

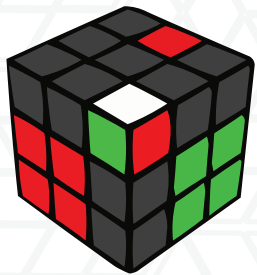
F2L 1

$U^2 (R U R') U (R U' R')$
 $y F R U^2 R' F'$



F2L 2

$y U^2 (L' U' L) U' (L' U L)$
 $F' L' U^2 L F$



F2L 3

$U (R U^2 R') U (R U' R')$



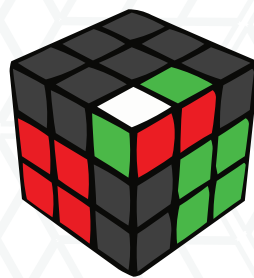
F2L 4

$y U' (L' U^2 L) U' (L' U L)$



F2L 5

$U (R U' R') U' (R U' R' U R U' R')$
 $U (F R' F' R) U (R U R')$
 $U^2 (L F' L' F) (R U R')$
 $y U L' U' (L^2 F' L' F) (L' U L)$
 $y F' (U' L' U L) F (L' U L)$
 $y' U^2 R U' R' U' S R' S'$



F2L 6

$y U' (L' U L) U (L' U L U' L' U L)$
 $y U' (F' L F L') U' (L' U' L)$
 $y U^2 (R F' R' F) (L' U' L)$
 $U' R U (R^2 F R F') (R U' R')$
 $F (U R U' R') F' (R U' R')$
 $y^2 U^2 L' U L U S' L S$



F2L 7

$(R U^2 R') U' (R U R')$



F2L 8

$y (L' U^2 L) U (L' U' L)$



F2L 9

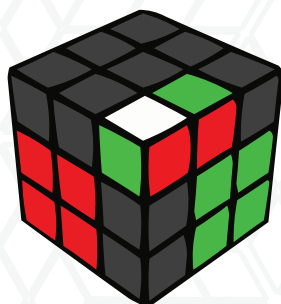
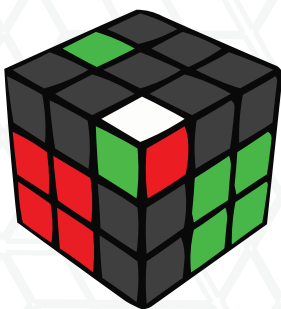
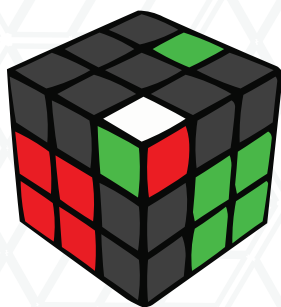
$(R U R')$



F2L 10

$y (L' U' L)$







F2L 11

U' (R U R') U (R U R')
 U2 (R U' R') U' (R U R')
 R' U R2 U R'



F2L 12

y U (L' U' L) U' (L' U' L)
 y U2 (L' U L) U (L' U' L)
 y L U' L2' U' L



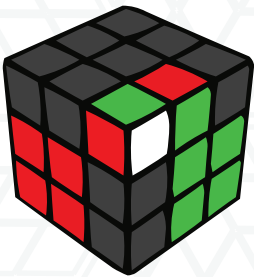
F2L 13

R' U2 R2 U R2' U R
 (R U' R') U (R U' R') U2 (R U' R')
 R' U2 R2 U R'
 y U L' U2 L U' y' R U R'



F2L 14

y L U2 L2' U' L2 U' L'
 y (L' U L) U' (L' U L) U2 (L' U L)
 y L U2 L2' U' L
 U' (R U2 R') U y (L' U' L)



F2L 15

U' (R U' R') U (R U R')



F2L 16

y U (L' U L) U' (L' U' L)



F2L 17

y U' (L' U L)



F2L 18

U (R U' R')



F2L 19

y U (L' U2 L) U2 (L' U L)
 R' U2 R2 U R2' U R



F2L 20

U' (R U2 R') U2 (R U' R')
 y l U2 L2' U' L2 U' l'







F2L 21

$U' (RUR') U2 (RU'R')$
 $y U' U L U' L' U' I$



F2L 22

$y U (L' U' L) U2 (L' U L)$
 $U' r U' R' U R U' r$



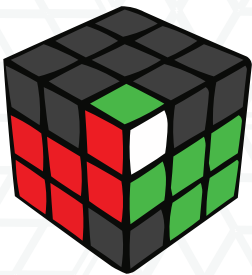
F2L 23

$M U (L F' L') U' M'$
 $U' (R' U R) U' (R U R')$
 $y (L' U L) y' U2 (R U R')$
 $y' (R2' F R F' R) U2 (R' U R)$
 $y2 (F' L f) U2 (L U L')$



F2L 24

$y M U' (R' F R) U M'$
 $y U (L U' L') U (L' U' L)$
 $(R U' R') y U2 (L' U' L)$
 $y2 (L2 F' L' F L') U2 (L U' L')$
 $y' (f R' f') U2 R' U' R$



F2L 25

$U (R U R') U2 (R U R')$
 $U' (R U2 R') U (R U R')$
 $y U (L' U L) U2 (L' U L)$



F2L 26

$y U' (L' U' L) U2 (L' U' L)$
 $y U (L' U2 L) U' (L' U' L)$
 $U' R U' R' U2 R U' R'$



$y2 U (F' L' f) U' (L U L')$
F2L 27

$U (F' U' F) U' (R U R')$
 $y U2 (L' U' L) (F' L F L')$
 $y U' M' (U' L' U I) (L' U L)$
 $y U' (L U F' L' F) (L' U L)$
 $y' U2 (R' U' R) y U (R U' R')$
 $y' U2 R' U' M U' R U M'$



$y' U' (f R f') U (R' U' R)$
F2L 28

$y U' (F U F') U (L' U' L)$
 $U2 (R U R') (F R' F' R)$
 $U M' (U R U' r') (R U' R')$
 $U (R' U' F R F') (R U' R')$
 $y2 U2 (L U L') y' U' (L' U L)$
 $y2 U2 L U M U L' U' M'$



F2L 29

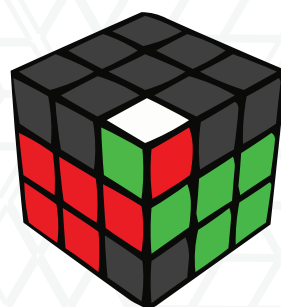
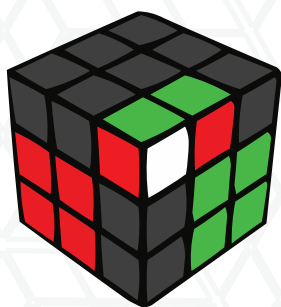
$(U R U' R')^3$



F2L 30

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







F2L 31

$(RUR')U'(RUR')$
 $yM'(U'L'UL)(U'L'U)$
 $y(LF'L'F)^2$



F2L 32

$y(L'UL)U(L'UL)$
 $M'(URUR')(URU'r')$
 $(R'FRF')^2$



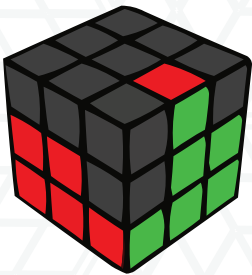
F2L 33

$(RU'R)U(RU'R)$



F2L 34

$y(L'UL)U'(L'UL)$



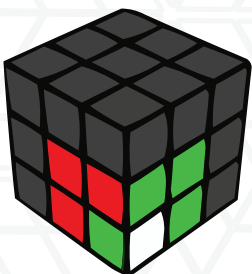
F2L 35

$U'(R'FRF')(RUR')$
 $(R'F'R)(URUR')F$
 $U'F'(RUR'U')(R'FR)$
 $yU'(L'UL)(F'LFL')$
 $y^2U'MULU'M'UL'$
 $y'U'R'UMU'RUM'$



F2L 36

$yU(LF'L'F)(L'UL)$
 $y(LFL')(U'L'UL)F'$
 $yUF(L'ULU)(LF'L')$
 $U(RUR')(FR'F'R)$
 $y'UMU'R'UM'U'R$
 $y^2ULU'MUL'U'M'$



F2L 37

$(RU'R)U(RU^2R'URUR')$
 $y'(L'UL)U(L'ULU^2L'UL)$



F2L 38

$y'(L'UL)U'(L'U^2LU'L'UL)$
 $(RU'R)U'(RUR'U^2RU'R)$



F2L 39

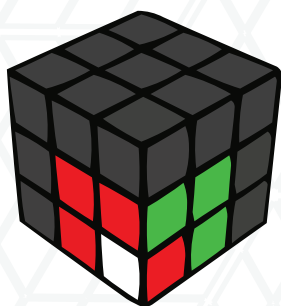
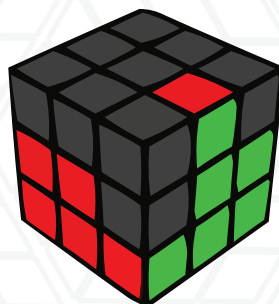
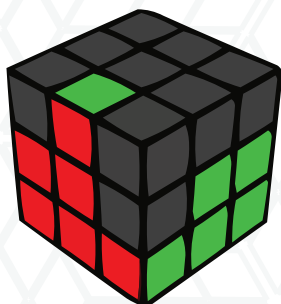
$(RU'R')(F'L'U^2LF)$
 $y(FRU^2R'F')(L'UL)$
 $y^2L^2FUF'U'L'UL'$
 $y'R'UR'U'F'UR^2$



