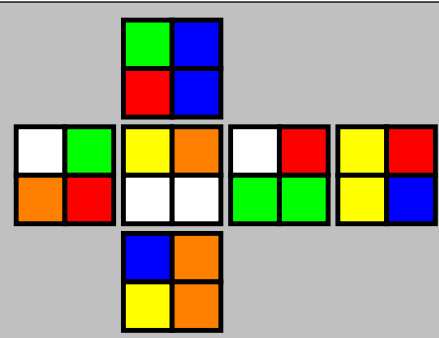
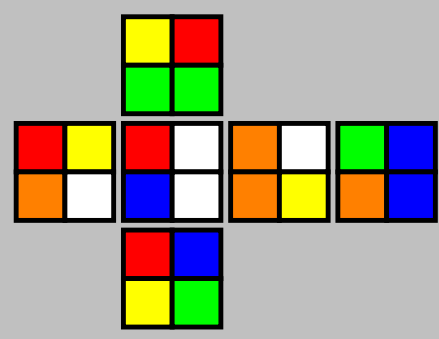
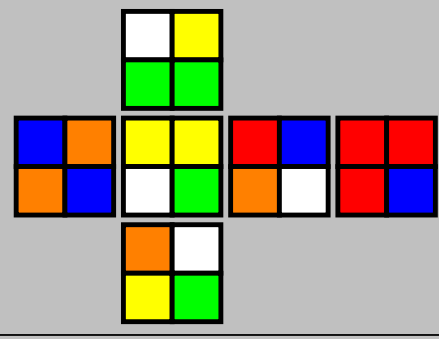
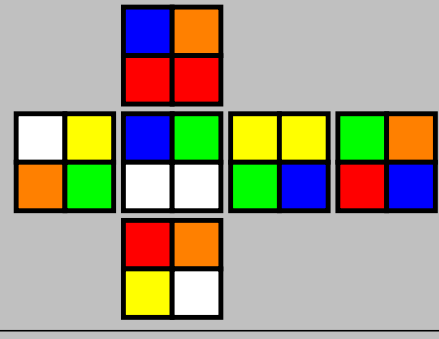
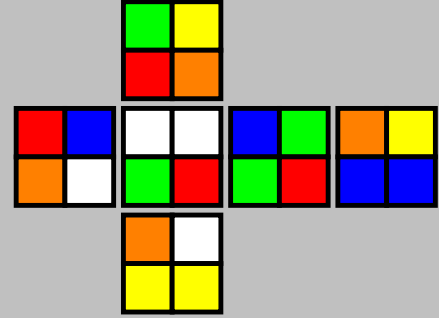
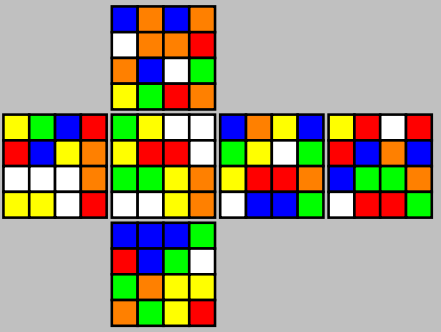
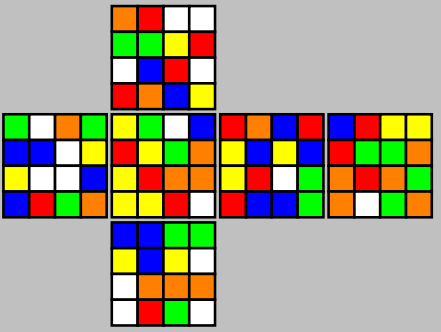
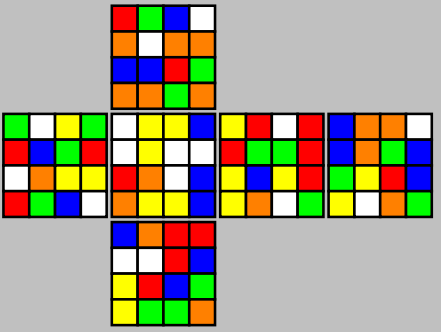
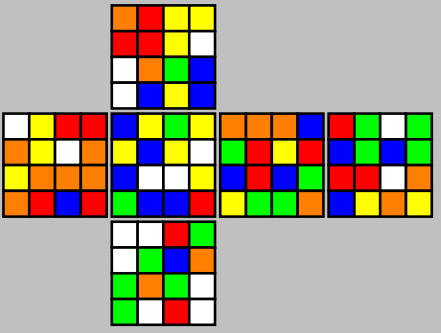
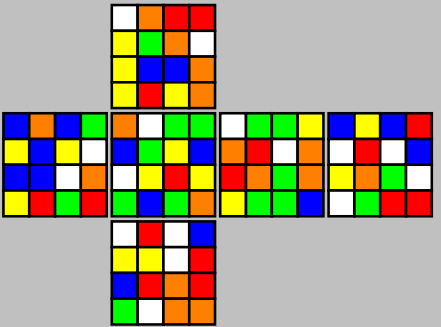


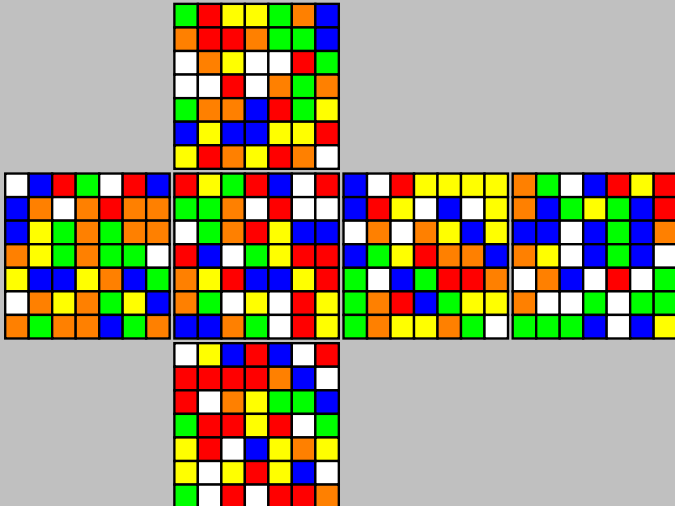
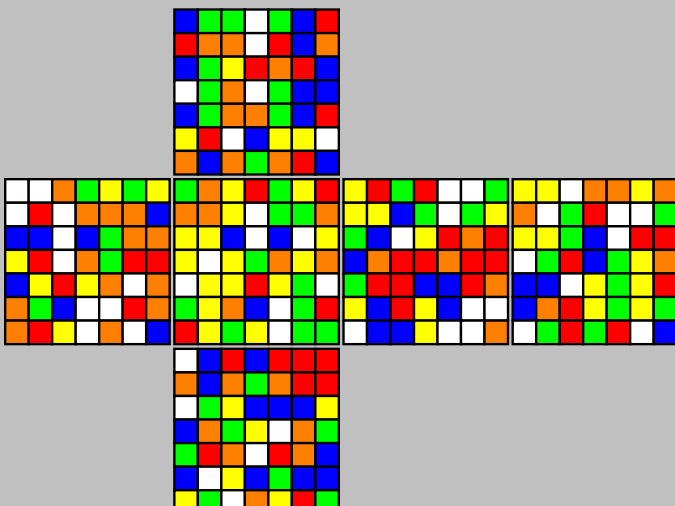
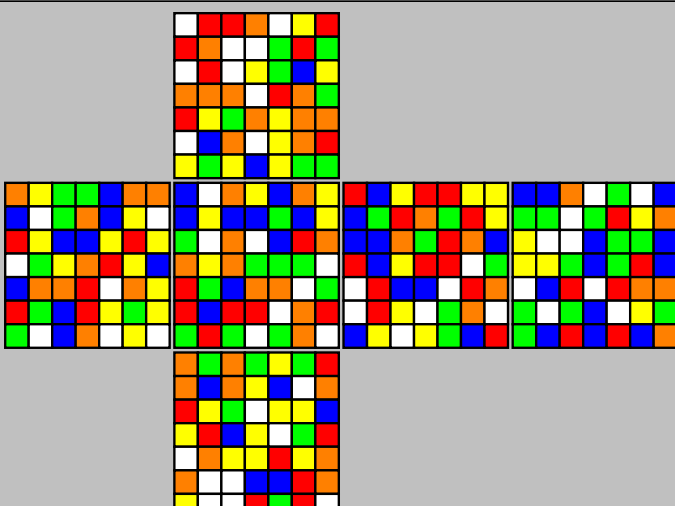
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2.	<p> <math>U</math> <math>R^2</math> <math>U</math> <math>B^2</math> <math>U'</math> <math>R^2</math> <math>F^2</math> <math>D'</math>  <math>F</math> <math>R^2</math> <math>B^2</math> <math>L'</math> <math>B'</math> <math>R'</math> <math>B'</math> <math>L</math>  <math>R^2</math> <math>D</math> <math>B^2</math> </p>	
