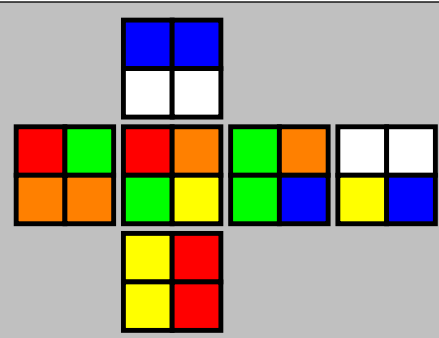
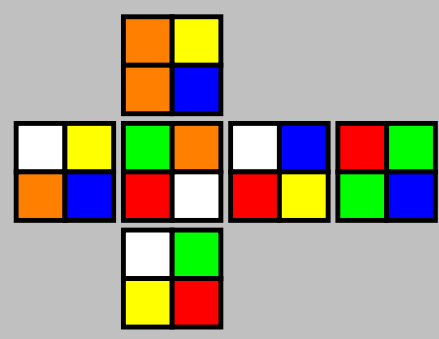
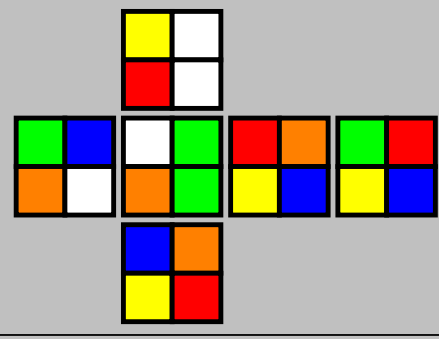
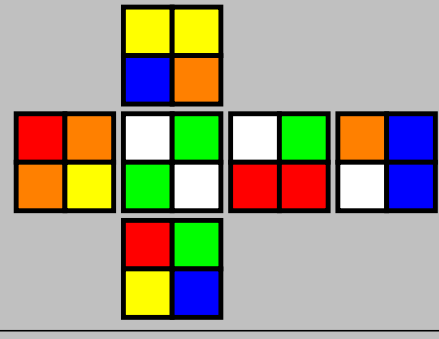
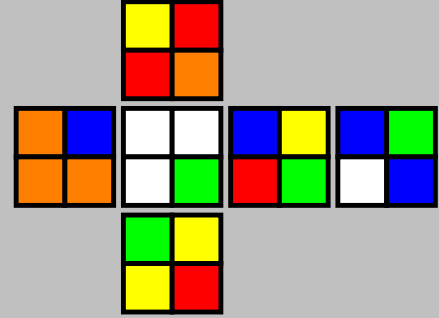
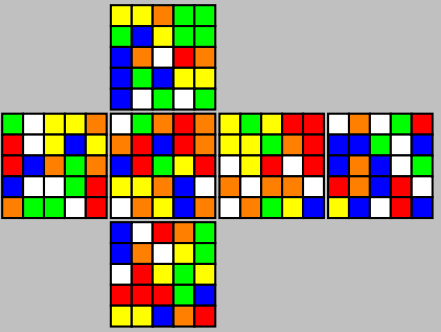
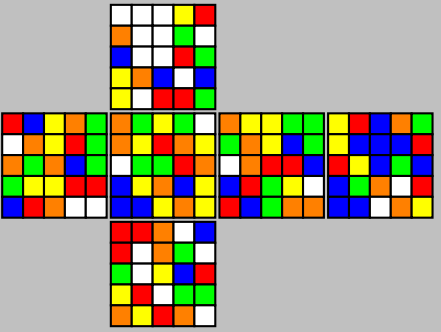
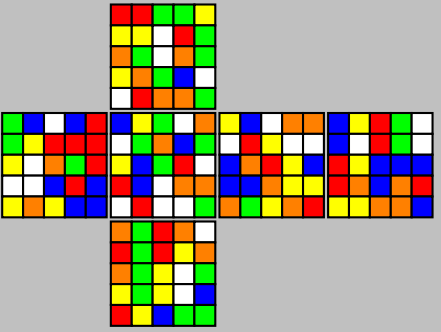
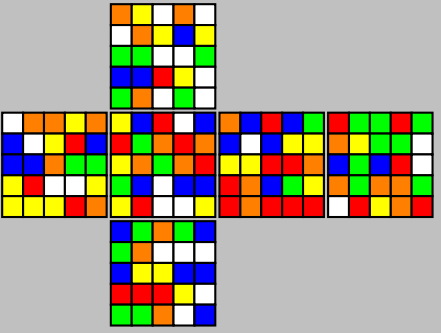
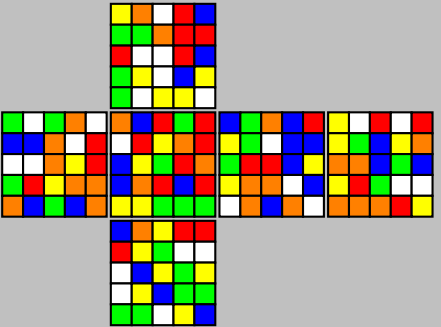


1.	$U'$ B2 $D'$ L2 D L2 U B2 R2 U R2 F $R'$ F $L'$ D F L2 $D'$ $L'$ R	
2.	F2 L2 U F2 D2 F2 R2 F2 R2 U B D R U2 L $F'$ U2 $F'$ L B	
3.	$D'$ F R2 F $B'$ $U'$ $L'$ B D F B U L2 U2 F2 R2 L2 F2 D R2	
4.	L2 B2 U2 $L'$ U2 R F2 L D2 $R'$ D F $U'$ $F'$ $R'$ B D $R'$ $U'$ B2	
5.	L D2 F2 L $U'$ $B'$ $R'$ $B'$ $U'$ $R'$ F R2 L2 $U'$ R2 D2 F2 L2 $U'$	

1.	F R2 F' U R' F R2 U2 R2 U2 F	
2.	U' R' U2 F U R2 F' R2 F U' R	
3.	R U2 F' R2 F R U' R' F U2 F2	
4.	U' R' F R2 U' R' F U F R2 U2	
5.	R2 F R2 U' R' U F U' F R U	

