x	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
$\pi_p(x)$	1	5	9	13	2	6	10	14	3	7	11	15	4	8	12	16

Let also the key schedule be derived from a 32-bit key K in a cyclic manner by considering 16 consecutive bits beginning from bit k_{4r-3} where r denotes the round. Assume that the initial key is:

$$K = 0011\ 1010\ 1001\ 0100\ 1101\ 0110\ 0011\ 1111 \tag{10}$$

and the plaintext be

$$x = 0010\ 0110\ 1011\ 0111. \tag{11}$$

Find the ciphertext:

K_1 K_2 K_3

1st round

$K = K_1$

$$u^1 = x \oplus K = \overset{\nearrow 1}{0001}\ \overset{\nearrow 12}{1100}\ \overset{\nearrow 2}{0010}\ \overset{\nearrow 3}{0011}$$

$$v^1 = \overset{\nearrow 4}{0100}\ \overset{\nearrow 5}{0101}\ \overset{\nearrow 13}{1101}\ \overset{\nearrow 1}{0001}$$

$$w^1 = 0010\ 1110\ 0000\ 0001$$

$$u^2 = w^1 \oplus K^2 = \cdots$$

$$l : \log l \ll l \cdot 2^l$$