9, 16), (17, 25, 13, 4, 33), (18, 0, 19, 21, 34),
 (5, 38, 8, 26, 14), (23, 35, 24, 15, 36), (31, 29, 10, 22, 11))
 ((21, 8, 22, 31, 0), (37, 10, 30, 9, 18), (16, 35, 19, 28, 5), (23, 33, 7, 20, 32), (13, 38, 27, 2, 24),
 (17, 1, 25, 12, 29), (4, 36, 14, 39, 15), (34, 6, 11, 26, 3))
 ((22, 34, 1, 26, 35), (15, 30, 3, 23, 5), (18, 29, 2, 12, 36), (28, 14, 21, 33, 6), (0, 20, 31, 7, 16),
 (10, 25, 9, 24, 38), (13, 8, 19, 39, 27), (17, 37, 11, 4, 32))
 ((35, 28, 9, 29, 14), (4, 30, 13, 6, 23), (25, 11, 38, 15, 8), (26, 12, 3, 19, 34), (39, 20, 33, 24, 1),
 (37, 21, 16, 36, 0), (32, 7, 18, 27, 5), (17, 22, 2, 10, 31))
 ((26, 36, 9, 11, 5), (33, 1, 18, 31, 13), (22, 38, 14, 24, 39), (27, 0, 25, 6, 15), (8, 20, 4, 21, 17),
 (16, 29, 37, 12, 30), (35, 3, 28, 34, 2), (10, 23, 7, 19, 32))
 ((13, 34, 27, 35, 7), (37, 28, 18, 32, 14), (4, 17, 26, 39, 12), (21, 6, 31, 2, 30), (11, 23, 8, 36, 29),
 (0, 22, 5, 24, 10), (19, 1, 15, 20, 9), (38, 3, 33, 16, 25))
 ((34, 11), (30, 18), (12, 24), (4, 10), (0, 32), (16, 22), (5, 19), (36, 17), (29, 33), (25, 15), (21, 38), (8, 35),
 (2, 28), (14, 31), (9, 26), (23, 37), (27, 3), (20, 6), (7, 39), (1, 13))
 ((29, 30), (12, 7), (36, 5), (4, 16), (20, 1), (11, 35), (10, 33), (3, 18), (28, 17), (38, 2), (32, 27), (21, 13),
 (8, 39), (9, 23), (0, 14), (19, 26), (34, 24), (37, 15), (6, 22), (31, 25))
 ((6, 19), (38, 4), (27, 8), (25, 2), (22, 3), (0, 15), (7, 30), (18, 5), (17, 35), (29, 39), (21, 36), (26, 37),
 (9, 14), (20, 10), (31, 24), (1, 11), (33, 28), (23, 13), (34, 12), (16, 32))
 ((22, 4), (33, 11), (37, 9), (18, 35), (6, 10), (14, 2), (36, 25), (27, 30), (16, 31), (15, 26), (29, 19), (20, 5),
 (3, 17), (8, 34), (38, 12), (24, 7), (32, 21), (1, 23), (28, 13), (0, 39))
 ((13, 5), (29, 32), (24, 11), (22, 1), (33, 8), (30, 28), (39, 10), (14, 3), (18, 25), (31, 12), (4, 26), (20, 16),
 (15, 35), (36, 6), (34, 0), (7, 17), (21, 2), (9, 38), (19, 23), (27, 37))
 ((3, 32), (31, 23), (10, 27), (11, 7), (34, 5), (38, 29), (6, 17), (39, 16), (30, 0), (22, 36), (4, 35), (15, 28),
 (37, 8), (25, 33), (21, 12), (20, 18), (2, 26), (14, 1), (9, 13), (24, 19))
 ((15, 34), (7, 14), (20, 12), (32, 25), (11, 30), (31, 3), (28, 38), (9, 33), (5, 17), (16, 24), (27, 36), (26, 6),
 (13, 37), (19, 2), (1, 21), (39, 4), (10, 35), (0, 23), (29, 8), (22, 18))
 ((31, 27), (15, 33), (25, 19), (17, 0), (26, 16), (18, 38), (35, 9), (24, 6), (30, 14), (8, 11), (5, 37), (4, 28),
 (12, 1), (13, 39), (21, 10), (7, 36), (2, 20), (29, 3), (34, 23), (32, 22))
 ((0, 24), (22, 14), (26, 30), (15, 9), (17, 2), (23, 12), (3, 16), (25, 4), (21, 31), (36, 1), (11, 28), (32, 13),
 (39, 18), (10, 8), (34, 20), (33, 5), (29, 35), (19, 27), (7, 37), (6, 38))
 ((31, 4), (5, 29), (28, 12), (19, 33), (14, 20), (30, 8), (27, 17), (35, 13), (23, 39), (36, 3), (15, 2), (22, 37),
 (6, 18), (9, 21), (26, 7), (16, 38), (25, 34), (11, 0), (32, 24), (1, 10))
 ((25, 39), (9, 12), (31, 26), (18, 21), (1, 38), (33, 22), (29, 7), (27, 11), (23, 16), (5, 30), (28, 36), (37, 4),
 (0, 35), (19, 20), (15, 3), (13, 2), (24, 17), (14, 6), (34, 10), (8, 32))
 ((0, 28), (1, 29), (2, 11), (3, 13), (4, 34), (5, 31), (6, 37), (7, 38), (8, 16), (9, 39), (10, 36), (12, 27),
 (14, 33), (15, 21), (17, 23), (18, 24), (19, 22), (20, 35), (25, 30), (26, 32))