1.	R2	Fw'	Uw2	U2	B	Rw2	Fw'
	D'	Fw'	B	D'	Uw2	B'	R2
	B	Rw	Fw'	R'	U	B2	U
	R2	U'	D	L2	R2	U'	R
	D2	U2	Rw2	Uw'	D2	U2	L2
	F2	Fw2	Rw'	F'	R2		
2.	Rw	Fw	D'	R'	D2	U	B2
	Fw	F'	U2	R2	Fw	F'	B'
	Rw'	U'	Fw	D'	R2	D	B2
	Fw2	D'	F2	Rw	D2	U2	R2
	Rw2	B'	L'	R2	U'	F'	B2
	R2	Fw	R'	L2	B'		
3.	Fw	F2	U2	D	R	Uw2	D
	L'	D'	B	Uw	L	B'	D2
	F	D'	B'	L	Rw'	D2	Fw2
	F2	U'	Rw	B	Rw	Fw2	L2
	U2	B2	F	R'	B'	U'	F2
	L	B	R'	F	R		
4.	F	U'	B2	U	Fw'	B	D'
	F	D	L	U2	Uw2	R	F'
	Rw'	Fw	R2	D2	L2	D	B
	Fw	Rw'	Uw	B	Fw	U	Fw'
	F'	L2	R'	Rw	F2	Uw	Rw
	R2	D2	F	D	Fw		
5.	D	F2	L'	B2	Rw'	Fw'	Uw'
	F	L'	F2	D2	R	F'	Rw
	R'	Fw2	Uw'	R'	B	Rw	Fw'
	R2	F2	L	R2	Uw2	D	Fw
	U'	Fw'	B2	Uw2	Fw	B	F
	L	R2	B'	U2	Uw		

1.	Fw L' U Dw R2 Rw' F U' Bw' Uw2 Rw D' R2 L Bw' Dw2 R' Fw U L' F Lw Dw' L2 Fw' Dw2 Lw L Fw Rw B L' Dw' L Fw' U2 D Lw2 B Bw2 Dw' Bw2 Uw Bw R2 Bw F' R2 L' D' Fw2 Bw2 U' R Dw2 Fw' B Lw Fw2 U'	
2.	D Lw' Rw' Uw2 R2 F R' Lw2 L Bw Rw' Uw R2 Bw2 D' Fw Bw U Uw' Fw F Uw2 Lw' F Rw' Lw Bw Rw2 Uw' Lw F2 U2 Rw' U2 F D' L Rw' Bw2 B2 R' D Rw2 U2 F Uw2 Bw2 F' Lw2 B' Fw2 Bw R2 Bw L Rw' Uw' Rw2 U' F	
3.	R2 Fw L R' Fw' B' L Lw' Rw U' Bw' Lw' U' B' R U' B Fw' Lw Rw2 D Uw' F2 Bw' Fw2 Rw2 Dw2 L Uw F' Bw' Dw2 B2 R' F' D' F' Dw' U2 Fw2 L U' D' L' U' L Rw2 Dw2 Uw' Lw Bw' F' Dw L' Uw F2 Fw Lw2 U Rw	
4.	R B2 F' Uw' B' Fw2 Bw' U2 Lw2 R2 Rw D2 Lw B Lw U' R F2 D2 R Bw' B2 L2 Uw2 F2 D2 Uw2 Fw' B Rw' F B2 Rw U' Rw F' Uw2 L2 D Bw2 Fw' Lw D2 Bw Uw2 D' Lw2 R D' F Fw2 D Uw2 U' R Dw F D' R2 F2	
5.	L2 Bw2 D' Bw Lw' L' D' U R' L' F2 Fw Bw' Uw L' U F Dw' D' Uw F Dw2 L' Uw U2 Fw F' Lw2 D Lw' L2 Bw Dw Rw F' L2 D Bw F D2 Rw' R2 L' Fw' Uw2 Lw Uw' Bw' Fw2 L U2 D Lw Rw Fw2 Rw Bw' Uw Rw2 Lw	

1.	Fw'	Dw'	3Uw	B	L2	R
	3Uw2	Uw2	3Fw'	3Rw2	3Uw	B
	R	U'	Uw'	L2	U'	F'
	Rw	F	Uw2	3Rw	Lw'	3Uw
	Dw2	3Fw2	Dw	3Uw	U'	F'
	Dw'	3Uw'	Lw'	L	Fw2	3Fw'
	L'	Rw'	Dw	3Rw	3Fw	3Uw
	D2	F'	Lw'	Rw	R2	3Uw
	B	U2	F'	R	B'	3Rw'
	3Fw	3Uw2	B	D'	Dw'	B2
	3Rw2	Fw2	Bw	L'	3Fw2	Rw2
	3Fw2	B	Fw	3Rw2	Dw2	3Rw2
	Uw2	Dw'	3Fw	R	D'	B2
	3Fw2	Uw				
2.	Lw'	L	B	F'	Uw'	B
	Uw'	F2	U	3Uw	Dw'	F'
	Rw	U2	R'	3Rw'	3Fw	3Rw2
	Lw'	Rw	B2	Fw2	Rw2	D2
	F'	R'	3Uw	Bw'	D2	3Uw2
	Uw2	Bw2	Lw'	R'	Uw	Dw
	U	R2	Lw'	Bw	3Uw	Lw'
	Rw	3Rw2	Dw	Lw2	3Uw2	R'
	Dw	3Fw'	L	Fw'	U	Lw
	Uw'	3Uw'	3Fw2	R2	3Fw2	3Rw'
	R'	Dw2	F'	L	3Fw'	Lw
	U	D'	R	U'	Bw2	U'
	Dw	Uw'	L'	Fw'	B	Bw2
	D'	L2				
3.	Bw	Uw'	3Uw	Dw'	U	Rw
	U2	3Fw'	D2	F2	Dw	Bw
	Lw	3Rw'	R	Uw2	B'	R
	Uw'	B	3Uw'	U	D'	Rw
	Lw'	3Fw'	3Rw2	Dw2	U	3Rw2
	U	3Rw	U	L	Dw2	3Uw
	L'	D	Rw	Fw2	3Rw	L
	B2	D	Fw'	Dw	R'	3Uw'
	Fw'	Bw2	B	3Uw2	3Rw2	L'
	Dw2	Bw'	3Fw'	F	Lw2	R
	Rw	3Rw2	D'	B'	Dw'	U
	3Uw	D'	F'	R'	Bw'	F
	R2	Dw2	Rw	U	Uw'	3Uw'
	D	Bw'				

1.