F2L 40

$y(L'UL)(FRU^2R'F')$
 $(F'L'U^2LF)(RUR')$
 $y'R^2F'U'FUR'U'$
 $y^2LU'LU'FU'F'L^2$

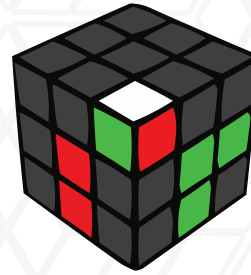






F2L 41

$R2' U2' F R2 F' U2' R' U R'$
 $y L2 U2 F' L2' F U2 L U' L$
 $y' (F R' F') U (R' U2' R) U (R' U2' R)$
 $y2 (F' L F) U' (L U2 L') U' (L U2 L')$



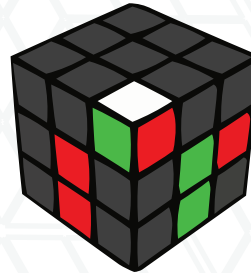
F2L 42

$U' R' U R2 U' R'$



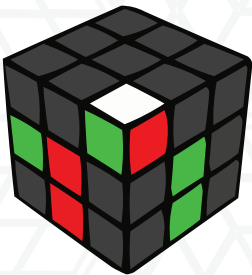
F2L 43

$y U L U' L2' U L$



F2L 44

$U2 (R' U R) U' (S R S')$
 $y R' F R2 U' R' U2 F'$
 $y2 U2 (L F' L' F) (L U L')$



F2L 45

$y U2 (L U' L') U (S' L' S)$
 $L F' L2' U L U2' F$
 $y' U2 (R' F R F') (R' U' R)$



F2L 46

$U2 L2' u L2 u' L2'$
 $y U2 R2 u' R2' u R2$
 $y' U2 L2' u' L2 u L2'$
 $y2 U2 R2 u R2' u' R2$



F2L 47

$L F' U F L'$
 $y R' F U' F' R$
 $y' (L' u' L) U' (L' u L)$
 $y2 (R u R') U (R u' R')$



F2L 48

$R' U' R2 U R'$



F2L 49

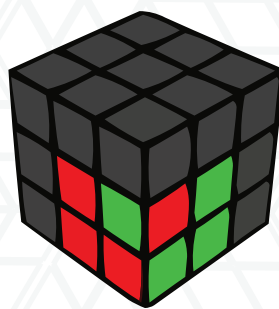
$y L U L2' U' L$



F2L 50

$F D R D' F'$
 $y R (F U F') R'$
 $y2 F (L U L') F'$
 $y' R u R u' R'$







F2L 51

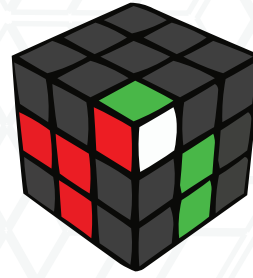
$y F' D' L' D F$
 $L' (F' U' F) L$
 $y' F' (R' U' R) F$
 $y^2 L' u' L' u L$



ADVANCED

> IN WRONG SLOT

WHITE SIDE



F2L 52

$U' (L' U' L) (R U' R')$
 $y U^2 L' U' L^2 U L^2 U' L$



ADVANCED

> IN WRONG SLOT

WHITE SIDE



F2L 53

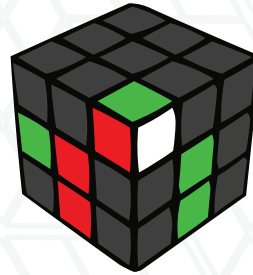
$U (R U R') (L' U L)$
 $y' U^2 R U R^2 U' R^2 U R'$



ADVANCED

> IN WRONG SLOT

WHITE SIDE



F2L 54

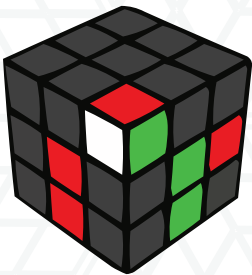
$(F U^2 F') (R U R')$
 $y L U^2 L' F U F'$
 $y' R U^2 R' f R f'$



ADVANCED

> IN WRONG SLOT

WHITE SIDE



F2L 55

$y (F' U^2 F) (L' U' L)$
 $R' U^2 R F' U' F$
 $y^2 L' U^2 L' f' L' f$



ADVANCED

> IN WRONG SLOT

WHITE SIDE



F2L 56

$U (R U R') (L U L')$
 $U' (R U^2 R') U' (L U L')$
 $y U (L' U L) (R' U R)$



ADVANCED

> IN WRONG SLOT

WHITE SIDE



F2L 57

$y U' (L' U' L) (R' U' R)$
 $y U (L' U^2 L) U (R' U' R)$
 $U' (R U' R') (L U' L')$



ADVANCED

> IN WRONG SLOT

WHITE SIDE



F2L 58

$U^2 F' (L U L') F$
 $y U^2 L' (B U B') L$
 $y' U^2 R' (F U F') R$
 $y^2 f' U L U' f$



ADVANCED

> IN WRONG SLOT

WHITE SIDE



F2L 59

$y U^2 F' (R' U' R) F'$
 $U^2 R' (B' U' B) R'$
 $y^2 U^2 L' (F' U' F) L'$
 $y' f' U' R' U f'$



ADVANCED

> IN WRONG SLOT

WHITE SIDE



F2L 60

$U (R U' R') (L' U L)$



ADVANCED

> IN WRONG SLOT

IN RIGHT SLOT





F2L 61

$y (L' U2 L) U' (L U L')$
 $y U2 (L' U L) U' (L U2 L')$



F2L 62

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



F2L 63

$y U' L' U' L2 U2 L'$



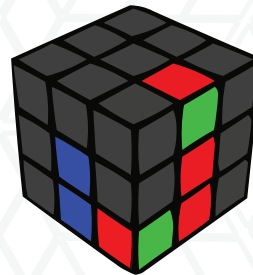
F2L 64

$(R U' R') U' (L' U L)$
 $y (S' L S)$



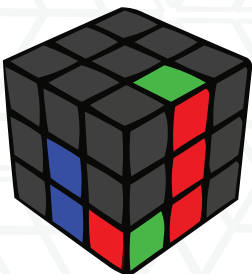
F2L 65

$U' (R U' R') (F U F')$
 $y U (L' U L) U (L U L')$
 $y U' (F U F') (L U L')$



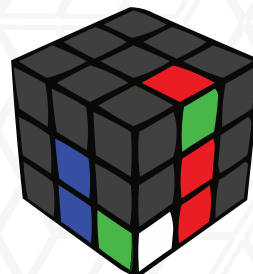
F2L 66

$y U' (L' U L) (R U' R')$



F2L 67

$(R U2 R') U (R' U' R)$
 $U2 (R U' R') U (R' U2 R)$



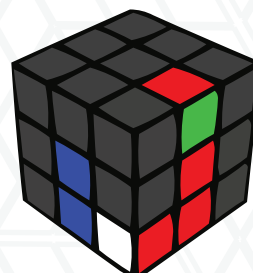
F2L 68

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



F2L 69

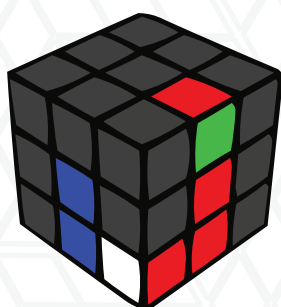
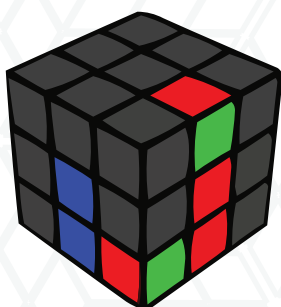
$U R U R2' U2 R$

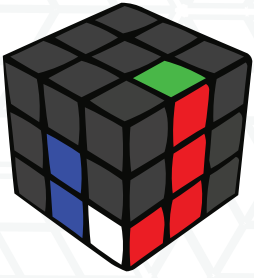


F2L 70

$(S R' S')$
 $y (L' U' L) U (R U' R')$







F2L 71

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



F2L 72

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



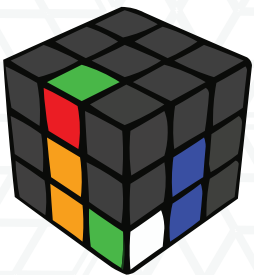
F2L 73

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



F2L 74

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



F2L 75

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



F2L 76

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



F2L 77

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



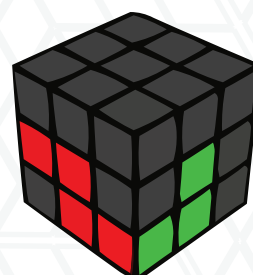
F2L 78

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



F2L 79

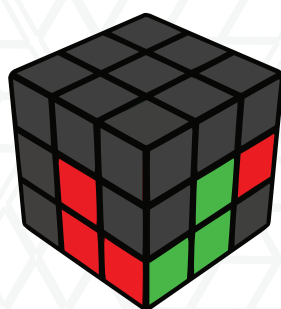
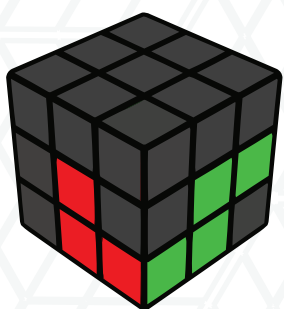
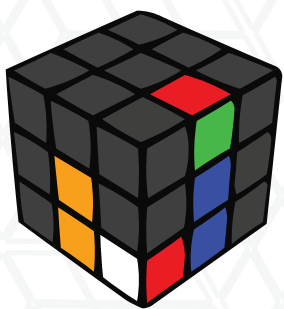
f' R' U R f
 y R' u' R u R
 y' L' u' L u L
 y2 f' D' L D f

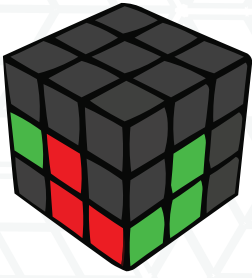


F2L 80

y L2' U L2 U' L2'
 y' R2 U R2' U' R2
 F L F2' L' F'