$\alpha = 10, \beta = 10$:

((37, 2, 23, 7, 12), (19, 20, 13, 29, 4), (25, 11, 1, 16, 5), (35, 0, 14, 28, 8), (15, 21, 30, 6, 32),
 (18, 38, 10, 24, 34), (9, 33, 3, 31, 26), (27, 36, 17, 22, 39))

((0, 15, 22, 30, 25), (11, 8, 31, 24, 5), (7, 32, 3, 19, 33), (16, 34, 23, 10, 39), (38, 6, 37, 18, 20),
 (27, 1, 28, 17, 4), (29, 2, 14, 26, 36), (12, 9, 13, 21, 35))
 ((5, 12, 4, 25, 19), (10, 30, 14, 38, 28), (0, 34, 29, 8, 18), (6, 20, 15, 39, 21), (26, 2, 24, 3, 11),
 (1, 36, 9, 16, 32), (27, 7, 31, 22, 35), (37, 17, 23, 33, 13))
 ((17, 20, 12, 36, 21), (14, 3, 18, 23, 35), (31, 29, 5, 32, 27), (8, 34, 26, 38, 15), (6, 11, 24, 1, 22),
 (10, 37, 28, 33, 2), (0, 16, 30, 4, 39), (25, 13, 7, 19, 9))
 ((12, 39, 24, 7, 26), (37, 16, 4, 20, 14), (21, 18, 33, 6, 10), (11, 31, 19, 28, 30), (25, 36, 23, 5, 17),
 (13, 8, 27, 2, 22), (32, 0, 38, 29, 9), (3, 15, 35, 1, 34))
 ((20, 34, 22, 16, 3), (8, 37, 0, 10, 26), (29, 7, 14, 24, 32), (11, 33, 5, 31, 9), (28, 35, 18, 39, 13),
 (21, 19, 36, 2, 12), (27, 17, 30, 1, 38), (4, 23, 6, 25, 15))
 ((27, 6, 17, 34, 15), (21, 16, 25, 18, 7), (20, 37, 5, 26, 33), (8, 22, 4, 14, 39), (10, 9, 30, 24, 35),
 (23, 31, 0, 28, 3), (1, 29, 19, 38, 12), (2, 32, 13, 36, 11))
 ((4, 10, 34, 6, 31), (14, 23, 11, 28, 32), (24, 0, 33, 15, 36), (5, 38, 16, 8, 20), (37, 7, 25, 3, 29),
 (1, 18, 26, 35, 13), (30, 27, 12, 22, 19), (9, 17, 39, 2, 21))
 ((10, 3, 12, 34, 27), (26, 39, 19, 23, 1), (35, 11, 0, 17, 7), (8, 32, 4, 33, 24), (28, 16, 6, 29, 15),
 (14, 22, 9, 37, 21), (20, 36, 5, 18, 30), (31, 13, 38, 2, 25))
 ((36, 16, 24, 18, 22), (27, 5, 15, 23, 9), (7, 20, 11, 29, 39), (21, 33, 17, 2, 31), (13, 30, 3, 35, 4),
 (14, 8, 38, 25, 34), (37, 1, 10, 32, 26), (6, 28, 12, 0, 19))
 ((11, 38), (36, 3), (22, 5), (18, 6), (8, 19), (29, 0), (28, 4), (1, 39), (23, 37), (16, 20), (15, 24), (33, 27),
 (34, 9), (2, 30), (17, 35), (13, 26), (12, 31), (25, 14), (7, 10), (21, 32))
 ((10, 5), (34, 2), (21, 0), (33, 12), (30, 8), (13, 23), (32, 22), (35, 6), (15, 37), (31, 14), (27, 3), (11, 4),
 (24, 17), (19, 26), (36, 18), (9, 28), (39, 25), (1, 20), (7, 38), (16, 29))
 ((35, 16), (4, 37), (21, 1), (2, 18), (17, 31), (30, 7), (25, 32), (34, 5), (36, 8), (33, 10), (29, 14), (9, 20),
 (26, 3), (19, 27), (28, 39), (0, 13), (23, 38), (24, 12), (6, 15), (22, 11))
 ((36, 10), (22, 33), (25, 1), (11, 27), (32, 17), (0, 20), (26, 30), (31, 18), (4, 38), (2, 13), (16, 23), (28, 34),
 (12, 29), (5, 35), (37, 19), (15, 7), (6, 14), (24, 9), (8, 21), (39, 3))
 ((27, 13), (26, 6), (8, 10), (34, 7), (12, 25), (2, 16), (30, 5), (37, 11), (4, 18), (0, 22), (36, 28), (31, 15),
 (9, 14), (3, 21), (20, 39), (33, 1), (38, 24), (23, 32), (17, 29), (19, 35))
 ((3, 37), (21, 4), (11, 7), (34, 19), (32, 12), (33, 25), (0, 26), (1, 15), (8, 17), (35, 20), (27, 16), (14, 36),
 (18, 29), (2, 28), (23, 30), (5, 13), (10, 31), (9, 39), (22, 38), (6, 24))
 ((9, 18), (25, 10), (23, 39), (12, 6), (32, 20), (15, 2), (37, 27), (34, 11), (24, 19), (0, 30), (13, 3), (35, 29),
 (31, 28), (16, 26), (22, 7), (14, 1), (4, 36), (38, 17), (8, 33), (21, 5))
 ((5, 39), (12, 30), (25, 37), (13, 24), (9, 38), (23, 8), (26, 15), (22, 3), (29, 10), (0, 27), (2, 35), (7, 16),
 (19, 32), (31, 20), (33, 14), (17, 1), (21, 11), (6, 36), (34, 4), (18, 28))
 ((15, 9), (23, 0), (35, 25), (34, 21), (36, 7), (26, 17), (38, 3), (37, 22), (5, 28), (33, 16), (20, 10), (18, 32),
 (13, 6), (14, 27), (29, 30), (19, 2), (4, 24), (11, 39), (8, 12), (1, 31))
 ((35, 9), (18, 27), (19, 1), (28, 7), (13, 34), (17, 3), (25, 8), (24, 37), (10, 22), (2, 20), (0, 36), (5, 14),
 (4, 26), (6, 39), (23, 12), (38, 21), (11, 32), (15, 30), (33, 29), (31, 16))