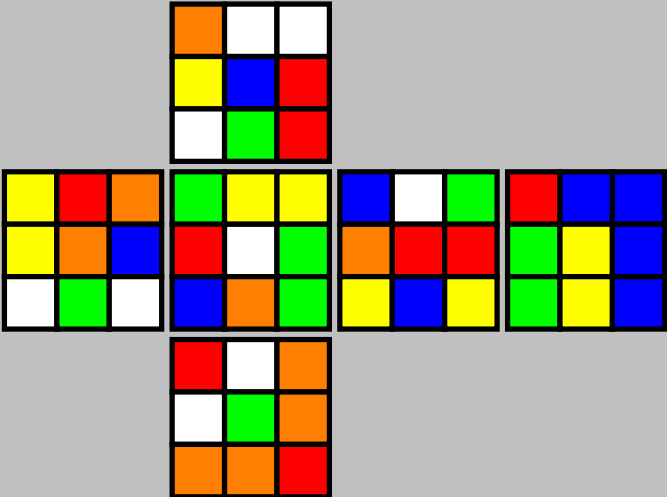
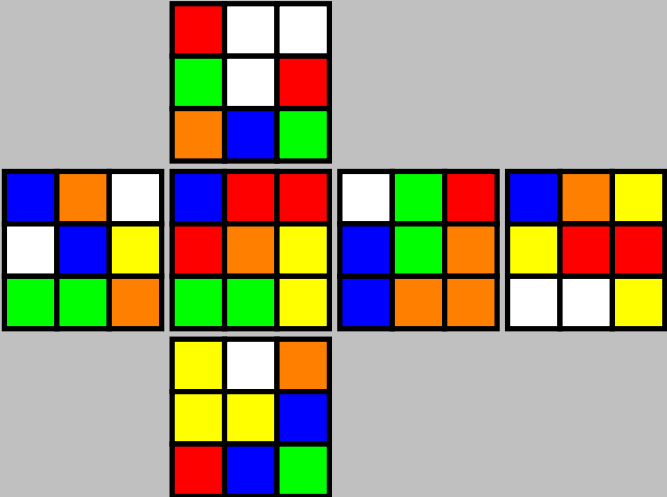
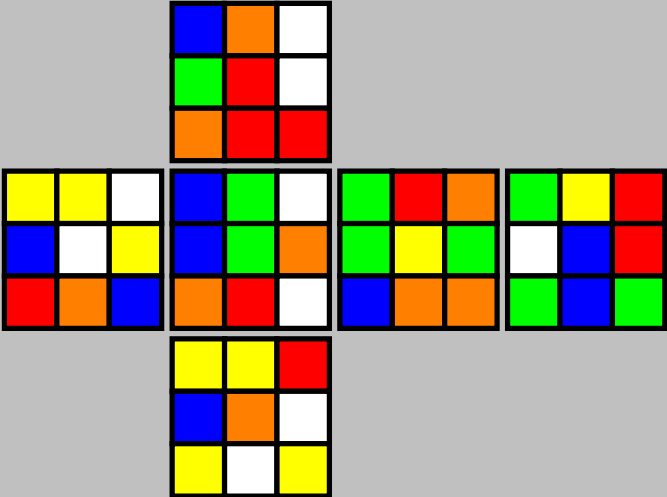
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D'	Fw2	Rw2	3Rw	Uw'	R'	3Bw2
F	Uw2	3Lw'	B2	3Lw2	F2	U
Bw'	L2	R	Uw2	Lw	3Dw'	Fw
3Uw2	Uw2	3Dw2	Lw2	L	Dw'	B
3Lw	Uw'	Rw'	3Uw2	3Lw'	L	3Fw'
3Rw'	L'	3Lw'	Uw	F2	L2	3Lw
Uw2	3Dw	3Fw'	L2	Fw2	Rw'	Bw2
3Lw	L'	3Rw	D'	Fw2	R2	U'
F2	U2	D'	Rw2	Lw	F2	3Bw2
3Rw2	3Bw	Dw'	D'	R	3Uw2	B'
Lw'	3Uw	3Bw	R2	Dw	3Dw2	B'
Rw'	Lw	3Bw'	3Rw	Lw2	L2	3Lw'
3Fw	Lw'	Uw2	Dw	3Uw'	Fw'	L
F	B					

2.

3Fw	3Uw'	R2	F	3Fw'	3Rw2	Lw2
D2	Lw	Uw2	3Lw2	Lw2	B2	U'
L2	D2	B2	U	Uw'	F2	Fw2
3Rw2	Fw'	Dw	R	L2	Fw2	3Fw
R	Dw'	Rw2	3Rw2	3Fw2	Dw	3Dw
F2	Lw'	U'	Lw	Uw'	3Uw'	Fw'
3Bw2	3Lw'	D	3Lw'	3Rw'	R2	Fw
B'	3Fw2	F	Uw'	Rw'	U'	Lw
B2	3Uw2	3Lw	F	B	3Uw	B
F'	R'	3Dw	D2	Rw2	R'	B2
3Dw2	3Rw	B2	3Dw'	Fw	3Uw2	3Rw'
Lw'	B	3Dw'	Uw2	B2	Uw	3Uw2
Fw	3Dw2	D2	3Bw2	D'	3Lw'	3Dw
F2	3Lw2	F2	3Uw'	Dw	Lw2	Bw2
B'	D2					

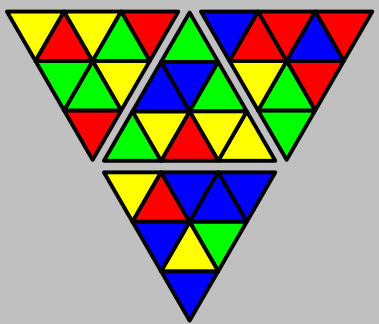
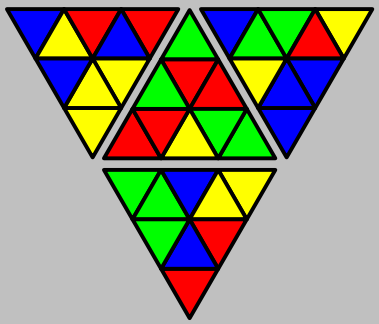
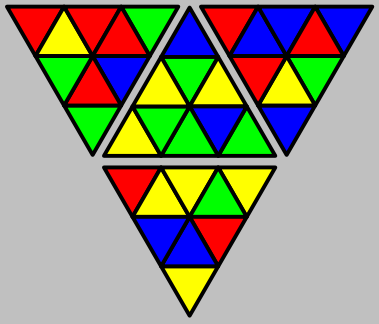
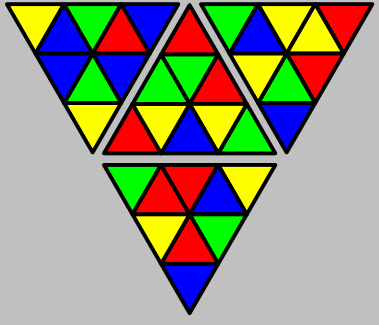
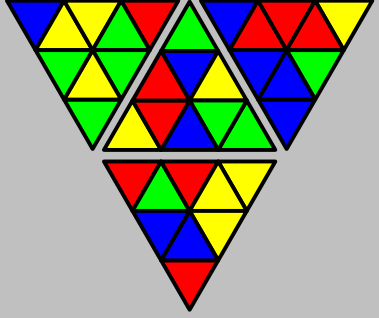
3.