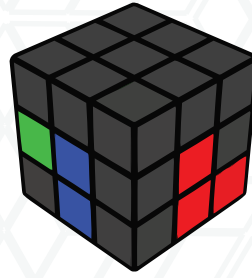






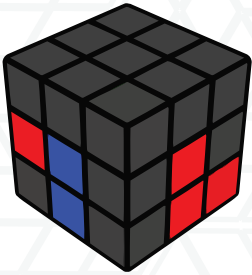
F2L 81

y f L U' L' f'
 L u L' u' L'
 y2 R u R' u' R'
 y' f D R' D' f'



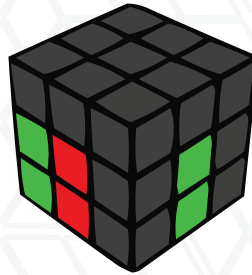
F2L 82

L2' u' L2 u L2'
 y' R2 u R2' u' R2
 y L2' u L2 u' L2'
 y2 R2 u' R2' u R2



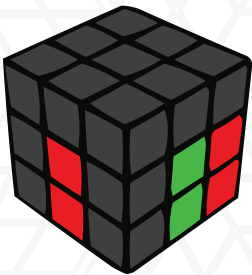
F2L 83

(L' u' L) U (L' u L)
 y' (R u R') U' (R u' R')
 y (L u L') U' (L u' L')
 y2 (R' u' R) U (R' u R)



F2L 84

R' F R2 U' R2' F' R
 L F' L2' U' L2 F L'
 y (f' L' f) U' (L' U L)
 y' (R U R') U' (f R' f')
 y2 (f R f') (L U2 L')



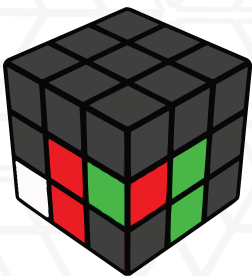
F2L 85

y L F' L2' U L2 F L'
 y R' F R2 U R2' F' R
 (f R f') U (R U' R')
 y2 (L' U' L) U (f' L f)
 y' (f' L' f) (R' U2' R)



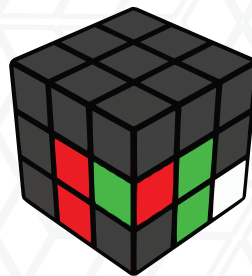
F2L 86

R (L U2 L') R'
 y L' (R' U2 R) L



F2L 87

L F2' L' F U' F
 (L F' L' U' F) U' (R U R')
 y (L U' F' L' F) (L' U L)



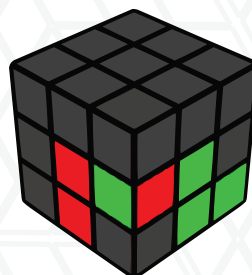
F2L 88

y R' F2 R F' U F'
 y (R' F R U F') U (L' U' L)
 (R' U F R F') (R U' R')



F2L 89

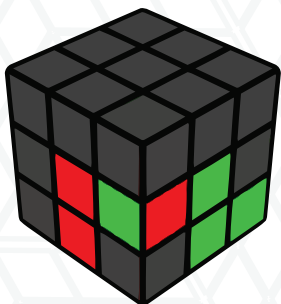
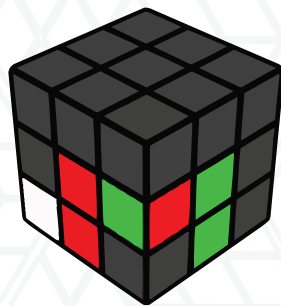
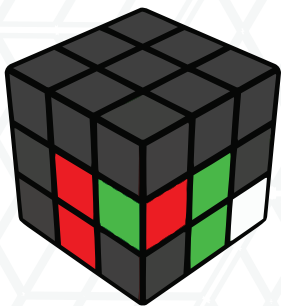
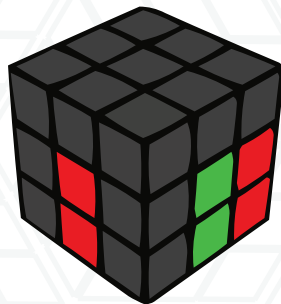
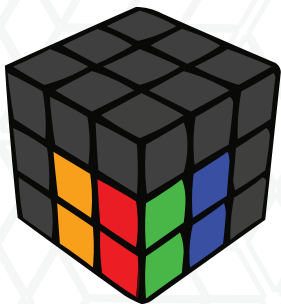
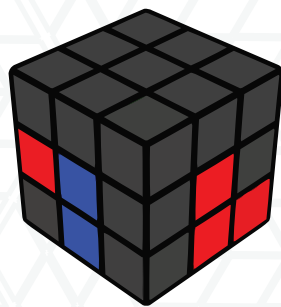
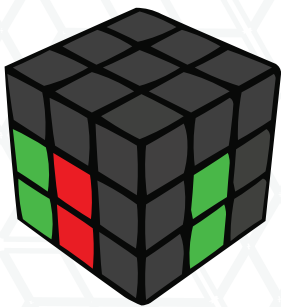
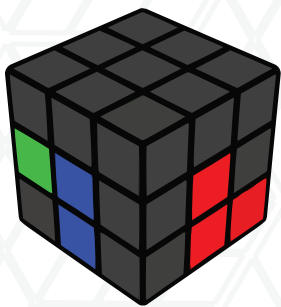
(R' F R U' F') (R U' R')
 y (L' U' L) U (S' L' S)

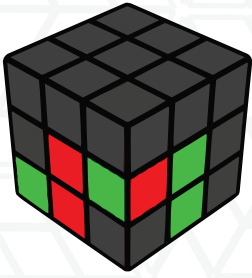


F2L 90

y (L F' L' U F) (L' U L)
 (R U R') U' (S R S')