$\alpha = 11, \beta = 8:$

((21, 18, 24, 5, 12), (39, 3, 11, 28, 0), (36, 19, 4, 27, 15), (17, 33, 7, 32, 8), (37, 14, 23, 38, 22),
 (13, 26, 10, 9, 31), (1, 25, 34, 2, 35), (20, 30, 16, 29, 6))
 ((35, 8, 36, 22, 12), (0, 11, 2, 26, 31), (14, 38, 6, 33, 5), (18, 29, 34, 1, 20), (28, 16, 7, 27, 37),
 (39, 17, 32, 13, 21), (30, 4, 24, 15, 3), (9, 25, 10, 23, 19))
 ((0, 24, 32, 11, 38), (17, 5, 28, 33, 21), (37, 1, 14, 31, 16), (8, 20, 19, 35, 27), (15, 26, 12, 2, 22),
 (29, 10, 6, 23, 30), (4, 18, 36, 3, 13), (25, 7, 34, 9, 39))
 ((33, 19, 30, 10, 8), (32, 25, 36, 9, 28), (21, 37, 17, 2, 14), (24, 34, 20, 4, 16), (18, 35, 7, 11, 27),
 (29, 12, 3, 38, 1), (26, 0, 15, 23, 39), (13, 5, 22, 31, 6))
 ((39, 14, 6, 37, 2), (1, 21, 10, 27, 36), (15, 35, 16, 3, 28), (24, 13, 9, 22, 17), (30, 26, 19, 29, 11),
 (4, 38, 7, 31, 23), (34, 0, 33, 18, 8), (5, 20, 32, 12, 25))
 ((4, 36, 24, 19, 34), (23, 37, 8, 12, 7), (16, 27, 1, 13, 20), (18, 3, 29, 31, 28), (6, 26, 9, 14, 32),
 (11, 21, 35, 0, 22), (33, 2, 30, 17, 25), (38, 10, 39, 15, 5))
 ((12, 27, 19, 25, 4), (2, 36, 23, 33, 29), (21, 0, 16, 1, 32), (18, 7, 39, 22, 6), (37, 9, 15, 31, 20),
 (35, 24, 10, 5, 11), (30, 8, 14, 28, 13), (26, 34, 3, 17, 38))

((27, 9, 12, 20, 0), (30, 22, 16, 5, 18), (28, 17, 1, 39, 6), (33, 14, 26, 37, 15), (8, 13, 38, 25, 31),
 (19, 3, 23, 34, 21), (24, 7, 29, 36, 11), (2, 32, 4, 35, 10))
 ((31, 18, 2, 28, 19), (8, 23, 13, 27, 39), (20, 7, 22, 4, 17), (25, 30, 5, 35, 6), (9, 16, 21, 15, 38),
 (10, 36, 26, 32, 0), (3, 24, 12, 1, 33), (14, 34, 11, 37, 29))
 ((29, 0, 23, 18, 32), (35, 13, 25, 11, 9), (37, 7, 10, 33, 4), (1, 22, 34, 12, 28), (21, 6, 15, 20, 3),
 (26, 8, 16, 36, 17), (31, 2, 19, 39, 5), (14, 30, 27, 38, 24))
 ((16, 32, 27, 14, 25), (37, 10, 1, 23, 5), (7, 30, 21, 4, 26), (31, 3, 22, 33, 24), (34, 13, 29, 35, 17),
 (39, 11, 20, 9, 18), (38, 28, 8, 15, 2), (19, 0, 12, 36, 6))
 ((12, 23), (35, 25), (38, 20), (27, 31), (17, 0), (3, 14), (1, 26), (39, 13), (18, 34), (21, 5), (37, 19), (33, 9),
 (29, 15), (10, 32), (6, 11), (16, 2), (28, 4), (8, 22), (24, 30), (7, 36))
 ((33, 11), (26, 16), (4, 31), (9, 30), (21, 36), (32, 5), (35, 14), (37, 0), (18, 25), (20, 39), (12, 38), (7, 15),
 (22, 13), (2, 23), (24, 1), (34, 6), (10, 28), (17, 29), (3, 27), (19, 8))
 ((22, 14), (18, 0), (25, 37), (13, 7), (10, 31), (9, 21), (30, 1), (26, 11), (19, 38), (2, 27), (33, 20), (35, 28),
 (24, 8), (23, 17), (32, 3), (39, 16), (36, 5), (12, 6), (29, 4), (15, 34))
 ((34, 27), (2, 20), (8, 25), (12, 37), (18, 1), (21, 7), (11, 31), (3, 26), (6, 17), (0, 14), (4, 39), (36, 13),
 (32, 15), (30, 28), (5, 19), (24, 9), (10, 22), (33, 16), (35, 23), (29, 38))
 ((39, 29), (31, 17), (16, 6), (20, 10), (2, 24), (25, 3), (1, 11), (5, 27), (32, 19), (30, 12), (15, 4), (21, 8),
 (22, 35), (7, 14), (36, 0), (38, 18), (13, 37), (34, 28), (9, 23), (33, 26))
 ((27, 33), (39, 28), (32, 23), (29, 9), (7, 17), (3, 37), (4, 10), (0, 25), (5, 26), (12, 31), (14, 36), (11, 8),
 (15, 30), (6, 24), (34, 16), (22, 18), (13, 2), (20, 35), (19, 1), (21, 38))
 ((10, 3), (7, 28), (9, 32), (38, 16), (18, 37), (21, 31), (20, 36), (6, 30), (0, 13), (14, 4), (1, 15), (11, 23),
 (2, 25), (19, 22), (33, 12), (17, 27), (26, 35), (29, 8), (24, 39), (34, 5))
 ((34, 10), (38, 8), (25, 15), (0, 30), (3, 35), (2, 21), (5, 29), (20, 14), (32, 22), (24, 37), (16, 23), (31, 1),
 (39, 12), (33, 13), (4, 11), (26, 18), (27, 6), (17, 9), (28, 36), (7, 19))

