U

D

R

L

F

B

U'

D'

R'

L'

F'

B'

Rubix Cube(tm) Lunch & Learn

With Alexis Ballo summer intern 2022

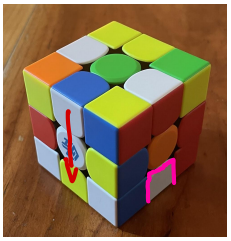
Celebrating Rendia's 6th Birthday

CROSS

Goal

Mostly Intuition

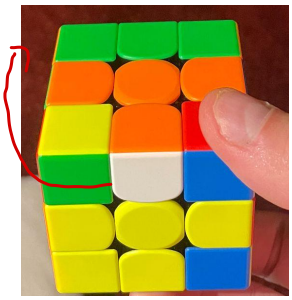
Intuition: position the edge piece below where the piece needs to go. Simply moving the middle up will put the edge in the correct position, but will move the white center, so we need another solution. To solve this we move the middle piece to the right, move the middle column down, swap the edge piece with the piece we stored on the side, and then bring the middle column back up

				
Begin with middle piece BELOW where you want to insert it	D	M	D'	M’

CROSS IFs

correct location
wrong orientation

top edge (white)
on bottom (yellow)

	
Do a full 180 degree turn of the face to bring the edge to the top and then insert as you normally would	Do a full 180 degree turn of the face to bring the edge to the top

CORNERS

Goal

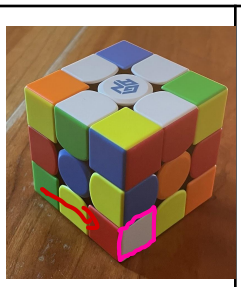
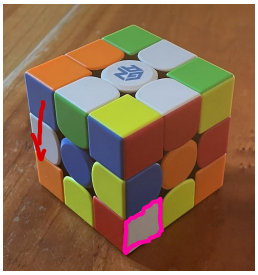
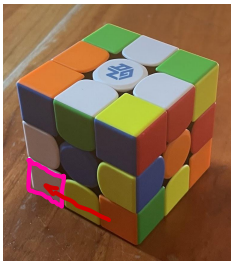
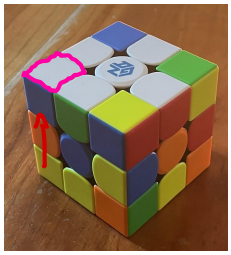
Mostly Intuition

Intuition: position the corner piece below where the piece needs to go. Simply moving the corner's column up will put the corner in the correct position, but will move the white edge that is already in place, so we need another solution. To solve this we move the middle piece to the right (or left depending on the side), move the respective column down, swap the corner piece with the piece we stored on the right or left, and then bring the column back up

(BLUE FACING) (for both)

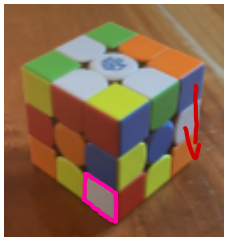
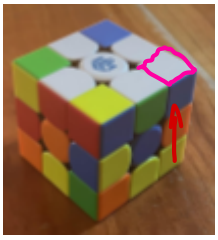
L

Left side

				
Begin with corner piece BELOW where you want to insert it	D	L	D'	L'

R

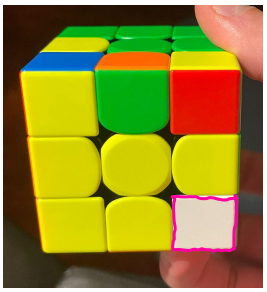
Right side

				
Begin with corner piece BELOW where you want to insert it	D'	R'	D	R

CORNER IFs

correct location
wrong orientation

top corner (white)
on bottom (yellow)

	
Perform the standard corner insert algorithm with the piece below the needed corner. Watch how the piece rotates	Position the white piece on the right side of the cube (already correct in picture). Perform the beginning of a standard corner insert, after you bring the left side down, turn the bottom face so that when you bring the left side up, the corner piece is brought along with it