3Rw	U2	Fw	Bw	3Bw2	3Dw2	L'
3Bw'	3Fw2	3Lw'	F2	L'	Dw	R2
3Rw	Bw2	Uw	3Rw	U	Dw'	Bw'
L'	3Uw2	B2	Lw'	B2	Fw	3Rw
F2	Rw'	Lw'	U2	3Uw2	3Dw2	Rw
3Bw'	3Lw'	L	Uw'	3Rw2	L'	Dw'
3Uw2	U	R2	Uw	D'	3Fw	Uw'
U2	L'	R	D	Bw2	U	3Bw'
R'	L2	Fw	3Rw'	L2	Bw2	3Rw
Lw2	F'	L2	R'	Bw	R2	D2
3Rw2	Uw	U	B	Lw	3Bw2	B'
3Uw	Dw	Lw'	Uw2	3Bw2	Uw'	R'
Bw	3Dw'	F'	D	F2	B	3Dw2
L2	B'	F	Uw	Rw	Lw2	U
R'	L'					

1.	<table><tr><td>B2</td><td>D'</td><td>R2</td><td>F2</td></tr><tr><td>U'</td><td>F2</td><td>L2</td><td>B2</td></tr><tr><td>R2</td><td>U2</td><td>F'</td><td>R'</td></tr><tr><td>B2</td><td>F2</td><td>U</td><td>F'</td></tr><tr><td>D'</td><td>R</td><td>F2</td><td>L</td></tr><tr><td>B'</td><td>Rw'</td><td></td><td></td></tr></table>	B2	D'	R2	F2	U'	F2	L2	B2	R2	U2	F'	R'	B2	F2	U	F'	D'	R	F2	L	B'	Rw'			
B2	D'	R2	F2																							
U'	F2	L2	B2																							
R2	U2	F'	R'																							
B2	F2	U	F'																							
D'	R	F2	L																							
B'	Rw'																									
2.	<table><tr><td>B2</td><td>U2</td><td>L2</td><td>B</td></tr><tr><td>R2</td><td>B'</td><td>F'</td><td>L</td></tr><tr><td>F'</td><td>L'</td><td>B2</td><td>R</td></tr><tr><td>D</td><td>U2</td><td>B2</td><td>R2</td></tr><tr><td>D</td><td>R'</td><td>Uw'</td><td></td></tr></table>	B2	U2	L2	B	R2	B'	F'	L	F'	L'	B2	R	D	U2	B2	R2	D	R'	Uw'						
B2	U2	L2	B																							
R2	B'	F'	L																							
F'	L'	B2	R																							
D	U2	B2	R2																							
D	R'	Uw'																								
3.	<table><tr><td>D2</td><td>L2</td><td>D2</td><td>R'</td></tr><tr><td>F2</td><td>D2</td><td>F2</td><td>L'</td></tr><tr><td>D2</td><td>F</td><td>L'</td><td>B</td></tr><tr><td>R2</td><td>B2</td><td>D</td><td>F'</td></tr><tr><td>U</td><td>B'</td><td>F2</td><td>U2</td></tr><tr><td>Fw'</td><td></td><td></td><td></td></tr></table>	D2	L2	D2	R'	F2	D2	F2	L'	D2	F	L'	B	R2	B2	D	F'	U	B'	F2	U2	Fw'				
D2	L2	D2	R'																							
F2	D2	F2	L'																							
D2	F	L'	B																							
R2	B2	D	F'																							
U	B'	F2	U2																							
Fw'																										

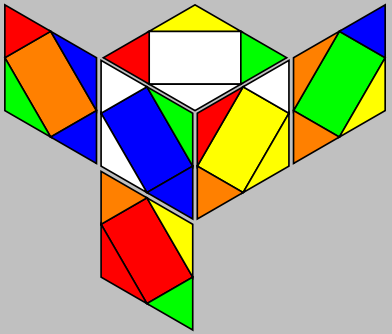
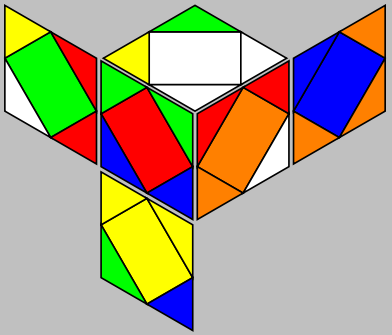
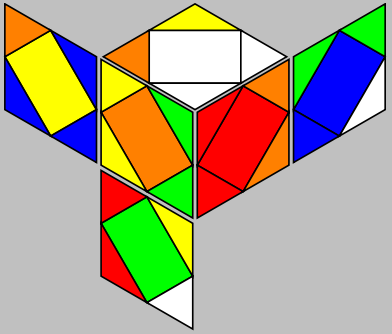
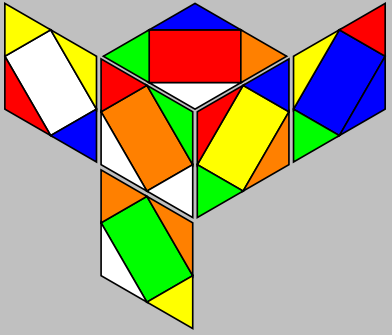
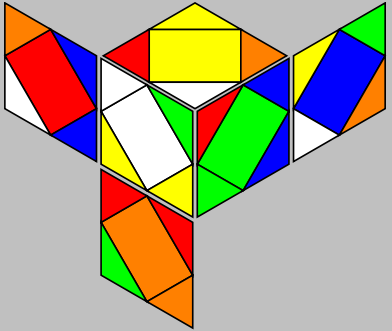
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2.	L2 U2 R' D2 R F2 L' B2 D2 L U' R' B' D L' D' F D2 L	
3.	D2 U2 B2 D2 U2 B' R2 D2 B2 R' D2 U B L2 D' F' R2 U2 B L'	
4.	B D2 F U2 F2 L2 F' L2 D2 F2 L' B L R F2 L U R' D2 U2	
5.	D2 B2 F2 L2 F2 L R' B2 D' L U' B U' F U F L2 B	

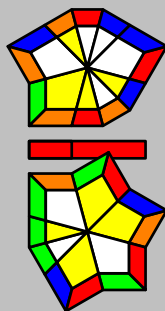
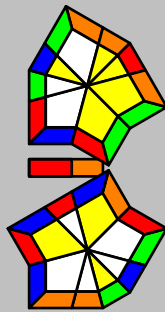
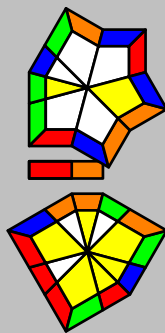
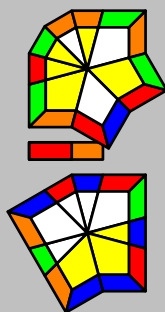
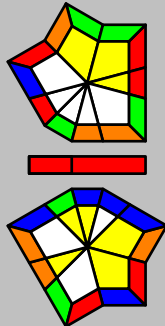


1.	U' L' U' B' U B' U' B' U R U' u' l b'	
2.	R' L' U' R B U' L' U L' B L u b'	
3.	R L' R L U' R L B' L' U R' u l' r b	
4.	L' U' R' U L R' L' R' B' R B' u' l' r' b	
5.	B' U B U' B L R' U' R U' B u' l b'	