$\alpha = 12, \beta = 6$:

((32, 24, 36, 8, 28), (37, 20, 1, 30, 17), (39, 13, 33, 11, 3), (34, 22, 5, 31, 0), (35, 25, 19, 27, 12),
 (10, 6, 38, 15, 29), (9, 14, 21, 2, 16), (18, 4, 26, 7, 23))
 ((29, 16, 31, 24, 12), (18, 25, 39, 14, 32), (1, 38, 17, 5, 27), (8, 34, 26, 9, 19), (20, 10, 35, 22, 36),
 (28, 3, 30, 15, 4), (7, 37, 11, 0, 33), (2, 23, 6, 21, 13))
 ((22, 19, 28, 15, 1), (30, 25, 37, 24, 6), (12, 7, 39, 26, 5), (10, 3, 34, 14, 2), (32, 21, 36, 29, 13),
 (33, 20, 35, 27, 4), (8, 38, 16, 23, 11), (18, 0, 17, 9, 31))
 ((13, 35, 1, 33, 9), (5, 14, 30, 21, 16), (2, 25, 8, 10, 39), (26, 12, 31, 22, 18), (17, 6, 15, 34, 28),
 (36, 4, 37, 29, 0), (38, 23, 32, 19, 20), (11, 7, 27, 3, 24))
 ((35, 16, 25, 12, 9), (15, 2, 36, 17, 26), (14, 20, 4, 13, 24), (30, 22, 7, 31, 29), (0, 21, 19, 38, 27),
 (28, 6, 37, 1, 11), (33, 18, 5, 34, 10), (39, 8, 32, 3, 23))
 ((3, 22, 12, 4, 35), (13, 36, 25, 1, 31), (26, 8, 20, 18, 38), (28, 0, 19, 7, 30), (2, 17, 24, 16, 33),
 (32, 6, 27, 34, 11), (21, 37, 14, 29, 39), (9, 15, 5, 10, 23))
 ((13, 23, 34, 7, 25), (1, 29, 33, 19, 36), (38, 9, 22, 8, 12), (10, 21, 18, 2, 26), (37, 28, 39, 17, 3),
 (35, 6, 16, 32, 0), (15, 31, 14, 4, 24), (11, 27, 30, 5, 20))
 ((38, 24, 5, 37, 10), (14, 3, 16, 26, 1), (32, 27, 13, 6, 12), (36, 18, 7, 35, 28), (39, 20, 9, 29, 11),
 (19, 31, 17, 23, 4), (22, 33, 25, 15, 0), (21, 8, 30, 2, 34))
 ((5, 33, 14, 0, 38), (9, 37, 18, 35, 11), (22, 4, 30, 12, 2), (1, 28, 31, 21, 17), (39, 15, 7, 16, 27),
 (24, 10, 32, 25, 34), (8, 13, 26, 36, 23), (19, 6, 20, 3, 29))
 ((14, 25, 0, 10, 28), (32, 26, 31, 27, 9), (20, 13, 3, 36, 7), (22, 6, 18, 1, 16), (5, 39, 12, 21, 11),
 (34, 29, 2, 38, 4), (37, 15, 33, 17, 8), (24, 19, 35, 23, 30))
 ((37, 0, 12, 1, 23), (9, 34, 18, 24, 39), (30, 10, 4, 31, 20), (36, 14, 38, 11, 6), (22, 13, 7, 32, 15),
 (5, 35, 29, 17, 25), (26, 19, 3, 21, 33), (2, 27, 8, 16, 28))
 ((10, 22, 14, 27, 36), (16, 30, 0, 39, 4), (20, 32, 29, 8, 15), (31, 6, 26, 11, 2), (19, 23, 5, 13, 37),
 (7, 21, 9, 25, 38), (33, 28, 18, 3, 12), (35, 24, 1, 34, 17))
 ((38, 13), (2, 19), (8, 24), (1, 21), (22, 37), (25, 31), (7, 29), (35, 26), (12, 28), (9, 10), (5, 32), (17, 27),
 (11, 4), (6, 39), (18, 30), (36, 15), (16, 34), (33, 3), (23, 14), (20, 0))
 ((9, 18), (5, 29), (24, 2), (35, 14), (8, 33), (3, 15), (26, 0), (30, 11), (7, 10), (25, 4), (1, 32), (38, 21),
 (16, 36), (13, 28), (34, 6), (20, 12), (23, 31), (37, 27), (22, 17), (19, 39))