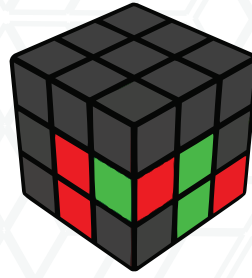






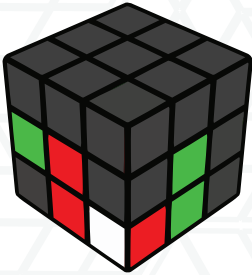
F2L 91

$(L' U L) (M' U R U' r') (R U' R')$
 $y (L U F' L' F) U^2 (L' U' L)$
 $y (L U L') (F U F') U' (L' U L)$



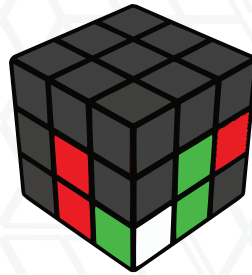
F2L 92

$y (R U' R') (M' U' L' U L) (L' U L)$
 $(R' U' F R F') U^2 (R U R')$
 $(R' U' R) (F' U' F) U (R U' R')$



F2L 93

$(R' F R U' F') U (R U' R')$
 $R U' R^2 u' R' u R$
 $y^2 L U' L^2 u' L' u L$

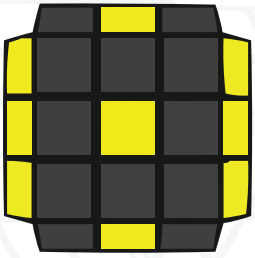


F2L 94

$y (L F' L' U F) U' (L' U L)$
 $y L' U L^2 u L u' L'$
 $y' R' U R^2 u R u' R'$

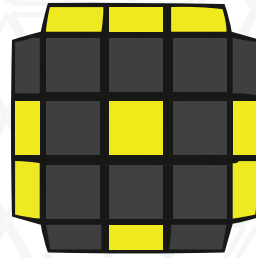






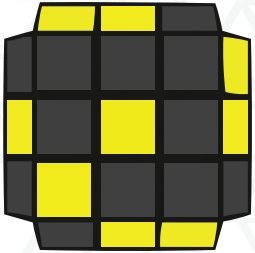
OLL 1

$R U^2 R^2 F R F' U^2 R' F R F'$



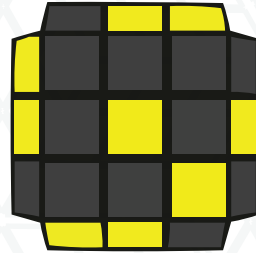
OLL 2

**$r U' U^2 r U^2 R' U^2 R U' r'$
 $y' F R U R' U' F' f R U R' U' f'$
 $y' F R U R' U' S R U R' U' f'$**



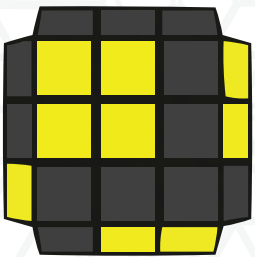
OLL 3

**$r' R^2 U R' U' r U^2 r' U M'$
 $y' F U R U' R' F' U F R U R' U' F'$
 $y' f R U R' U' f' U' F R U R' U' F'$**



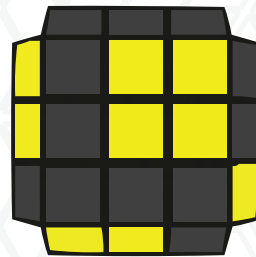
OLL 4

**$M U' r U^2 r' U' R U' R' M'$
 $y' F U R U' R' F' U' F R U R' U' F'$
 $y' f R U R' U' f' U F R U R' U' F'$**



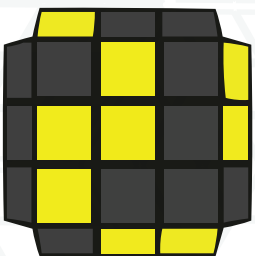
OLL 5

**$r' U^2 L U L' U l$
 $y^2 r' U^2 R U R' U r$**



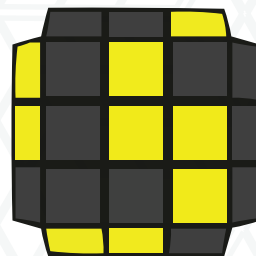
OLL 6

$r' U^2 R' U' R U' r'$



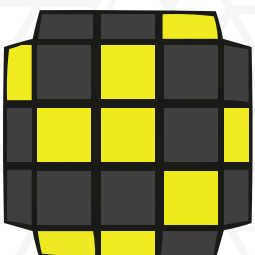
OLL 7

$r U R' U R U^2 r'$



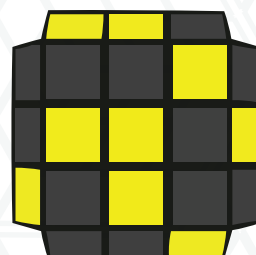
OLL 8

**$r' U' L U' L' U^2 l$
 $R U^2 R' U^2 R' F R F'$
 $y^2 r' U' R U' R' U^2 r$**



OLL 9

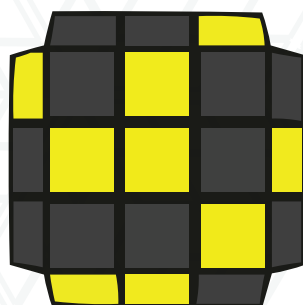
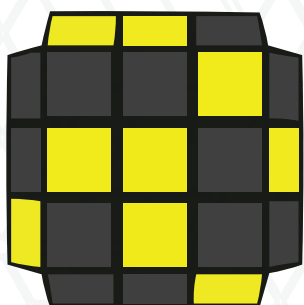
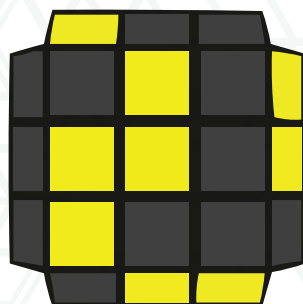
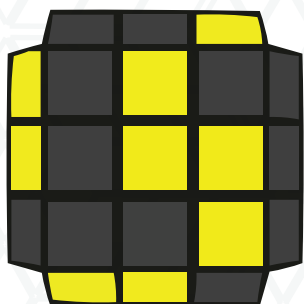
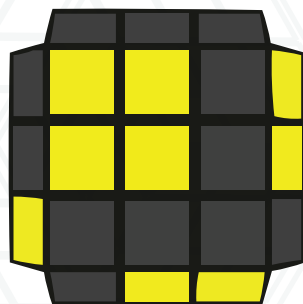
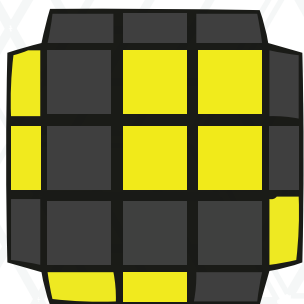
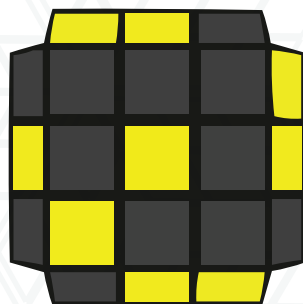
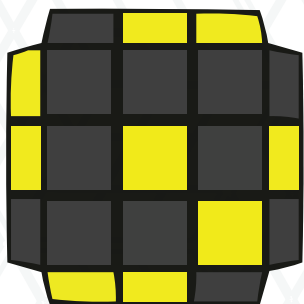
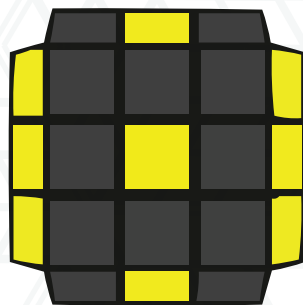
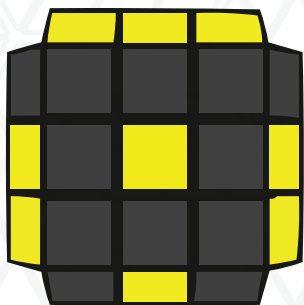
$R U R' U' R' F R^2 U R' U' F'$

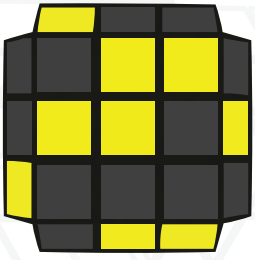


OLL 10

**$R U R' U' R' F R F' R U^2 R'$
 $y^2 r U R' U R U' R' U' r' R U R U' R'$**

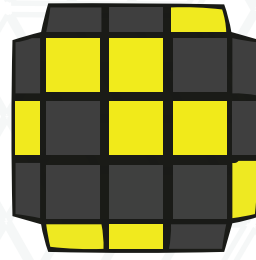






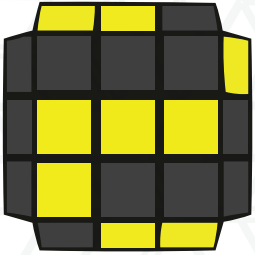
OLL 11

$rUR'UR'FRF'RU2r'$
 $y2r'R2UR'URU2R'UM'$



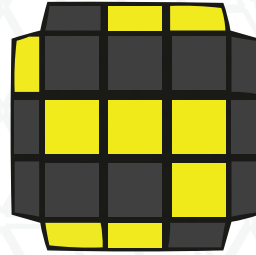
OLL 12

$M'R'U'RUR'R'U2RU'R'$



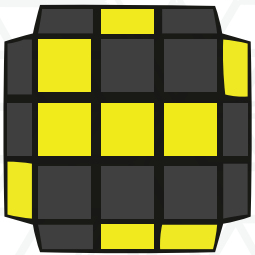
OLL 13

$FUR'R2F'RUR'R'$
 $rU'r'U'rUR'y'R'UR$



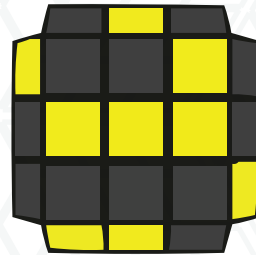
OLL 14

$R'FRUR'FRFU'F'$



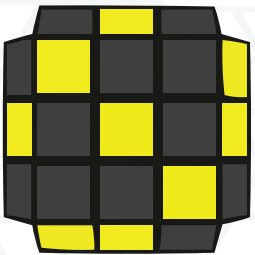
OLL 15

$rU'LR'ULURUI$
 $y2r'U'rR'URUR'Ur$



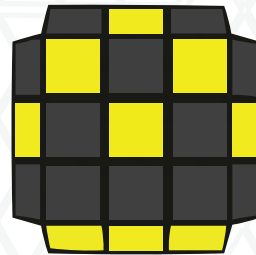
OLL 16

$rUR'RUR'U'rU'r'$



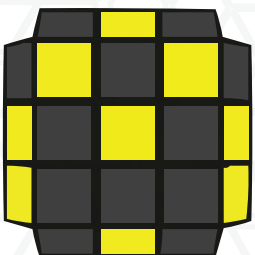
OLL 17

$FR'F'R2r'URUR'R'U'M'$
 $y2RUR'UR'FRF'U2R'FRF'$



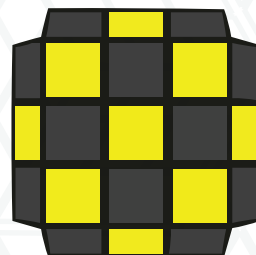
OLL 18

$rUR'URU2r2U'RUR'R'U2r$
 $yRU2R2FRF'U2M'URU'r'$



OLL 19

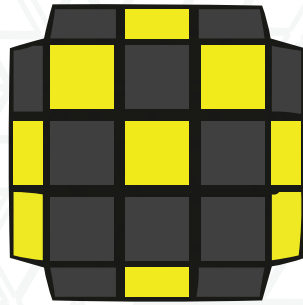
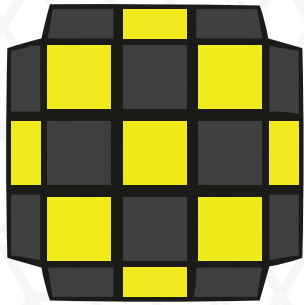
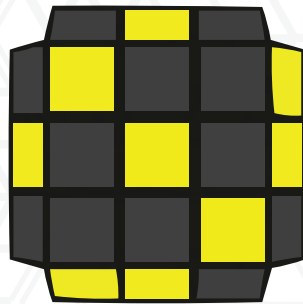
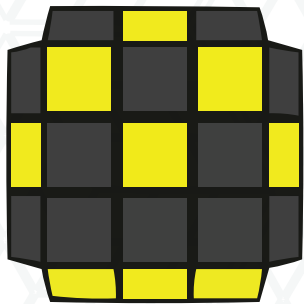
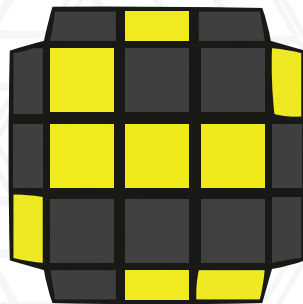
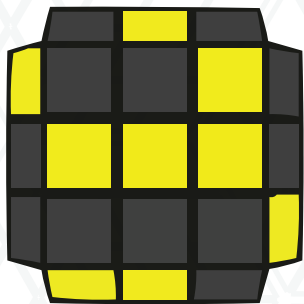
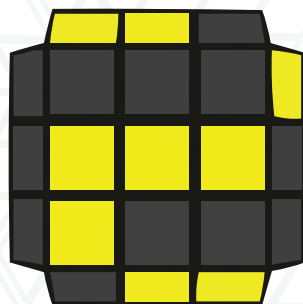
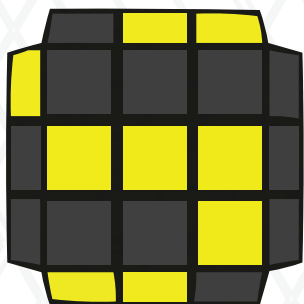
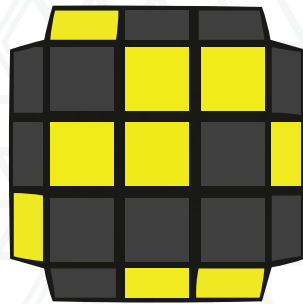
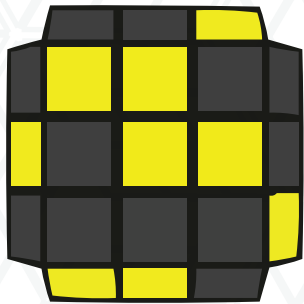
$r'RURUR'U'M'R'FRF'$

