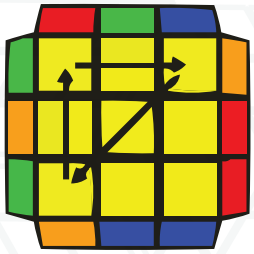
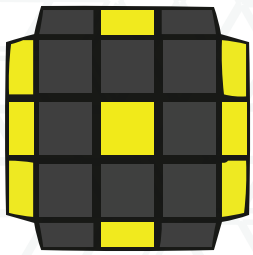


PLL Aa

x L2 D2 (L' U' L) D2 (L' U L')
y' x' (L' U L') D2 (L U' L') D2 L2
y x (R' U R') D2 (R U' R') D2 R2
y2 x' R2 D2 (R' U' R) D2 (R' U R')

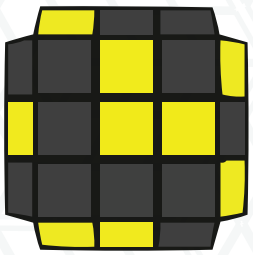
F2L 1

U2 (R U R') U (R U' R')
y F R U2 R' F'



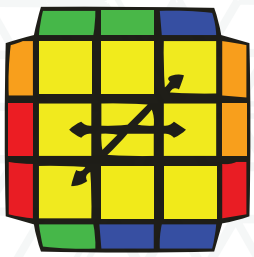
OLL 1

R U2 R2 F R F' U2 R' F R F'



OLL 47

R' U' R' F R F' R' F R F' U R
F' L' U' L U L' U' L U F
y' F U R U' R' F' R U R' U R U2 R'

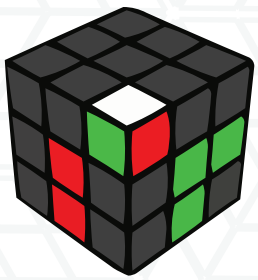


PLL Na

(R U R' U) (R U R') F' (R U R' U') ->
-> R' F (R2 U' R' U2) (R U' R')
z U R' D (R2 U' R) D' U R' D (R2 U' R) D'

F2L 9

(R U R')

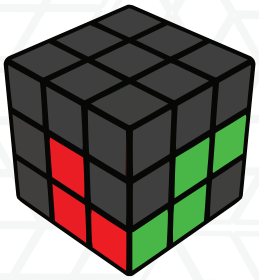


F2L 42

U' R' U R2 U' R'

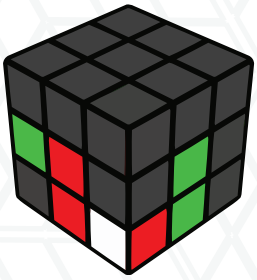
F2L 72

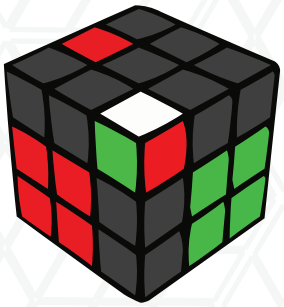
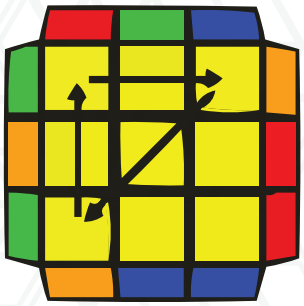
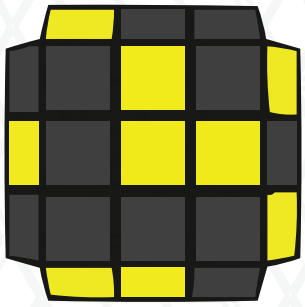
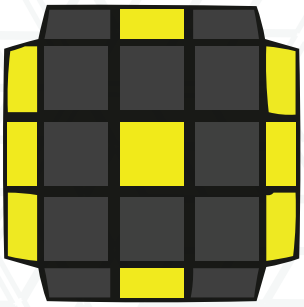
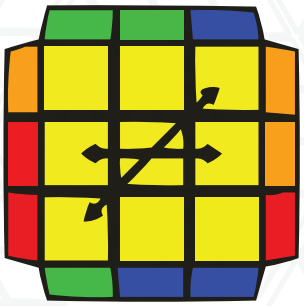
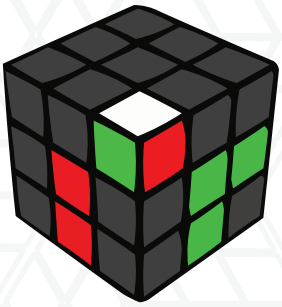
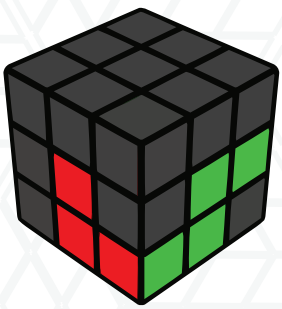
U' (F' U F) (L U2 L')
y U' (L' U L) U' (f R' f')



F2L 78

R2 U' R2' U R2
y2 L2' U' L2 U L2'
y F' R' F2 R F



F2L 93

(R' F R U' F') U (R U' R')
R U' R2' u' R' u R
y2 L U' L2' u' L' u L