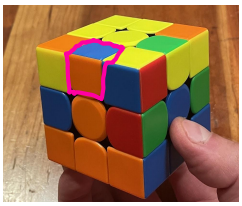
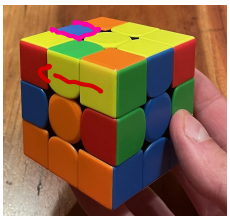
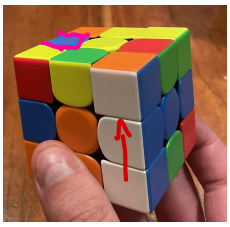
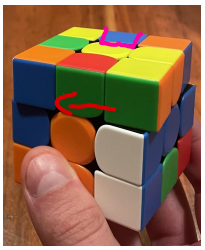
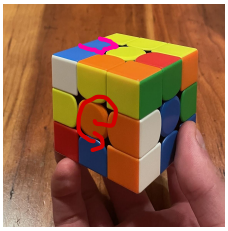
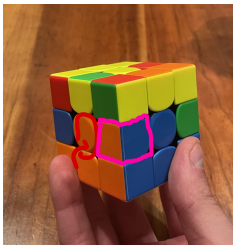
Goal

Remember algorithm

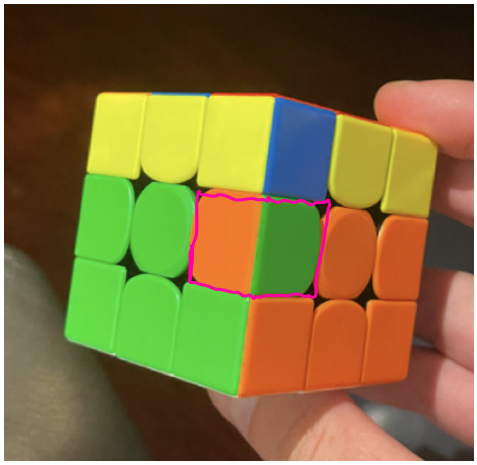
EDGES

Intuition: place the edge piece above the piece where that edge needs to be inserted into. Position the edge facing you is on the same side as the side's center color. Perform an algorithm!

Right variation (ORANGE FACING YOU)

				
Begin edge piece above the edge to insert into	U	R	U	R'
				
