11010101101010110100111000010

0x1AB569C2 , 3, 1 -> 0xB569C21A

0x1AB569C2 , 3, -1 -> 0xC21AB569

sd = 0x1AB569C2 & 0x00FFFFFF
si = 0x1AB569C2 & 0xFFFFFF00

unos = (~0x0) = 0xFFFFFFFF
~0xFF000000 = 0x00FFFFFF

bd = ~(unos << (n<<3))
bi = (unos << ((4-n)<<3))

s_d_at = x & bd
s_i_ad = x & bi

s_d_ad = x & ~bd
s_i_at = x & ~bi

s_d_p1 = (s_d_at << ((4-n) << 3))
s_d_p2 = (s_d_ad >> (n << 3)) & ~(bi)

s_d = s_d_p1 | s_d_p2

s_i_p1 = (s_i_ad >> ((4-n) << 3)) & bd
s_i_p2 = (s_i_at << (n << 3))

s_i = s_i_p1 | s_i_p2

k = shift >> 1
return (s_d & ~k | (s_i & k)