2019-06-03

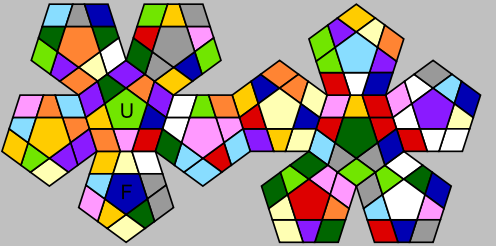
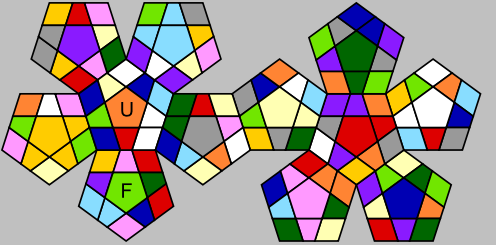
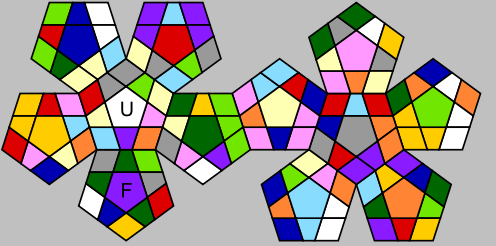
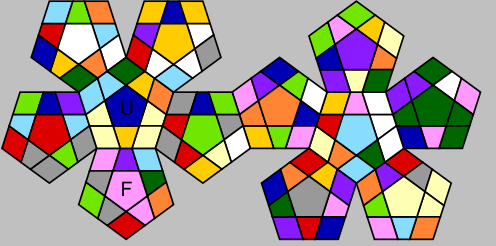
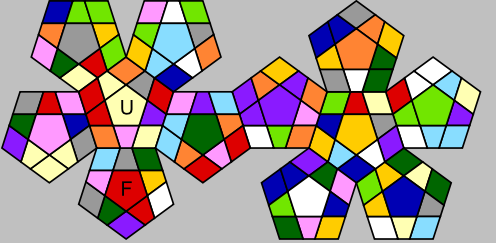
skewb  
Scrambles for 2019-06-03

1.	$B\ L\ R\ B'\ U'\ L\ B'\ L\ U'\ B'\ R$	
2.	$B\ R\ U'\ R\ B\ U'\ B'\ L\ B\ U'\ R'$	
3.	$R\ B\ U\ L\ U'\ B\ R\ L'\ U\ L\ U$	
4.	$R\ B\ R'\ U\ L'\ U'\ B\ L\ R\ U'\ B'$	
5.	$U\ L\ U'\ R'\ U'\ R'\ B'\ R\ U'\ R\ U'$	

1.	$(1, 0) / (2, -1) / (1, -5) /$ $(-1, -4) / (6, 0) / (0, -3) /$ $(0, -2) / (3, 0) / (1, 0) /$ $(-2, -4) / (-2, 0) / (6, -3) /$ $(5, 0)$	
2.	$(3, -4) / (0, -3) / (-3, 0) /$ $(4, -2) / (3, 0) / (3, -1) /$ $(0, -3) / (0, -3) / (-3, 0) /$ $(1, 0) / (-2, 0) / (4, 0) /$ $(4, 0) / (4, 0)$	
3.	$(4, 0) / (-1, 5) / (-5, 1) /$ $(0, -3) / (6, 0) / (0, -1) /$ $(3, 0) / (2, 0) / (-5, -3) /$ $(4, 0) / (-5, 0) / (2, 0)$	
4.	$(-2, 0) / (5, -4) / (1, -2) /$ $(3, 0) / (-3, -3) / (0, -1) /$ $(6, -3) / (1, 0) / (0, -4) /$ $(2, 0) / (0, -4) / (4, 0) /$ $(0, -4) /$	
5.	$(0, 2) / (0, 3) / (-5, -5) /$ $(3, 0) / (3, 0) / (-1, -4) /$ $(-5, 0) / (-3, 0) / (-1, 0) /$ $(-4, 0) / (-2, 0) / (4, 0) /$ $(2, 0)$	

2019-06-03

minx  
Scrambles for 2019-06-03

1.	R-- D-- R++ D-- R-- D-- R++ D-- R++ D-- U'	
	R-- D-- R++ D++ R-- D++ R++ D-- R++ D++ U	
	R++ D-- R-- D-- R++ D-- R++ D++ R-- D-- U'	
	R-- D++ R++ D++ R-- D++ R++ D-- R++ D++ U	
	R++ D++ R++ D-- R++ D++ R++ D-- R++ D-- U'	
	R++ D++ R++ D++ R-- D-- R-- D-- R-- D-- U'	
	R++ D++ R++ D++ R-- D-- R++ D-- R-- D-- U'	
	R++ D++ R++ D++ R-- D-- R++ D-- R-- D-- U'	
2.	R++ D-- R-- D-- R++ D-- R-- D++ R++ D++ U	
	R++ D++ R++ D++ R++ D-- R-- D-- R++ D++ U	
	R++ D-- R-- D++ R++ D-- R-- D-- R++ D++ U	
	R-- D++ R++ D++ R-- D++ R-- D-- R++ D++ U	
	R-- D++ R-- D++ R-- D++ R++ D++ R++ D++ U	
	R-- D++ R-- D-- R-- D-- R++ D++ R-- D-- U'	
	R++ D++ R-- D-- R-- D-- R-- D-- R++ D-- U'	
	R++ D++ R-- D-- R-- D-- R-- D-- R++ D-- U'	
3.	R-- D++ R-- D++ R++ D-- R-- D++ R++ D-- U'	
	R++ D++ R-- D-- R++ D-- R++ D-- R-- D-- U'	
	R++ D-- R-- D-- R-- D++ R-- D-- R++ D++ U	
	R++ D-- R-- D-- R++ D++ R++ D-- R++ D++ U	
	R++ D-- R-- D++ R++ D++ R-- D++ R-- D-- U'	
	R-- D++ R++ D-- R-- D++ R-- D++ R++ D-- U'	
	R++ D-- R++ D-- R-- D-- R-- D-- R++ D-- U'	
	R++ D-- R++ D-- R-- D-- R-- D-- R++ D-- U'	
4.	R-- D-- R++ D++ R-- D-- R++ D-- R-- D-- U'	
	R++ D-- R-- D-- R++ D-- R++ D-- R-- D++ U	
	R-- D++ R-- D-- R-- D-- R++ D++ R++ D-- U'	
	R-- D++ R++ D-- R++ D++ R-- D++ R-- D++ U	
	R++ D-- R-- D-- R-- D++ R-- D++ R++ D++ U	
	R++ D-- R++ D++ R++ D++ R-- D++ R++ D-- U'	
	R-- D-- R++ D-- R-- D++ R-- D-- R++ D-- U'	
	R-- D-- R++ D-- R-- D++ R-- D-- R++ D-- U'	
5.	R-- D++ R++ D-- R++ D-- R++ D++ R++ D++ U	
	R-- D++ R++ D-- R-- D++ R-- D++ R++ D-- U'	
	R++ D-- R-- D-- R++ D++ R-- D-- R-- D-- U'	
	R++ D++ R-- D-- R++ D++ R++ D++ R++ D++ U	
	R++ D-- R-- D-- R++ D-- R-- D++ R-- D-- U'	
	R-- D++ R-- D-- R++ D-- R-- D++ R++ D++ U	
	R-- D++ R++ D++ R++ D++ R-- D++ R-- D-- U'	
	R-- D++ R++ D++ R++ D++ R-- D++ R-- D-- U'	