U'	F'	U'	F	

EDGES IFs



Insert one of the yellow edges to “knock” out the needed edge

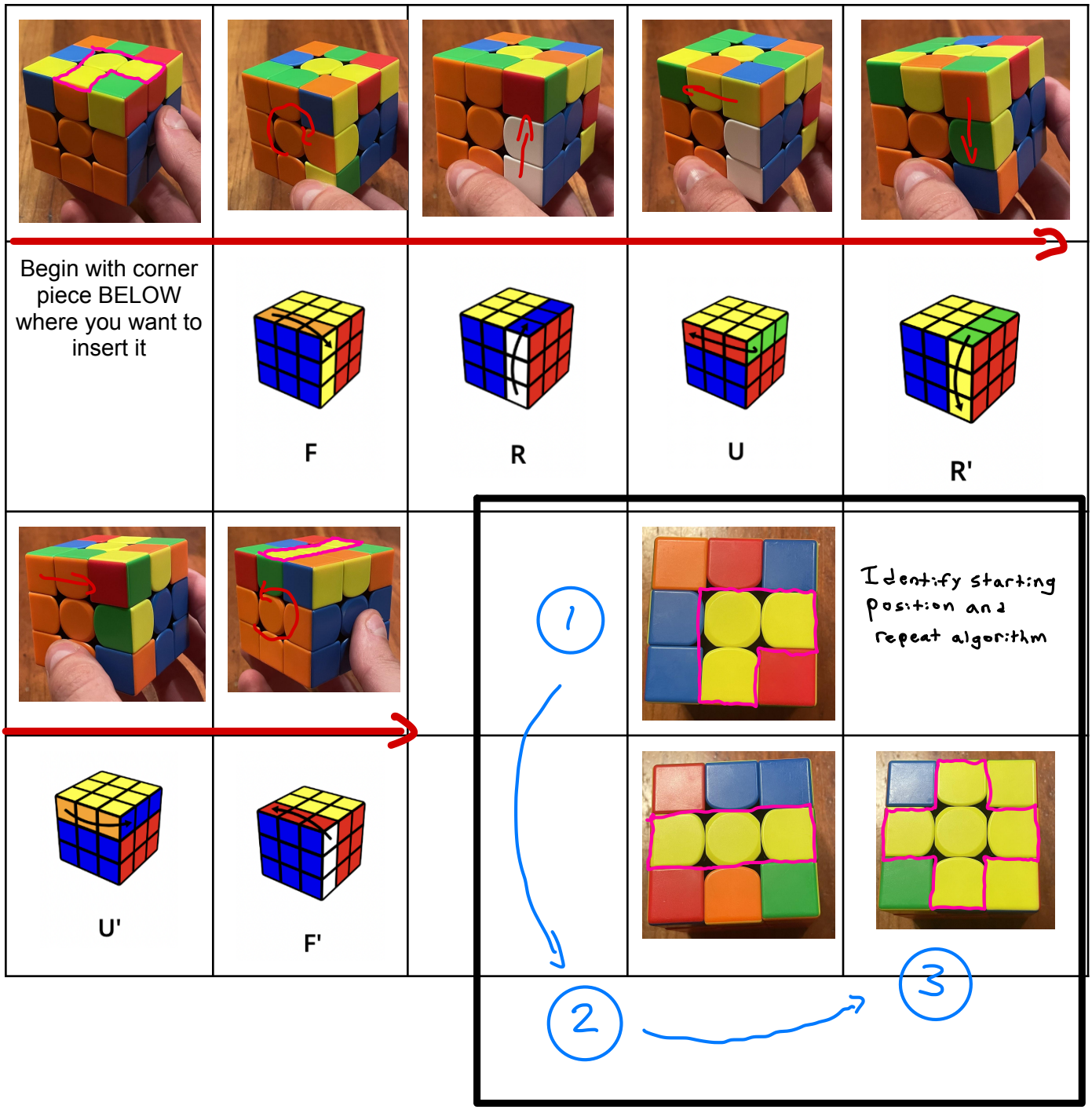
Goal

Remember algorithm

TOP - CROSS

Intuition: we first form the cross using a simple algorithm, and repeat the same algorithm depending on the positioning of the top yellow pieces

(ORANGE FACING)



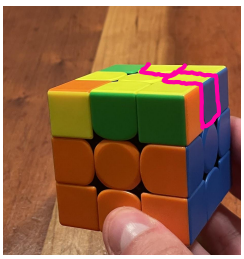
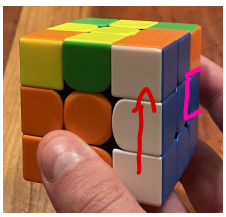
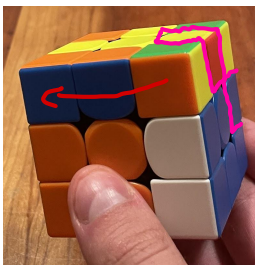
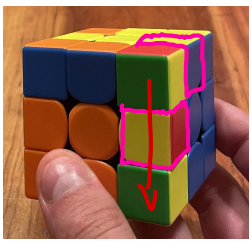
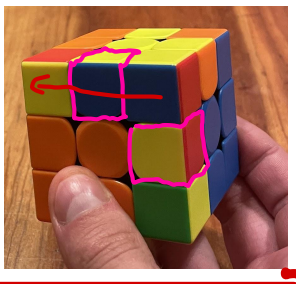
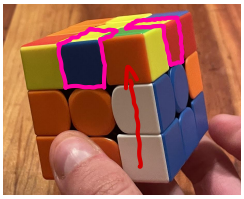
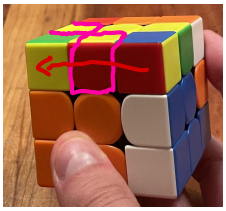
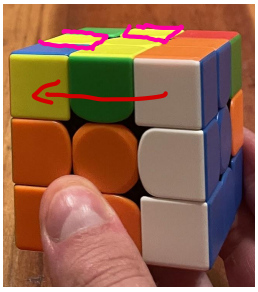
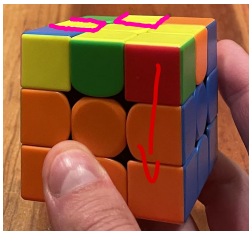
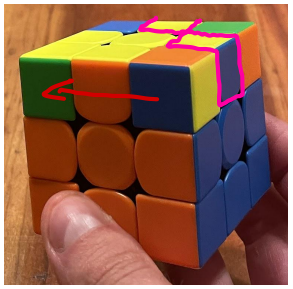
Goal