((25, 11), (36, 12), (17, 4), (20, 16), (13, 34), (35, 2), (9, 28), (23, 15), (3, 38), (32, 22), (19, 30), (6, 33),
 (0, 24), (26, 37), (21, 5), (18, 29), (1, 39), (8, 31), (14, 7), (10, 27))
 ((39, 18), (12, 34), (26, 3), (5, 28), (31, 11), (37, 16), (13, 30), (22, 38), (36, 9), (24, 7), (10, 25), (35, 8),
 (17, 32), (21, 15), (2, 20), (23, 0), (19, 1), (6, 14), (33, 27), (4, 29))
 ((6, 25), (8, 14), (18, 27), (21, 4), (16, 39), (9, 24), (13, 0), (2, 32), (23, 33), (30, 26), (36, 5), (35, 15),
 (3, 31), (38, 29), (12, 37), (17, 20), (22, 11), (7, 28), (34, 19), (10, 1))
 ((34, 20), (10, 31), (38, 28), (37, 2), (1, 13), (35, 21), (18, 8), (19, 5), (15, 27), (11, 36), (23, 12), (24, 33),
 (3, 25), (39, 22), (17, 7), (4, 32), (14, 26), (6, 29), (0, 16), (30, 9))

$\alpha = 13, \beta = 4$:

((2, 39, 4, 13, 29), (30, 23, 11, 38, 8), (34, 15, 35, 3, 28), (33, 5, 16, 1, 24), (27, 32, 9, 25, 7),
 (17, 22, 31, 19, 21), (14, 36, 20, 18, 26), (6, 10, 0, 37, 12))
 ((1, 38, 29, 30, 26), (20, 35, 8, 13, 33), (32, 21, 7, 24, 10), (3, 16, 31, 23, 37), (27, 34, 14, 39, 6),
 (5, 22, 12, 0, 15), (2, 19, 36, 25, 18), (9, 17, 28, 4, 11))
 ((27, 16, 21, 5, 18), (38, 24, 6, 20, 15), (36, 0, 25, 1, 22), (13, 31, 3, 23, 39), (7, 26, 11, 32, 28),
 (29, 33, 12, 35, 19), (37, 10, 8, 14, 2), (34, 4, 17, 30, 9))
 ((3, 32, 5, 14, 21), (39, 25, 19, 38, 26), (24, 0, 34, 1, 17), (6, 37, 16, 20, 13), (23, 10, 27, 12, 8),
 (4, 30, 28, 18, 33), (2, 35, 29, 31, 11), (36, 7, 22, 15, 9))
 ((1, 15, 37, 21, 18), (35, 7, 32, 23, 6), (0, 22, 39, 10, 31), (2, 13, 34, 20, 38), (19, 26, 12, 9, 28),
 (24, 5, 27, 11, 30), (16, 36, 29, 17, 8), (14, 3, 33, 25, 4))
 ((22, 19, 33, 17, 2), (23, 36, 21, 13, 5), (12, 20, 8, 32, 1), (10, 29, 34, 24, 9), (35, 25, 30, 15, 28),
 (6, 38, 14, 31, 26), (27, 0, 11, 3, 39), (4, 37, 18, 7, 16))
 ((16, 35, 5, 34, 22), (17, 36, 10, 38, 25), (39, 1, 19, 30, 0), (11, 33, 23, 12, 28), (4, 26, 8, 27, 31),
 (37, 24, 2, 32, 13), (14, 6, 21, 15, 7), (3, 20, 9, 29, 18))
 ((0, 21, 12, 34, 23), (25, 5, 37, 28, 10), (27, 33, 15, 3, 19), (8, 18, 31, 20, 39), (22, 14, 29, 4, 32),
 (38, 9, 35, 17, 7), (2, 26, 13, 1, 30), (16, 6, 36, 11, 24))
 ((35, 4, 24, 14, 1), (37, 7, 13, 0, 19), (39, 16, 32, 26, 9), (27, 36, 8, 22, 38), (29, 5, 28, 2, 12),
 (30, 20, 17, 23, 18), (21, 34, 3, 10, 33), (15, 6, 11, 25, 31))
 ((29, 15, 23, 19, 8), (2, 16, 34, 17, 27), (6, 30, 21, 9, 33), (7, 31, 5, 12, 39), (26, 10, 4, 22, 37),
 (11, 1, 20, 14, 35), (18, 38, 3, 36, 24), (0, 32, 25, 13, 28))
 ((38, 21, 10, 7, 23), (28, 16, 26, 33, 1), (9, 22, 30, 27, 14), (24, 12, 3, 13, 35), (34, 25, 37, 11, 8),
 (36, 2, 15, 39, 5), (4, 18, 32, 20, 19), (31, 17, 0, 29, 6))