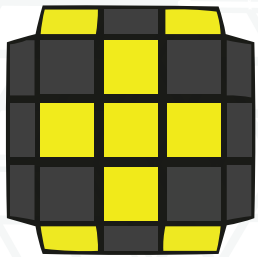


OLL 20

$rUR'U'M2URUR'U'M'$
 $r'RURUR'U'M2URU'r'$

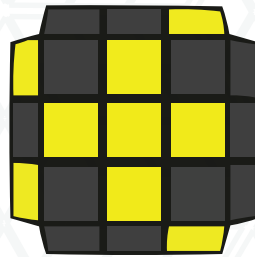






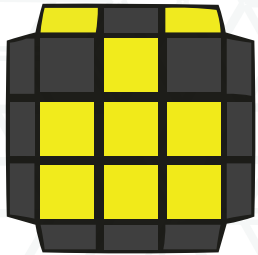
OLL 21

$R U^2 R' U' R U R' U' R U' R'$
 $y R U R' U R U' R' U R U^2 R'$



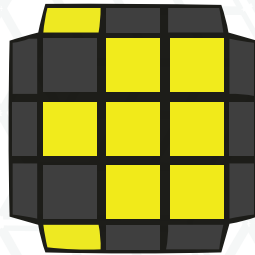
OLL 22

$R U^2 R^2 U' R^2 U' R^2 U^2 R$



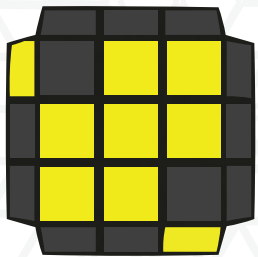
OLL 23

$R^2 D' R U^2 R' D R U^2 R$
 $y^2 R^2 D R' U^2 R D' R' U^2 R'$



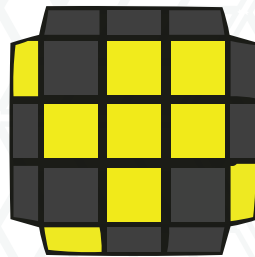
OLL 24

$r U R' U' r' F R F'$
 $y R U R D R' U' R D' R^2$



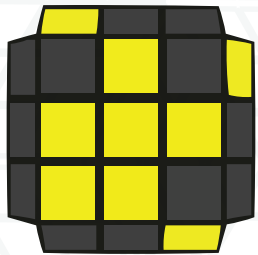
OLL 25

$F' r U R' U' r' F R$
 $y' R' F R B' R' F' R B$



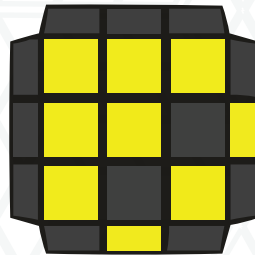
OLL 26

$R U^2 R' U' R U' R'$
 $y' R' U' R U' R' U^2 R$



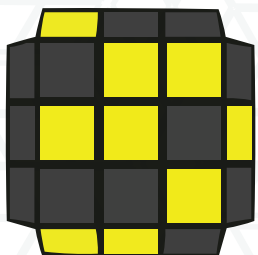
OLL 27

$R U R' U' R U^2 R'$
 $y' R' U^2 R U R' U R$



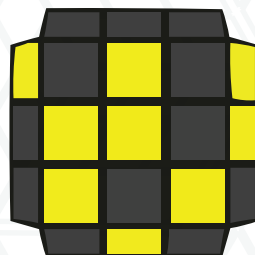
OLL 28

$r U R' U' r' R U R U' R'$



OLL 29

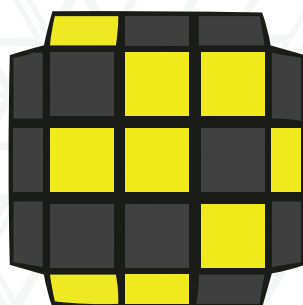
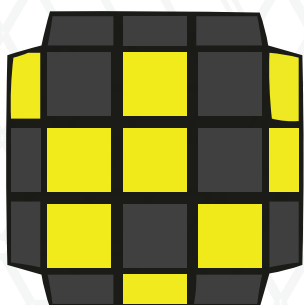
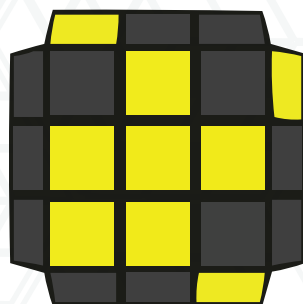
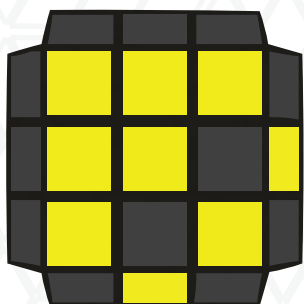
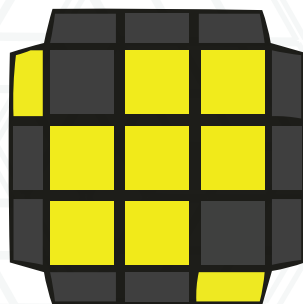
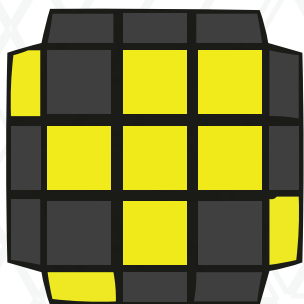
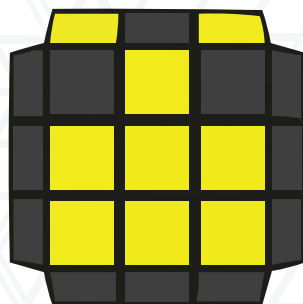
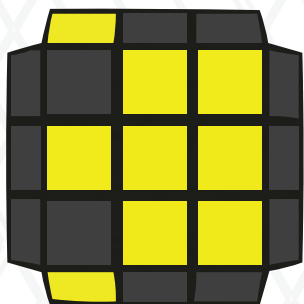
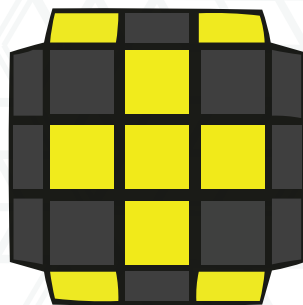
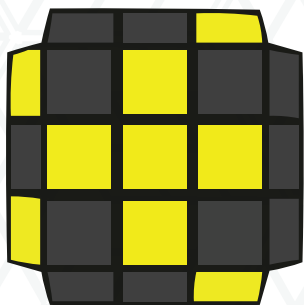
$R U R' U' R U' R' F' U' F R U R'$

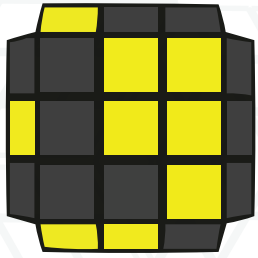


OLL 30

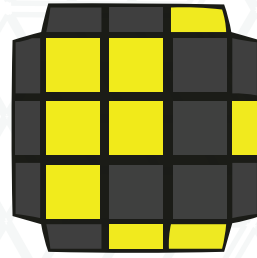
$F R' F R^2 U' R' U' R U R' F^2$
 $F U R U^2 R' U' R U^2 R' U' F'$



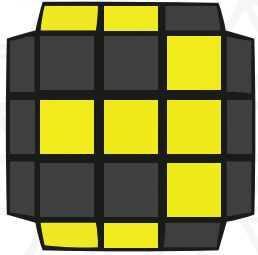




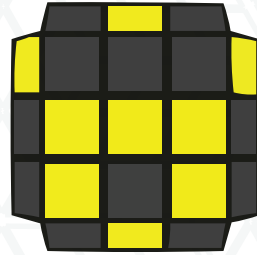
OLL 31
R' U' F U R U' R' F' R



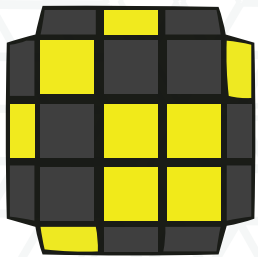
OLL 32
L U F' U' L' U L F L'
y2 S R U R' U' R' F R F'



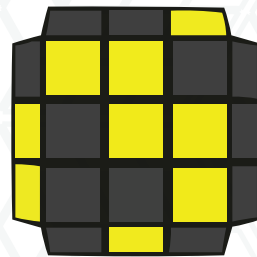
OLL 33
R U R' U' R' F R F'



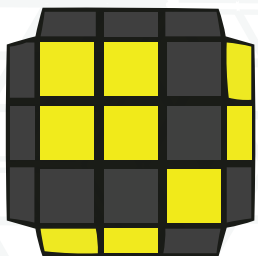
OLL 34
R U R2 U' R' F R U R U' F'
R U R' U' B' R' F R F' B



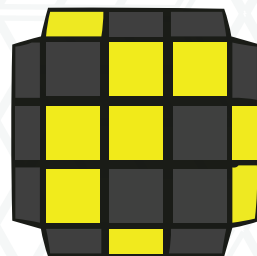
OLL 35
R U2 R2 F R F' R U2 R'



