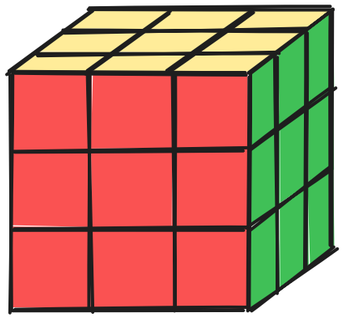
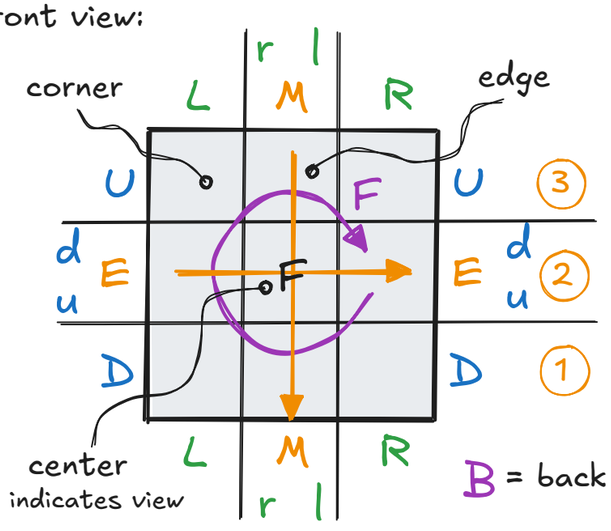
3x3 BASICS



Front view:



R: 90°CW R': 90°CCW R²: 180°

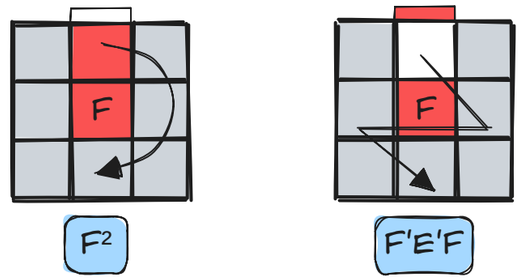
Turn cube:

X: like turning R

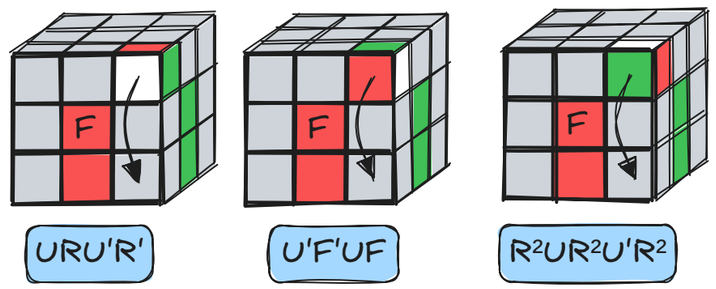
Y: like turning U

Z: like turning F

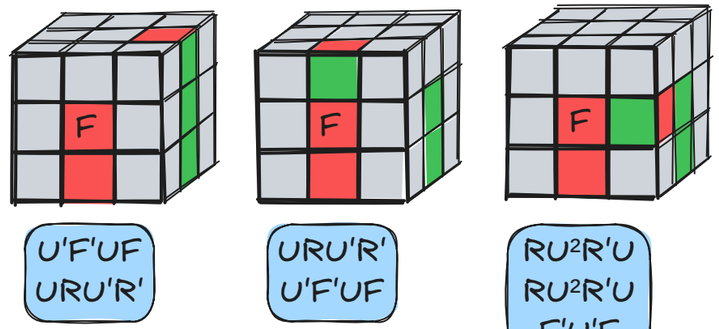
1) Place white edges layer 1



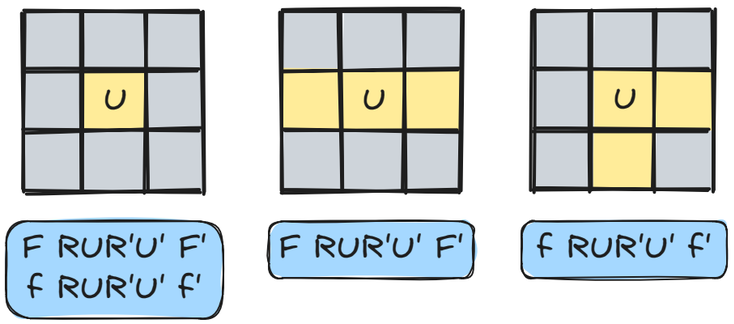
2) Place white corners layer 1



3) Place edges layer 2

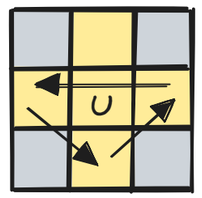


4) Orient yellow edges layer 3



5) Permutate yellow edges layer 3

turn U that one edge is in right spot (not two)
put it in back

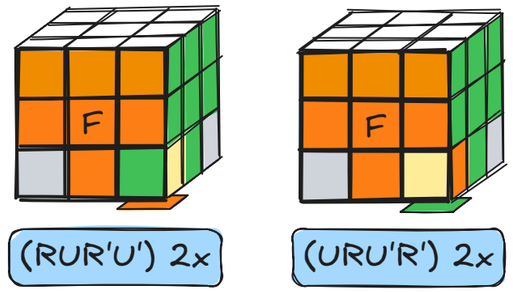


R'U²RUR'UR

do algorithm once or twice

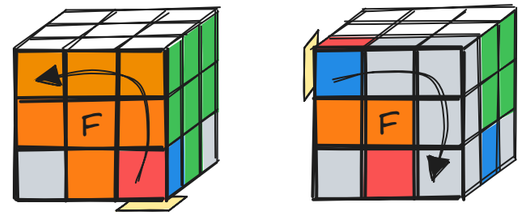
6) Orient yellow corners layer 3

turn cube X² that white is on top
* put misorientated corner in front-right-bottom
* after doing algorithm, turn D for next corner
* repeat steps until correct orientation



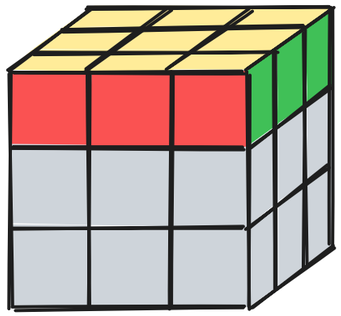
7) Permutate yellow corners layer 3

turn cube X² that white is on top
look at corner front-right-bottom
* put in temporary place: RUR'
* turn D until target position is in front-right-bottom position
* put corner back: RU'R'
* choose another yellow cornor and turn D until it is in front-right-bottom
* repeat stemps until correct permutation



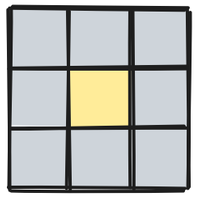
step 7 can be executed before step 6

3x3 LAST LAYER

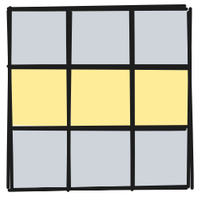


OLL algorithms

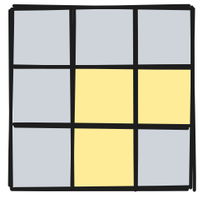
1)



F RUR'U' F'
f RUR'U' f'

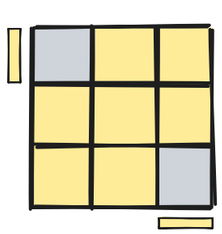


F RUR'U' F'

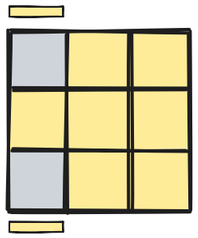


f RUR'U' f'

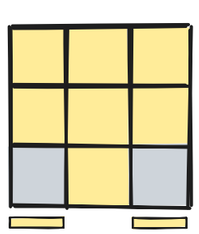
2)



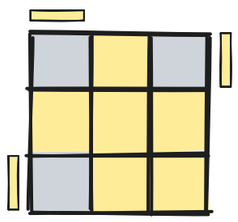
F' rUR'U' L'U|



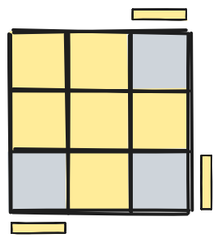
rUR'U' LU| F'



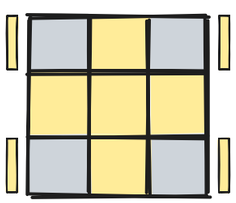
R²DR'U² RD'R'U² R'



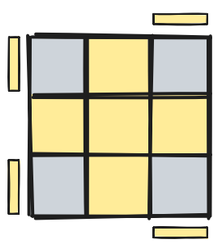
R'U²RUR'UR



R'U'RU'R'U²R



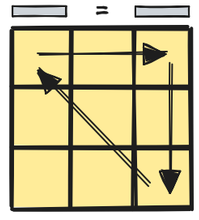
RUR'U RU'R'U RU²R'



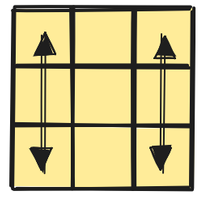
RU² R²U' R²U' R²U² R

PLL algorithms

3)

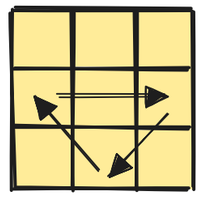


x R'UR'D²
RU'R'D² R² x'

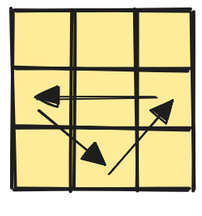


x' RU'R'D RUR'D'
RUR'D RU'R'D' x

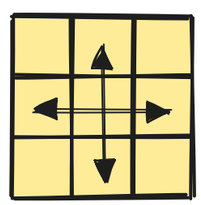
4)



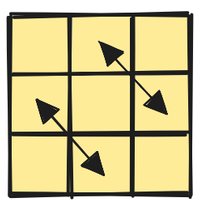
R²U RUR'U' R'U' R'UR'



R²U' R'U'RU RU RU'R



M²U M²U² M²U M²



M²U' M²U'
M'U² M²U² M'