 ((0, 14, 23, 2, 20), (1, 10, 5, 11, 21), (3, 17, 6, 32, 24), (4, 12, 30, 13, 38), (7, 29, 39, 19, 34),
 (8, 25, 15, 27, 37), (9, 16, 33, 28, 31), (18, 22, 35, 26, 36))
 ((0, 16, 23, 9, 18), (1, 27, 4, 15, 36), (2, 10, 35, 21, 31), (3, 25, 12, 32, 29), (5, 19, 6, 28, 38),
 (7, 20, 37, 14, 30), (8, 24, 13, 22, 33), (11, 34, 26, 17, 39))
 ((0, 26), (1, 23), (2, 21), (3, 22), (4, 20), (5, 17), (6, 18), (7, 33), (8, 15), (9, 37), (10, 34), (11, 29),
 (12, 38), (13, 36), (14, 25), (16, 30), (19, 32), (24, 31), (27, 35), (28, 39))
 ((0, 33), (1, 29), (2, 25), (3, 26), (4, 21), (5, 20), (6, 22), (7, 11), (8, 31), (9, 19), (10, 30), (12, 36),
 (13, 27), (14, 28), (15, 32), (16, 38), (17, 37), (18, 34), (23, 35), (24, 39))
 ((0, 35), (1, 31), (2, 33), (3, 27), (4, 23), (5, 30), (6, 34), (7, 12), (8, 21), (9, 13), (10, 20), (11, 22),
 (14, 32), (15, 26), (16, 25), (17, 38), (18, 39), (19, 24), (28, 36), (29, 37))
 ((0, 38), (1, 37), (2, 34), (3, 30), (4, 36), (5, 26), (6, 25), (7, 19), (8, 28), (9, 27), (10, 22), (11, 20),
 (12, 31), (13, 23), (14, 33), (15, 24), (16, 29), (17, 32), (18, 35), (21, 39))

$\alpha = 14, \beta = 2$:

((34, 1, 37, 14, 29), (19, 5, 31, 3, 23), (0, 11, 6, 21, 35), (27, 15, 38, 17, 2), (4, 26, 30, 22, 33),
 (9, 13, 39, 25, 36), (32, 10, 20, 18, 24), (16, 28, 7, 12, 8))
 ((24, 39, 22, 17, 33), (34, 8, 35, 19, 2), (4, 13, 6, 28, 30), (9, 38, 3, 32, 27), (16, 5, 12, 1, 21),
 (7, 20, 31, 0, 10), (37, 23, 18, 26, 15), (11, 25, 14, 36, 29))
 ((38, 19, 34, 27, 14), (12, 31, 24, 15, 23), (8, 28, 0, 30, 21), (35, 2, 26, 1, 29), (5, 11, 33, 3, 22),
 (37, 13, 20, 36, 10), (6, 25, 16, 9, 17), (7, 32, 4, 39, 18))
 ((8, 24, 4, 14, 33), (30, 12, 22, 37, 6), (36, 15, 39, 0, 26), (2, 32, 29, 16, 23), (19, 7, 31, 28, 9),
 (35, 25, 10, 1, 13), (11, 21, 18, 38, 27), (34, 3, 17, 5, 20))