3.	<p> <math>R^2</math> <math>D^2</math> <math>F^2</math> <math>U</math> <math>R^2</math> <math>U</math> <math>B^2</math> <math>U^2</math>  <math>R^2</math> <math>B'</math> <math>L'</math> <math>D'</math> <math>U'</math> <math>F'</math> <math>D</math> <math>R^2</math>  <math>U'</math> <math>B^2</math> <math>U^2</math> <math>R</math> </p>	
4.	<p> <math>F'</math> <math>L</math> <math>D^2</math> <math>F</math> <math>R</math> <math>D'</math> <math>R^2</math> <math>D^2</math>  <math>L'</math> <math>F'</math> <math>R'</math> <math>U</math> <math>R^2</math> <math>B^2</math> <math>D'</math> <math>B^2</math>  <math>U</math> <math>D^2</math> <math>R^2</math> <math>U'</math> </p>	
5.	<p> <math>U'</math> <math>F^2</math> <math>D'</math> <math>F^2</math> <math>L^2</math> <math>U</math> <math>L^2</math> <math>R^2</math>  <math>D'</math> <math>L</math> <math>B</math> <math>L</math> <math>F'</math> <math>U'</math> <math>L^2</math> <math>U'</math>  <math>R</math> <math>U</math> <math>B'</math> <math>F'</math> </p>	

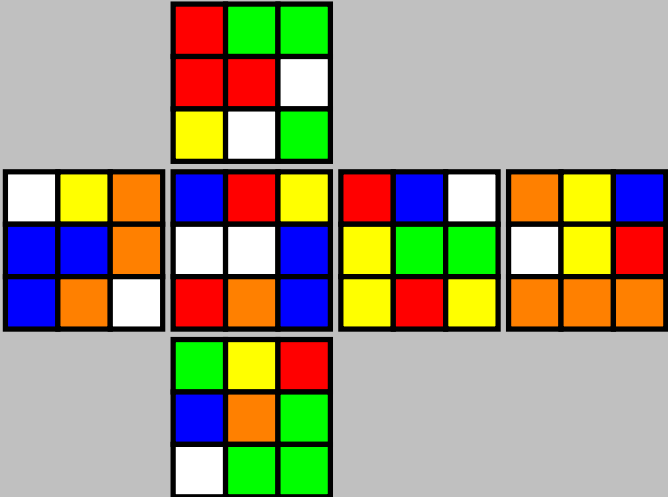
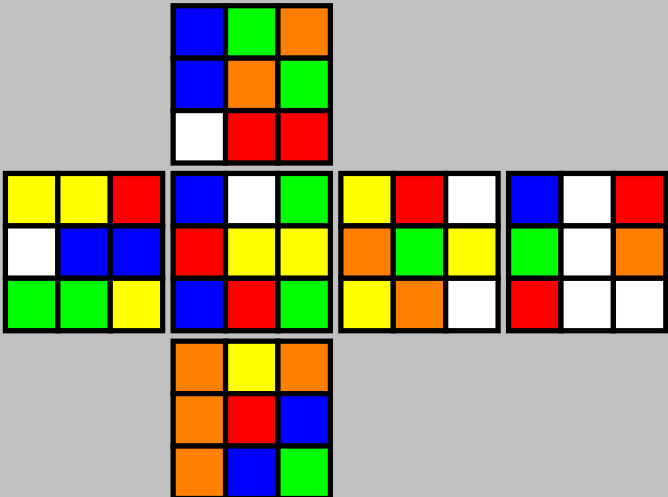
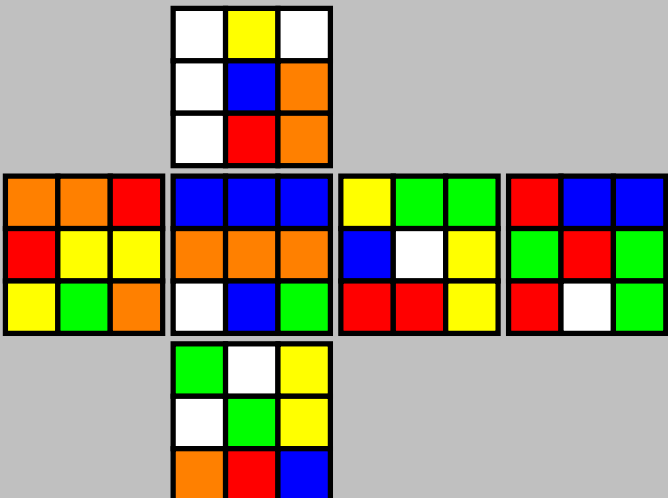
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3.	$R F U' R U R' F U^2 R' U' F$	
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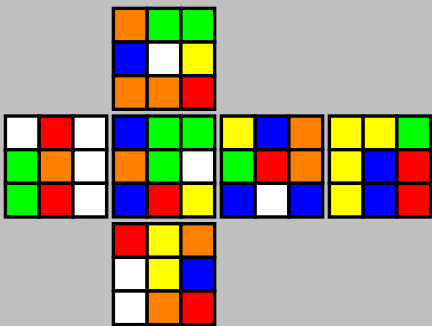
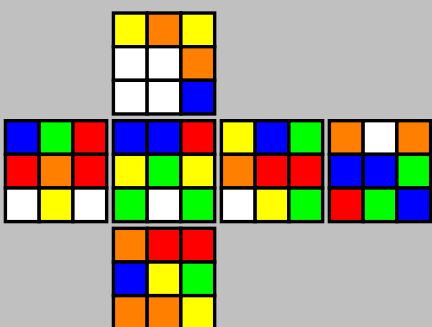
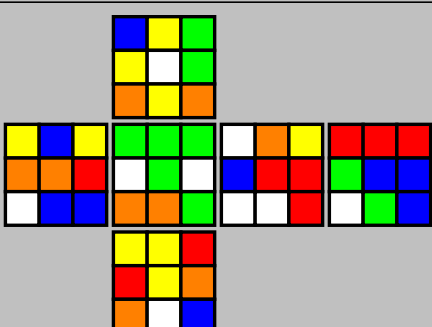
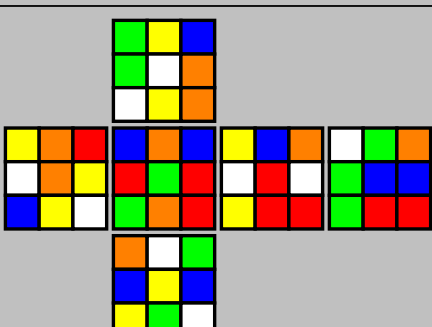
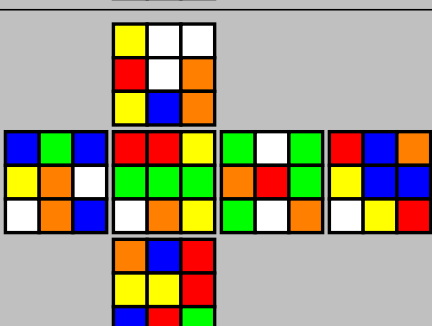
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	Fw D' Uw' B2 F2 D' U'	