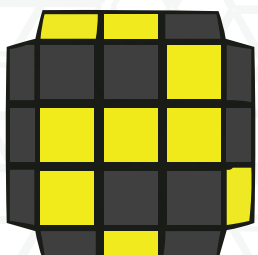
OLL 36
L' U' L U' L' U L U L F' L' F'
y2 R' U' R U' R' U R U B' R' B



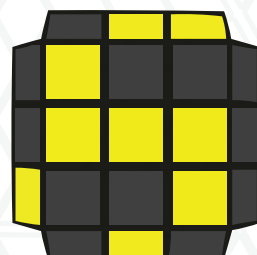
OLL 37
F R' F' R U R U' R'
F R U' R' U' R U R' F'



OLL 38
R U R' U R U' R' U' R' F R F'

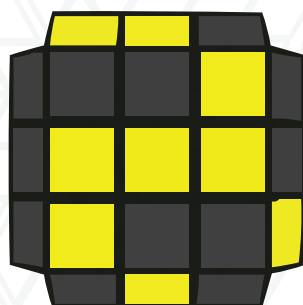
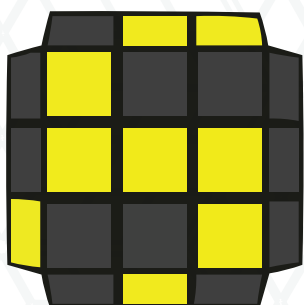
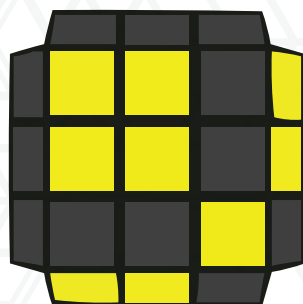
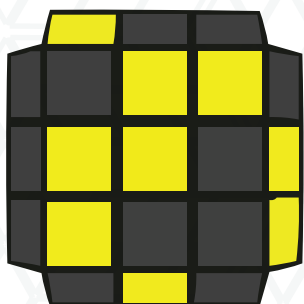
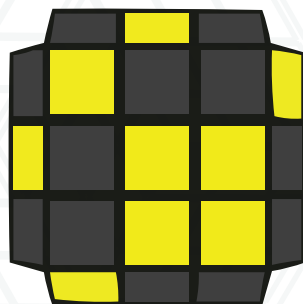
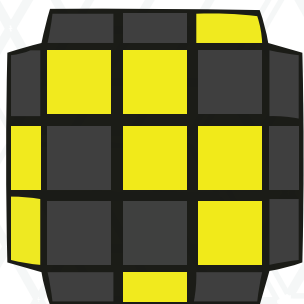
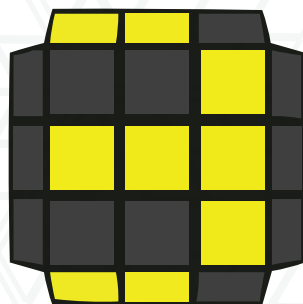
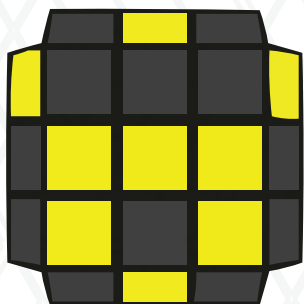
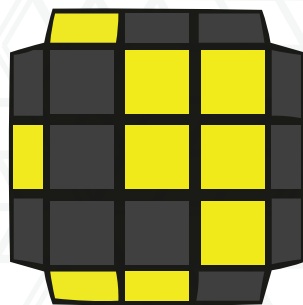
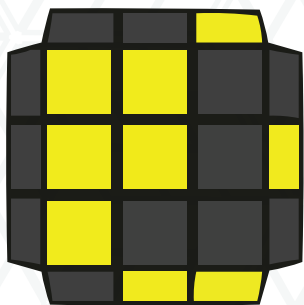


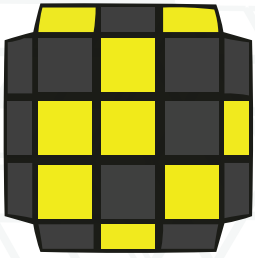
OLL 39
L F' L' U' L U F U' L'
y2 R B' R' U' R U B U' R'



OLL 40
R' F R U R' U' F' U R

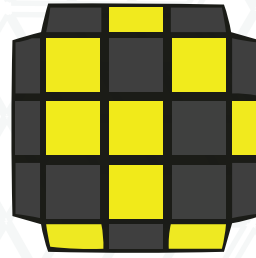






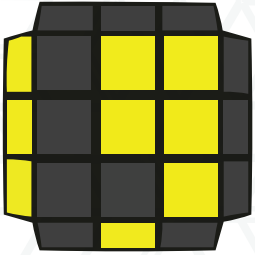
OLL 41

RUR'URU2R'FRUR'U'F'



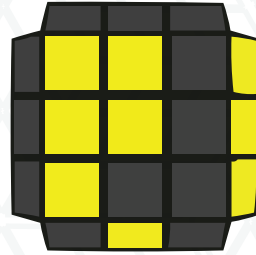
OLL 42

R'U'RUR'R'U2RFRUR'U'F'



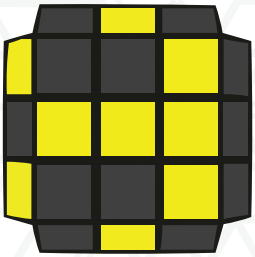
OLL 43

**F'U'L'ULF
R'U'FR'F'RUR**



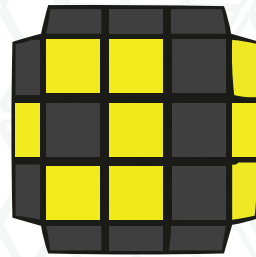
OLL 44

**FURUR'F'
y2FRUR'U'f'**



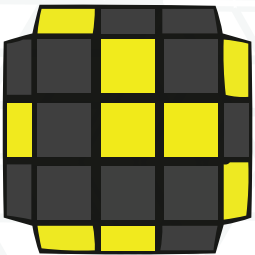
OLL 45

FRUR'U'F'



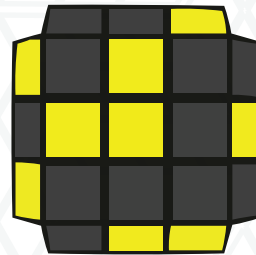
OLL 46

R'U'R'FR'UR



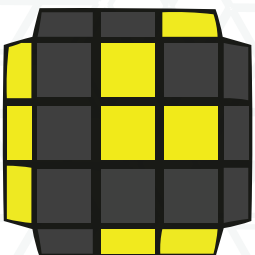
OLL 47

**R'U'R'FR'FR'FR'UR
F'L'U'LUL'U'LUF
y'FURUR'FRUR'URU2R'**



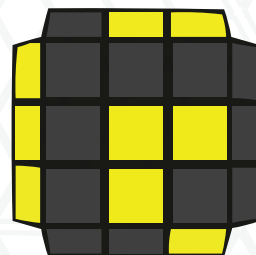
OLL 48

FRUR'URUR'U'F'



OLL 49

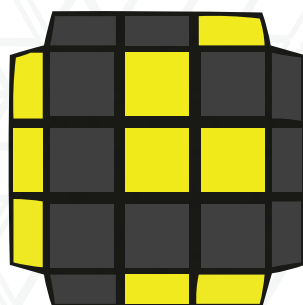
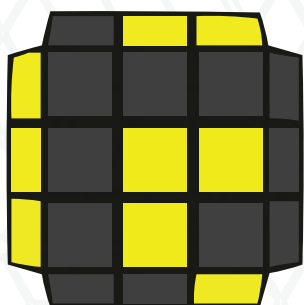
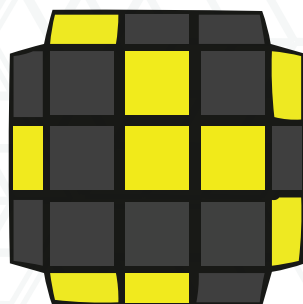
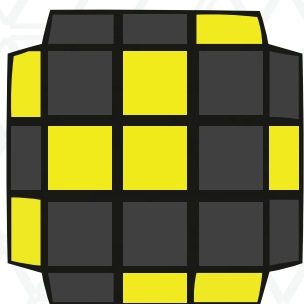
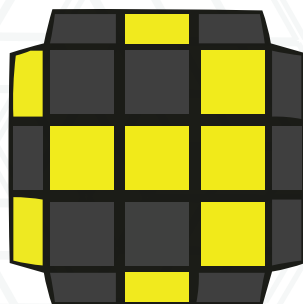
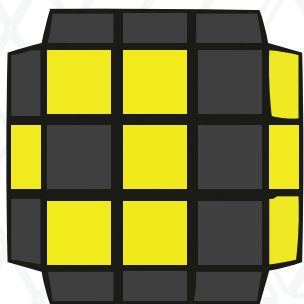
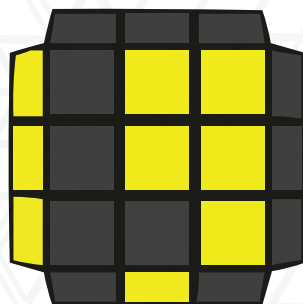
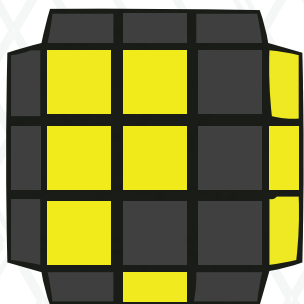
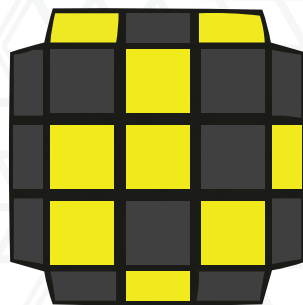
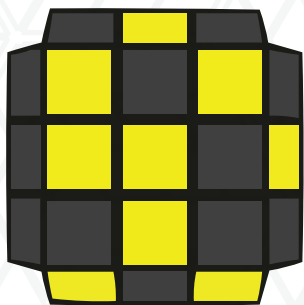
rU'r2Ur2Ur2U'r