((11, 20, 32, 18, 3), (37, 12, 4, 36, 17), (7, 38, 13, 29, 39), (14, 5, 25, 33, 1), (8, 30, 15, 28, 19),
 (9, 24, 6, 23, 35), (26, 31, 16, 27, 10), (21, 34, 0, 22, 2))
 ((20, 37, 2, 25, 17), (9, 26, 6, 29, 18), (5, 23, 11, 4, 28), (7, 16, 39, 12, 35), (13, 21, 15, 1, 30),
 (8, 10, 34, 24, 38), (0, 32, 22, 19, 33), (3, 36, 27, 31, 14))
 ((31, 9, 14, 6, 15), (37, 28, 38, 1, 24), (2, 29, 7, 26, 39), (5, 34, 12, 20, 33), (8, 32, 21, 36, 13),
 (4, 18, 22, 10, 23), (25, 19, 27, 17, 0), (3, 16, 30, 11, 35))
 ((11, 8, 23, 14, 39), (30, 5, 26, 17, 7), (4, 31, 21, 9, 15), (36, 0, 18, 34, 22), (28, 32, 12, 24, 2),
 (20, 19, 3, 37, 16), (38, 29, 10, 35, 6), (25, 1, 27, 33, 13))
 ((29, 31, 13, 3, 15), (5, 37, 18, 1, 32), (36, 6, 10, 24, 11), (38, 23, 30, 19, 26), (4, 27, 8, 39, 20),
 (16, 35, 17, 21, 0), (28, 33, 12, 2, 14), (7, 22, 9, 25, 34))
 ((21, 38, 4, 34, 14), (18, 27, 7, 23, 36), (26, 12, 29, 0, 37), (6, 22, 1, 19, 31), (3, 10, 2, 13, 28),
 (30, 20, 8, 15, 25), (9, 33, 16, 32, 11), (35, 24, 17, 39, 5))
 ((14, 24, 13, 26, 32), (29, 5, 36, 8, 17), (16, 2, 33, 23, 1), (30, 9, 20, 35, 27), (28, 12, 25, 3, 39),
 (19, 37, 7, 15, 0), (34, 6, 18, 31, 11), (4, 22, 38, 10, 21))
 ((0, 12, 3, 20, 14), (1, 11, 2, 15, 35), (4, 10, 5, 24, 19), (6, 27, 37, 21, 39), (7, 25, 38, 16, 36),
 (8, 22, 13, 23, 31), (9, 29, 30, 17, 32), (18, 28, 34, 26, 33))
 ((0, 13, 27, 39, 23), (1, 20, 6, 12, 36), (2, 30, 18, 5, 38), (3, 21, 33, 7, 24), (4, 16, 26, 14, 35),
 (8, 25, 32, 19, 29), (9, 10, 28, 11, 37), (15, 22, 31, 17, 34))
 ((0, 20, 15, 5, 27), (1, 17, 4, 25, 31), (2, 18, 35, 28, 36), (3, 26, 8, 37, 29), (6, 19, 39, 10, 33),
 (7, 11, 38, 12, 21), (9, 23, 32, 13, 34), (14, 22, 16, 24, 30))
 ((0, 24), (1, 39), (2, 31), (3, 27), (4, 37), (5, 21), (6, 16), (7, 13), (8, 14), (9, 12), (10, 30), (11, 22),
 (15, 32), (17, 28), (18, 25), (19, 36), (20, 38), (23, 34), (26, 35), (29, 33))
 ((0, 38), (1, 28), (2, 20), (3, 30), (4, 29), (5, 13), (6, 32), (7, 14), (8, 18), (9, 39), (10, 31), (11, 26),
 (12, 27), (15, 33), (16, 34), (17, 23), (19, 21), (22, 35), (24, 36), (25, 37))

$K_{3(4)}$ Let the vertex set be \mathbb{Z}_{12} with vertex partition $\{0, 1, 2, 3\}$, $\{4, 5, 6, 7\}$, and $\{8, 9, 10, 11\}$.

C_3 -factors: ((0, 6, 11), (1, 7, 8), (2, 5, 10), (3, 4, 9))
 ((0, 7, 9), (1, 6, 10), (2, 4, 11), (3, 5, 8))
 C_4 -factors: ((0, 4, 1, 5), (2, 8, 6, 9), (3, 10, 7, 11))
 ((0, 8, 4, 10), (1, 9, 5, 11), (2, 6, 3, 7))