Remember algorithm

TOP - CROSS ORIENTATION

Intuition: we first form the cross using a simple algorithm, and repeat the same algorithm depending on the positioning of the top yellow pieces

(ORANGE FACING)

				
Begin with the two solved edges in the BACK and RIGHT	R	U	R'	U
				
R	U	U	R'	U

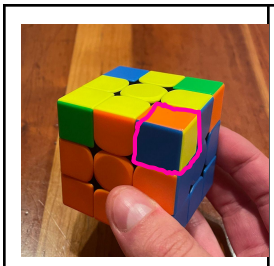
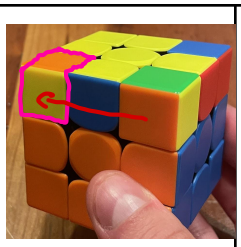
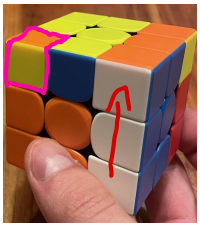
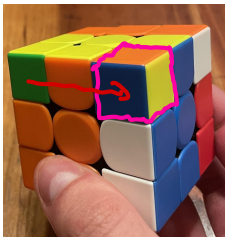
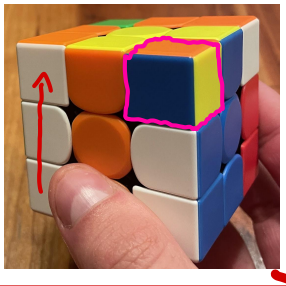
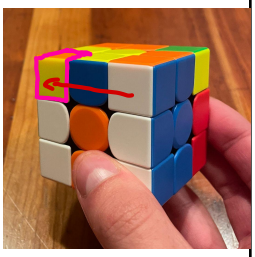
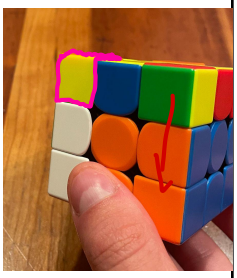
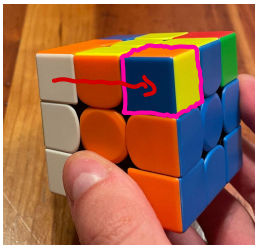
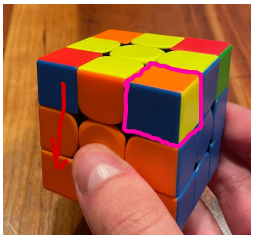
Goal

Remember algorithm

TOP - CORNER POSITIONING

Intuition: swap the corners by preserving the location of one piece and moving the other 3 corners

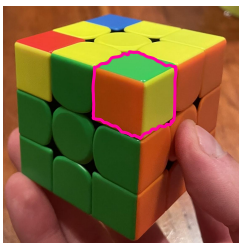
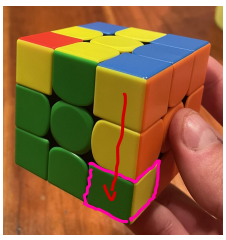
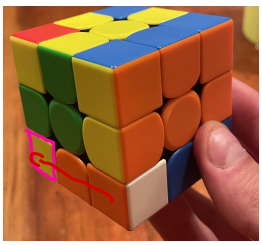
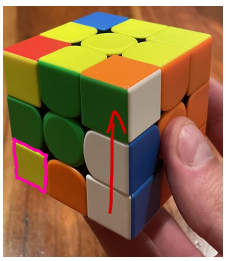
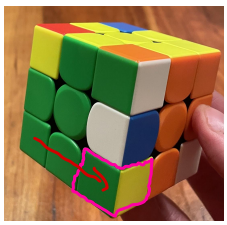
(ORANGE FACING)

				
Begin with one solved corner in the top right position	U	R	U'	L'
				IF corners are still not positioned correctly, repeat
U	R'	U'	L	

TOP - CORNER ORIENTATION

Goal:
Know "sexy move"

Intuition: this move "the sexy move" rotates the piece in place
(GREEN FACING)

				
Hold any unsolved corner in the top right	R'	D'	R	D
REPEAT UNTIL YELLOW IS IN POSITION	keep the same side facing you, rotate JUST the top yellow face (to mixed) to the next corner and repeat algo V REPEAT			