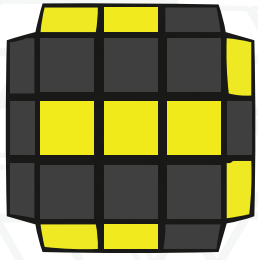


OLL 50

r'Ur2U'r2U'r2Ur'

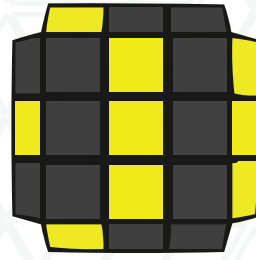






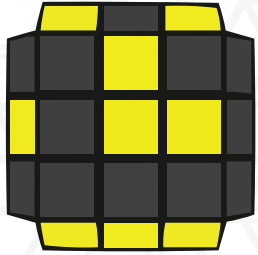
OLL 51

FUR'UR'URUR'F'
y2fRUR'URUR'U'f'



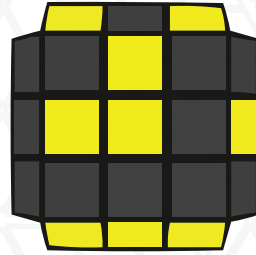
OLL 52

RUR'URUBU'B'R'
y2R'F'U'FU'RUR'UR
RUR'URU'yRU'R'F'



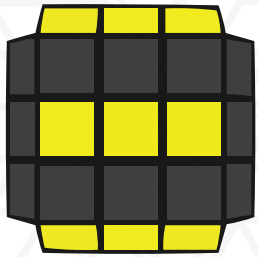
OLL 53

r'U2LUL'U'LUL'U'
y2r'U2RUR'URUR'Ur
yr'URUR'URUR'R'U2r



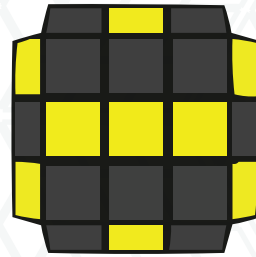
OLL 54

r'U2R'URUR'URUR'r'
yrURURUR'URU2r'



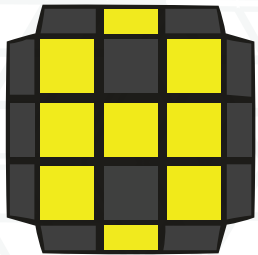
OLL 55

R'FRURUR2F'R2UR'URUR'
yRU2R2URUR'R'U2FRF'



OLL 56

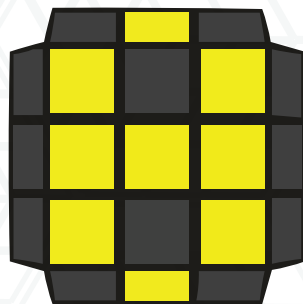
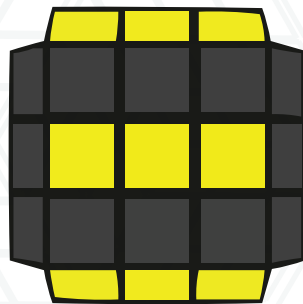
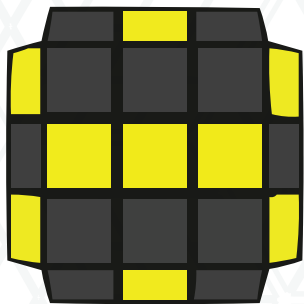
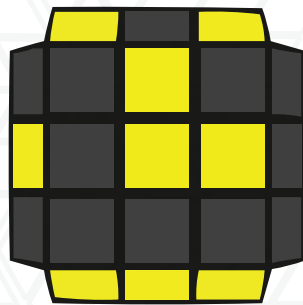
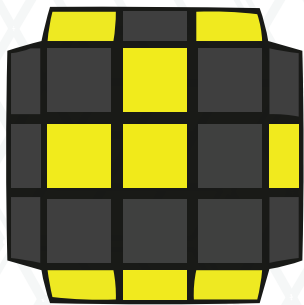
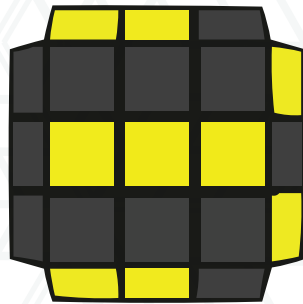
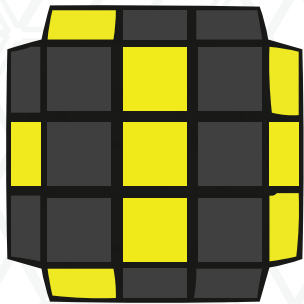
r'UrUR'URUR'R'URr'Ur
rUrURUR'URUR'R'Ur'
rUrURUR'URUR'M'Ur'

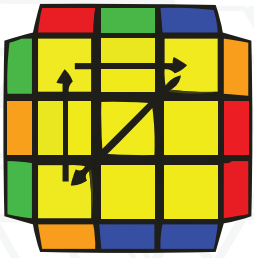


OLL 57

RUR'UR'M'URUR'r'

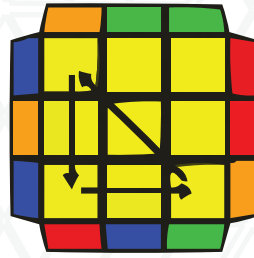






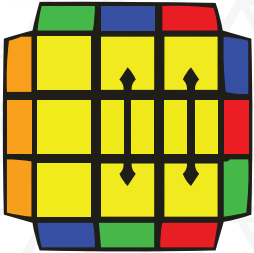
PLL Aa

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



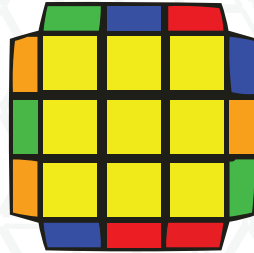
PLL Ab

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



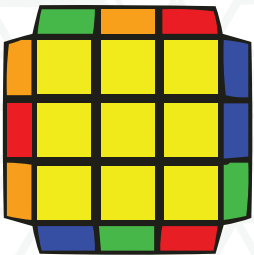
PLL F

$R' U' F' (R U R' U') R' F -->$
 $--> (R2 U' R' U') (R U R' U) R$



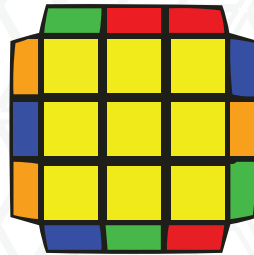
PLL Ga

$(R2 U' R' U) (R' U' R U') R2 -->$
 $--> (U' D) (R' U R) D'$
 $R2 u (R' U R' U') R u' R2 y' (R' U R)$



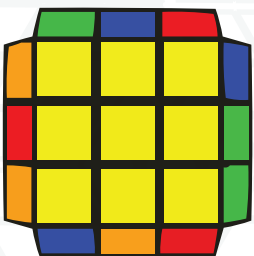
PLL Gb

$(R' U' R) (U D') (R2 U' R' U) -->$
 $--> (R U' R U') R2 D$
 $y F' U' F R2 u (R' U R U') R u' R2$



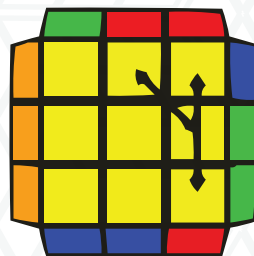
PLL Gc

$(R2 U' R' U') (R U R' U) R2 -->$
 $--> (U D') (R U' R') D$
 $y2 R2 F2 (R U2 R U2) R' F -->$
 $--> (R U R' U') R' F R2$
 $R2 u' (R' U' R U) R' u R2 y (R U' R')$