1.	<div>UR3 -    DR5+    DL2 -</div> <div>UL2+    U4+    R3+</div> <div>D2 -    L4+    ALL1 -</div> <div>y2    U6+    R3+</div> <div>D5+    L6+    ALL5+</div>	
2.	<div>UR5 -    DR2 -    DL1 -</div> <div>UL0+    U0+    R2+</div> <div>D5+    L2+    ALL1 -</div> <div>y2    U1 -    R4 -</div> <div>D0+    L5 -    ALL2 -</div> <div>UR    UL</div>	
3.	<div>UR3 -    DR2+    DL4 -</div> <div>UL2+    U0+    R5 -</div> <div>D6+    L5+    ALL0+</div> <div>y2    U6+    R4+</div> <div>D3 -    L1+    ALL5 -</div> <div>DR    DL</div>	
4.	<div>UR2+    DR1 -    DL3+</div> <div>UL3 -    U1+    R2+</div> <div>D1 -    L1+    ALL1+</div> <div>y2    U3 -    R1 -</div> <div>D3 -    L2 -    ALL1 -</div> <div>UR    DL</div>	
5.	<div>UR2 -    DR0+    DL1 -</div> <div>UL6+    U1 -    R1 -</div> <div>D6+    L3+    ALL0+</div> <div>y2    U1 -    R4 -</div> <div>D3+    L1+    ALL2 -</div> <div>UR    DL</div>	

## Fewest Moves

- > You have 60 minutes to find and write a solution.
- > Write 1 move per bar. To delete a move, clearly blacken it.
- > Your solution must not be directly derived from any part of the scrambling algorithm.
- > Your solution must be at most 80 moves, including rotations.
- > Your result will be counted in OBTM.
- > Only use notation from Article 12 of the WCA Regulations. If you are uncertain, use only the exact moves listed here:

## Face Moves

Clockwise	F	R	U	B	L	D
Counter-clockwise	F'	R'	U'	B'	L'	D'
Double	F2	R2	U2	B2	L2	D2

## Rotations

Clockwise	[f]	[r]	[u]	[b]	[l]	[d]
Counter-clockwise	[f']	[r']	[u']	[b']	[l']	[d']
Double	[f2]	[r2]	[u2]	[b2]	[l2]	[d2]

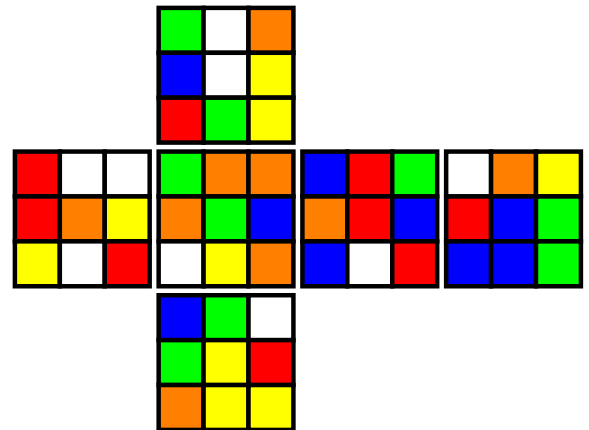
Scrambles for 2019-06-03  
333fm

Competitor: \_\_\_\_\_

WCA ID: \_\_\_\_\_

DO NOT FILL IF YOU ARE THE COMPETITOR.

Graded by: \_\_\_\_\_ Result: \_\_\_\_



Scramble: R' U' F D' B2 D' R2 D' U2 B2 U F' L' R D U' L' B2 U2 F' R2 F D R' U' F

[illegible]

## Fewest Moves

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## Face Moves

Clockwise	F	R	U	B	L	D
Counter-clockwise	F'	R'	U'	B'	L'	D'
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## Rotations

Clockwise	[f]	[r]	[u]	[b]	[l]	[d]
Counter-clockwise	[f']	[r']	[u']	[b']	[l']	[d']
Double	[f2]	[r2]	[u2]	[b2]	[l2]	[d2]

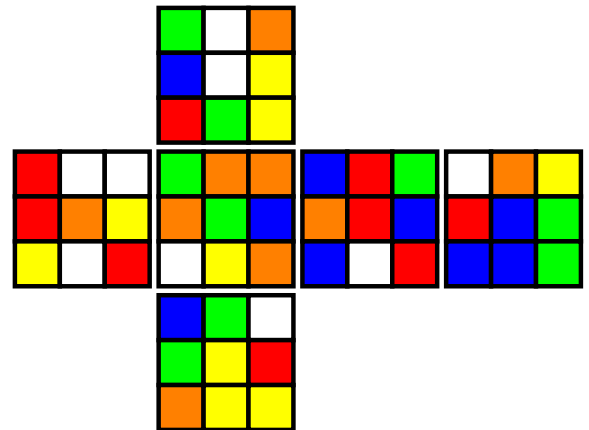
Scrambles for 2019-06-03  
333fm

Competitor: \_\_\_\_\_

WCA ID: \_\_\_\_\_

DO NOT FILL IF YOU ARE THE COMPETITOR.

Graded by: \_\_\_\_\_ Result: \_\_\_\_

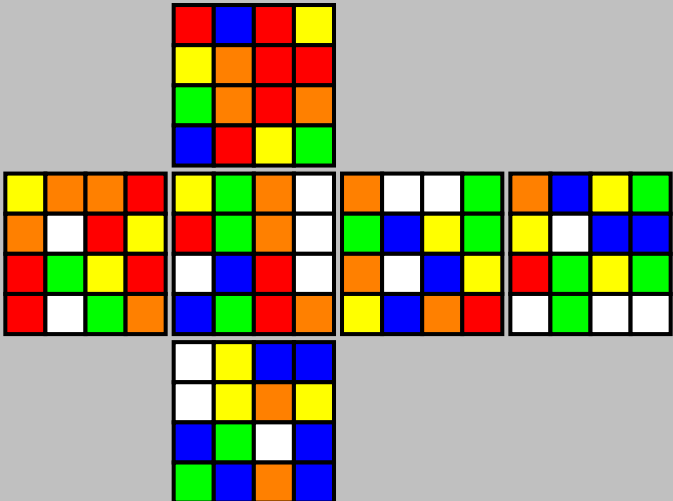
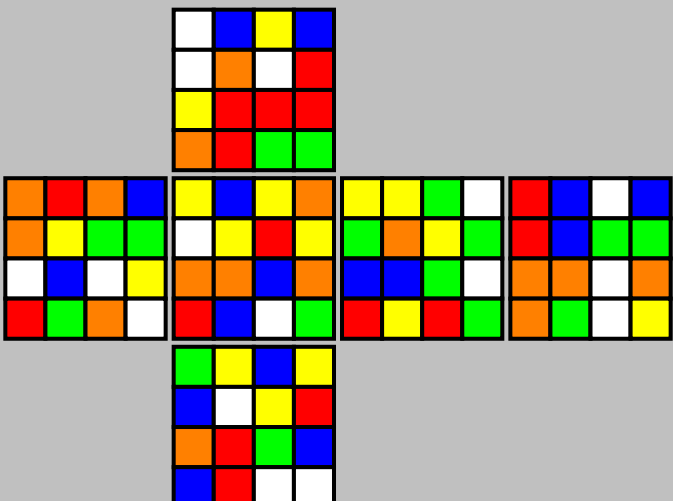
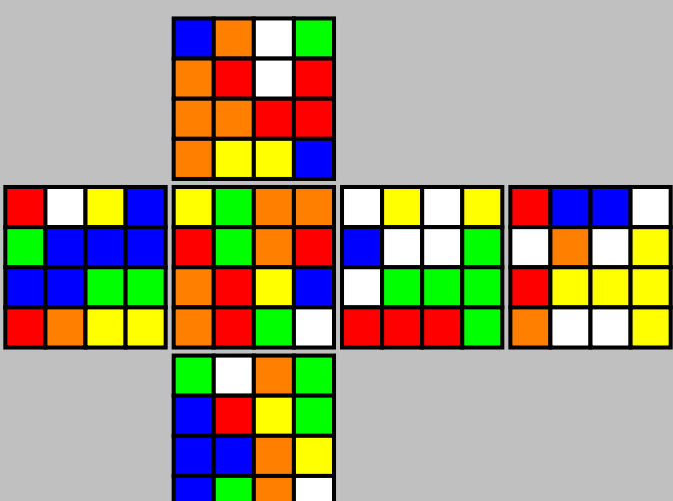


Scramble: R' U' F D' B2 D' R2 D' U2 B2 U F' L' R D U' L' B2 U2 F' R2 F D R' U' F

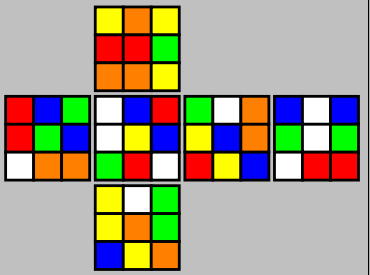
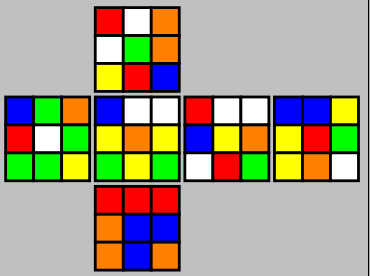
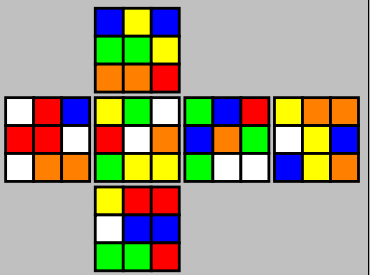
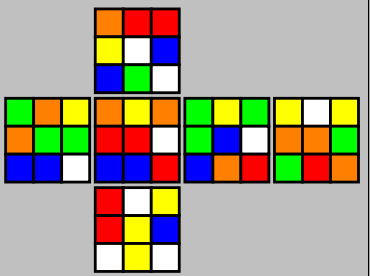
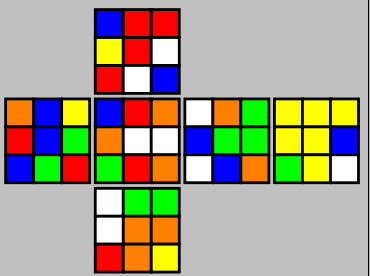
A blank sheet of white paper featuring a light gray grid pattern. The grid consists of evenly spaced horizontal and vertical lines, creating a series of small squares across the entire page. There are no margins, text, or other markings present.

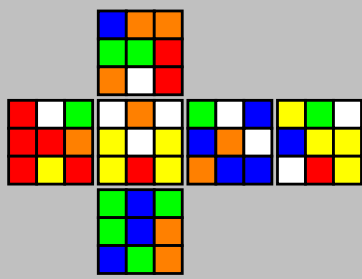
1.	<p>F D' B2 D R L B D</p> <p>F2 L U B2 R' D2 L B2</p> <p>L</p>	
2.	<p>L2 D2 R2 D' L2 R2 U' B2</p> <p>L' D' F' D2 L2 R' B2 L'</p> <p>F' D2 L'</p>	
3.	<p>F2 L R' U2 L B2 U2 R'</p> <p>F2 U' F R' D L' B' L'</p> <p>F' R' D L'</p>	
4.	<p>R F R' B2 L F D' F'</p> <p>B' R B2 D2 F2 D2 L2 B2</p> <p>L' D2</p>	
5.	<p>U2 B L U B2 L2 B' L2</p> <p>U' D' R L2 F' D2 R2 U2</p> <p>F U2 F'</p>	