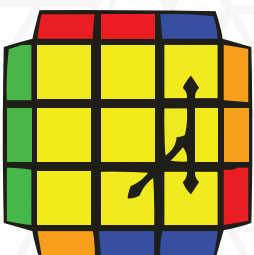
PLL Gd

$(R U R') (U' D) (R2 U' R' U) -->$
 $--> (R' U R' U) R2 D'$
 $(R U R') y' R2 u' (R U' R' U) R' u R2$



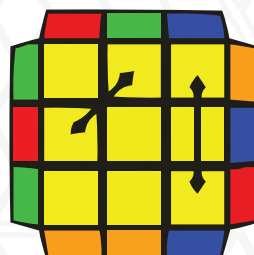
PLL Ja

$x R2 F R F' (R U2 R' U) r U2$
 $y2 (L' U' L) F (L' U' L U) L F' (L2 U L)$
 $y' (R' U' L' U2) (R U' R' U2) R L$



PLL Jb

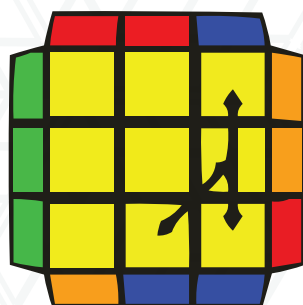
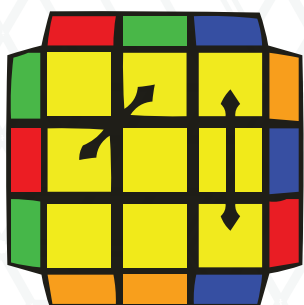
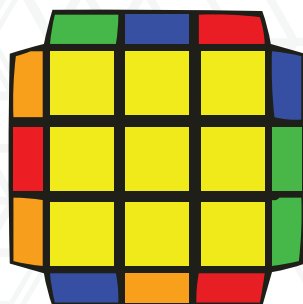
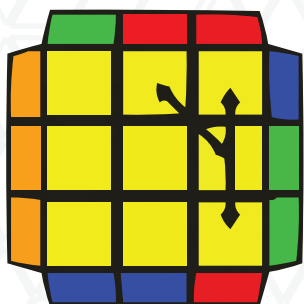
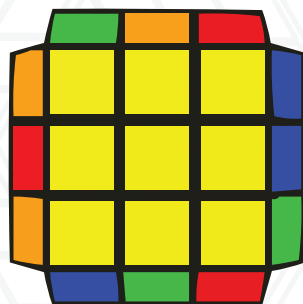
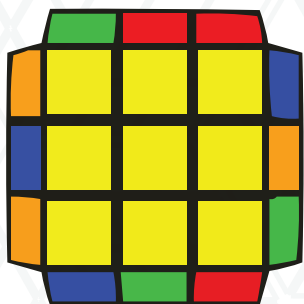
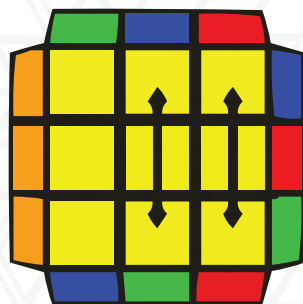
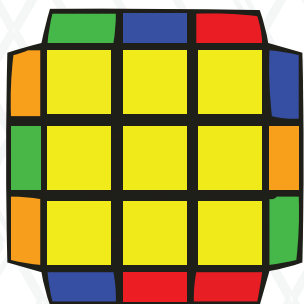
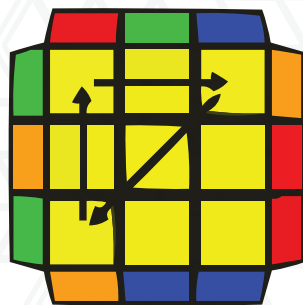
$(R U R') F' (R U R' U') R' F (R2 U' R')$

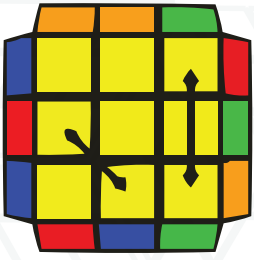


PLL Ra

$(R U' R' U') (R U R) D (R' U' R) -->$
 $--> D' (R' U2 R')$
 $(R U R') F' (R U2 R' U2) R' F -->$
 $--> (R U R U2) R'$
 $y' (L U2 L' U2) L F' (L' U' L U) L F L2$

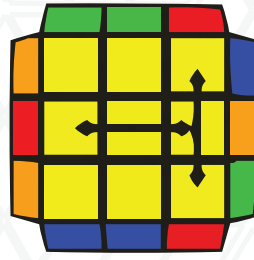






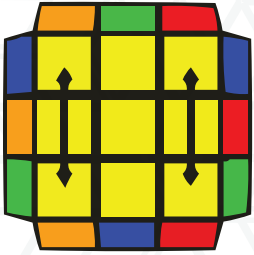
PLL Rb

$R^2 F (R U R U') R' F' (R U^2 R' U^2) R$
 $y' (R' U^2 R U^2) R' F \rightarrow$
 $\rightarrow (R U R' U') R' F' R^2$
 $(R' U^2 R') D' (R U' R') D \rightarrow$
 $\rightarrow (R U R U') (R' U' R)$



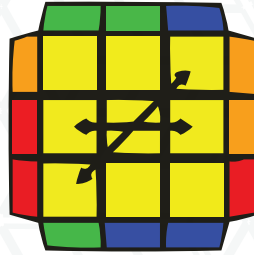
PLL T

$(R U R' U') R' F (R^2 U' R' U') \rightarrow$
 $\rightarrow (R U R') F'$



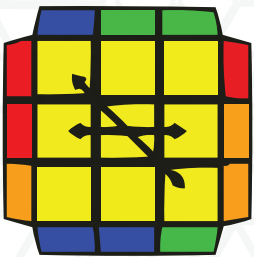
PLL E

$x' (L' U L) D' (L' U' L) D (L' U' L) \rightarrow$
 $\rightarrow D' (L' U L) D$
 $x' (R U' R') D (R U R') D' (R U R') \rightarrow$
 $\rightarrow D (R U' R') D'$



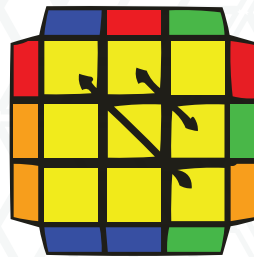
PLL Na

$(R U R' U) (R U R') F' (R U R' U') \rightarrow$
 $\rightarrow R' F (R^2 U' R' U^2) (R U' R')$
 $z U R' D (R^2 U' R) D' U R' D \rightarrow$
 $\rightarrow (R^2 U' R) D'$



PLL Nb

$R' (U R U' R') F' U' F (R U R') \rightarrow$
 $\rightarrow (F R' F') U' R$
 $z D' R U' R^2 D R' U D' R U' R^2 D R' U$



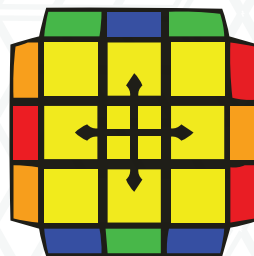
PLL V

$(R U R' U') y R' F' (R^2 U' R' U) \rightarrow$
 $\rightarrow R' F R F$
 $(R' U R' U') R D' R' D R' U D' \rightarrow$
 $\rightarrow R^2 U' R^2 D R^2$
 $z D' R^2 D (R^2 U' R') D' (R U' R U) \rightarrow$
 $\rightarrow R' D R U' z'$



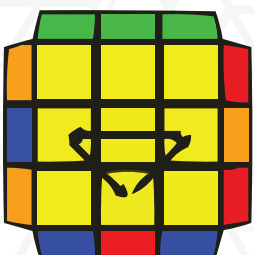
PLL Y

$F (R U' R' U') (R U R') F' \rightarrow$
 $\rightarrow (R U R' U') (R' F R F')$
 $F R' F (R^2 U' R' U') (R U R') \rightarrow$
 $\rightarrow F' (R U R' U') F'$



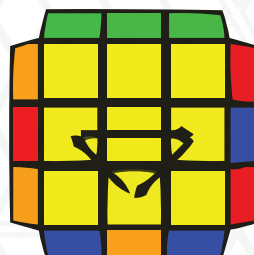
PLL H

$M^2 U M^2 U^2 M^2 U M^2$
 $M^2 U' M^2 U^2 M^2 U' M^2$



PLL Ua

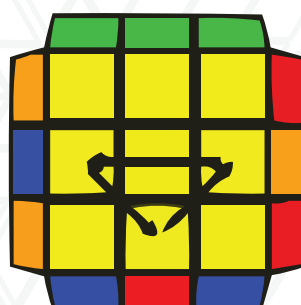
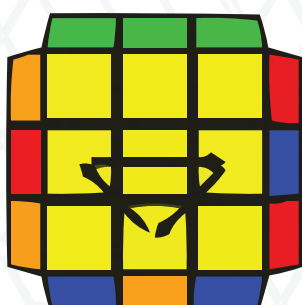
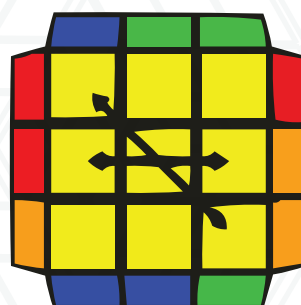
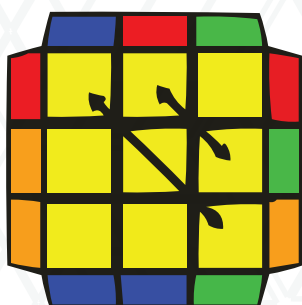
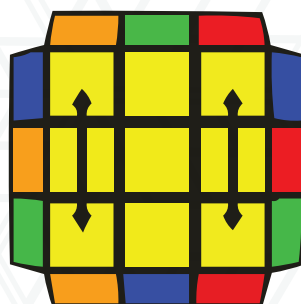
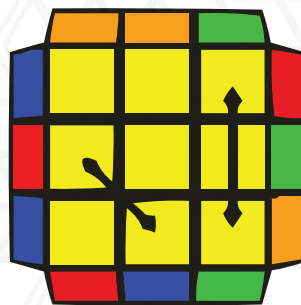
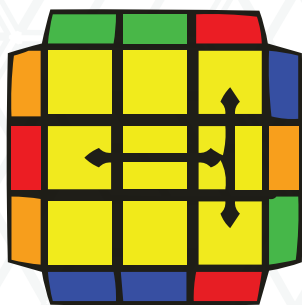
$M^2 U M U^2 M' U M^2$
 $(R U' R U) (R U R U') R' U' R^2$
 $y^2 (R^2 U' R' U') (R U R U) (R U' R)$

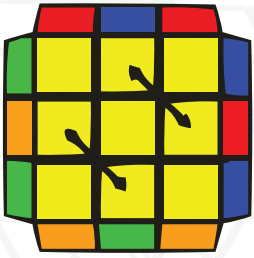


PLL Ub

$M^2 U' M U^2 M' U' M^2$
 $R^2 U (R U R' U') (R' U' R' U) R'$
 $y^2 (R' U R' U') R' U' (R' U R U) R^2$
 $y^2 (R' U R' U') R^3 U' (R' U R U) R^2$







PLL Z

$M' U M^2 U M^2 U M' U^2 M^2$
 $y M' U' M^2 U' M^2 U' M' U^2 M^2$
 $y M^2 U M^2 U M' U^2 M^2 U^2 M'$
 $M^2 U' M^2 U' M' U^2 M^2 U^2 M'$