1.	<table><tr><td>B'</td><td>L2</td><td>F2</td><td>R2</td><td>F2</td></tr><tr><td>D2</td><td>B2</td><td>L'</td><td>U</td><td>D2</td></tr><tr><td>B'</td><td>U</td><td>L'</td><td>B2</td><td>D</td></tr><tr><td>F</td><td>U2</td><td>Uw2</td><td>Fw2</td><td>R2</td></tr><tr><td>F</td><td>Rw2</td><td>B</td><td>D</td><td>B2</td></tr><tr><td>L2</td><td>B'</td><td>R2</td><td>Fw2</td><td>Rw</td></tr><tr><td>F</td><td>U</td><td>D</td><td>F</td><td>Uw</td></tr><tr><td>L'</td><td>D'</td><td>Fw</td><td>D</td><td>U'</td></tr><tr><td>Fw</td><td>Uw</td><td>z'</td><td></td><td></td></tr></table>	B'	L2	F2	R2	F2	D2	B2	L'	U	D2	B'	U	L'	B2	D	F	U2	Uw2	Fw2	R2	F	Rw2	B	D	B2	L2	B'	R2	Fw2	Rw	F	U	D	F	Uw	L'	D'	Fw	D	U'	Fw	Uw	z'								
B'	L2	F2	R2	F2																																																
D2	B2	L'	U	D2																																																
B'	U	L'	B2	D																																																
F	U2	Uw2	Fw2	R2																																																
F	Rw2	B	D	B2																																																
L2	B'	R2	Fw2	Rw																																																
F	U	D	F	Uw																																																
L'	D'	Fw	D	U'																																																
Fw	Uw	z'																																																		
2.	<table><tr><td>R</td><td>U2</td><td>L</td><td>D2</td><td>U2</td></tr><tr><td>R'</td><td>F2</td><td>U2</td><td>B'</td><td>U'</td></tr><tr><td>L'</td><td>R</td><td>U'</td><td>L2</td><td>F2</td></tr><tr><td>U</td><td>L'</td><td>D2</td><td>Rw2</td><td>F'</td></tr><tr><td>Uw2</td><td>Fw2</td><td>U'</td><td>F</td><td>B</td></tr><tr><td>Uw2</td><td>U</td><td>Fw2</td><td>D</td><td>F'</td></tr><tr><td>Rw2</td><td>R'</td><td>Fw2</td><td>Rw</td><td>F'</td></tr><tr><td>D'</td><td>Fw</td><td>R'</td><td>Uw'</td><td>Rw2</td></tr><tr><td>R'</td><td>L'</td><td>F</td><td>x2</td><td>y2</td></tr></table>	R	U2	L	D2	U2	R'	F2	U2	B'	U'	L'	R	U'	L2	F2	U	L'	D2	Rw2	F'	Uw2	Fw2	U'	F	B	Uw2	U	Fw2	D	F'	Rw2	R'	Fw2	Rw	F'	D'	Fw	R'	Uw'	Rw2	R'	L'	F	x2	y2						
R	U2	L	D2	U2																																																
R'	F2	U2	B'	U'																																																
L'	R	U'	L2	F2																																																
U	L'	D2	Rw2	F'																																																
Uw2	Fw2	U'	F	B																																																
Uw2	U	Fw2	D	F'																																																
Rw2	R'	Fw2	Rw	F'																																																
D'	Fw	R'	Uw'	Rw2																																																
R'	L'	F	x2	y2																																																
3.	<table><tr><td>R2</td><td>U2</td><td>B2</td><td>U2</td><td>L2</td></tr><tr><td>U'</td><td>R2</td><td>L2</td><td>D</td><td>L'</td></tr><tr><td>D2</td><td>R2</td><td>B2</td><td>D2</td><td>R'</td></tr><tr><td>F</td><td>D2</td><td>B</td><td>D</td><td>R</td></tr><tr><td>Uw2</td><td>L</td><td>Fw2</td><td>U</td><td>R</td></tr><tr><td>L2</td><td>B2</td><td>Uw2</td><td>R'</td><td>L</td></tr><tr><td>Uw2</td><td>L2</td><td>Fw'</td><td>D2</td><td>R</td></tr><tr><td>U</td><td>L</td><td>Fw2</td><td>Rw2</td><td>Uw</td></tr><tr><td>R2</td><td>Uw'</td><td>Fw</td><td>U</td><td>R2</td></tr><tr><td>y</td><td></td><td></td><td></td><td></td></tr></table>	R2	U2	B2	U2	L2	U'	R2	L2	D	L'	D2	R2	B2	D2	R'	F	D2	B	D	R	Uw2	L	Fw2	U	R	L2	B2	Uw2	R'	L	Uw2	L2	Fw'	D2	R	U	L	Fw2	Rw2	Uw	R2	Uw'	Fw	U	R2	y					
R2	U2	B2	U2	L2																																																
U'	R2	L2	D	L'																																																
D2	R2	B2	D2	R'																																																
F	D2	B	D	R																																																
Uw2	L	Fw2	U	R																																																
L2	B2	Uw2	R'	L																																																
Uw2	L2	Fw'	D2	R																																																
U	L	Fw2	Rw2	Uw																																																
R2	Uw'	Fw	U	R2																																																
y																																																				

1.	F'	U	B	R'	Uw
	Rw2	R2	Fw'	R2	F
	L	F2	Rw2	Dw'	L'
	Lw	Rw'	Bw'	B'	U
	F'	B2	U'	Dw2	Uw'
	B	U'	L	Uw2	B
	Lw	F'	B'	Lw'	F2
	U	Rw2	R2	B	R2
	Bw2	U2	L	Uw'	L2
	R'	Lw2	Fw	Bw	U'
	Bw'	D'	Bw2	B'	U
	B2	Rw	U2	Lw'	B2
	3Rw'	3Uw'			
2.	Dw'	Uw2	R2	Dw2	R
	Uw'	R'	Dw'	L'	F2
	Lw	Bw'	Fw	B	Dw
	Lw'	F	Dw'	Lw'	Dw'
	Bw'	D'	U	Lw	R
	Dw'	Lw2	Fw2	B	Dw2
	Bw2	B'	Dw'	R'	D
	F'	Dw	F	Bw2	R
	Fw2	F	Bw'	Uw2	U'
	L2	Rw'	R'	D'	L
	Rw'	Dw'	L	Bw2	Dw2
	B'	L'	Uw'	U2	Fw
	3Fw	3Uw2			
3.	B'	U	Dw'	Rw	Uw
	B	Lw	Fw	Uw'	Rw2
	Uw2	D	L2	Uw	Rw2
	Bw2	R'	B2	Fw	Uw2
	Bw2	Rw'	L	F'	U
	R	Rw'	F2	R'	L2
	Rw2	U'	L2	Lw2	Dw
	L	D2	F2	Rw	R
	Fw	Dw'	B	R'	B
	Lw2	B'	D'	U'	R'
	Dw	U2	F2	U2	Lw2
	D2	Uw'	Dw'	R	U2
	3Rw'	3Uw			

1.	B2 D2 L2 F' D2 R2 U2 B U2 B2 L2 D' R' F L F U' L' U2 Fw' Uw	
2.	L2 U' L2 B2 D R2 D2 U' F' D' U' L' B' L F' U R U B2 U Rw Uw'	
3.	F2 U' R2 D U F2 R2 U2 L2 U' L' U' B D U R B U R' B D Rw Uw2	
4.	D2 L2 F L2 B' L2 D2 B2 F2 D' R' F2 L' U L2 B L R2 D' F' Uw	
5.	B2 U2 L2 U2 F2 U2 B D2 F U' L R' B2 F' R' B L D' F' R2 Fw' Uw'	

6.	F ' U2 R2 B2 D2 U2 B	
	R2 B ' F L ' D U R '	
	D2 U ' F D ' L ' B ' D2	
	Rw Uw2	