	F2 Rw' Fw L2 U' Fw B2	
	R2 F' L' Rw B	
2.	Uw B' Uw' Fw' Uw B' U	
	R D' R' L2 Uw' D' U'	
	L2 R2 Fw R F R' Fw'	
	B' U' R' Rw2 B' U B	
	Uw' Fw L F2 Rw Uw2 Fw'	
	Rw2 F2 L2 Fw D'	
3.	Uw2 Fw' Rw' U F' D2 F2	
	Uw F U' F' Fw Rw' B'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

1.	Rw2 L2 Dw Rw Dw Fw' Bw' Dw2 Bw' R D2 F D' Dw2 Uw Lw' Fw' R' L' Uw2 U2 Lw' R' Bw D2 Lw' D2 Uw' B Fw' U' B U D L2 Fw Lw Rw2 D' Uw2 B L U F2 D2 Fw D' F' Bw R Dw' U2 Bw L2 Bw2 Lw' Bw B R2 Rw2	
2.	Lw' L F' B D2 B' U2 Rw' F Fw Bw2 Dw2 B Fw' Rw' Dw' Fw Rw2 L2 Uw' B2 Dw2 D' Uw2 Lw' U2 Rw' B Uw' F Dw2 U2 B' Dw2 Uw2 U2 F2 R2 F Fw L' D' Dw' Bw U2 Lw2 Rw2 F' D Lw F Bw' Dw2 D2 L Fw' L Dw2 L Dw	
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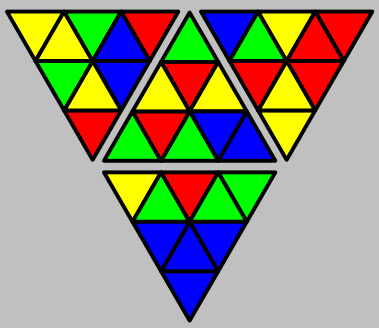
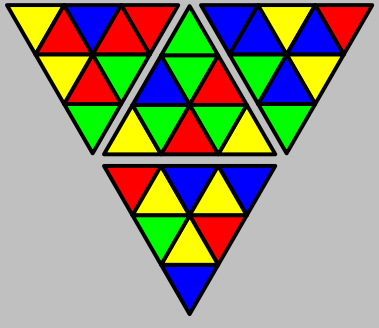
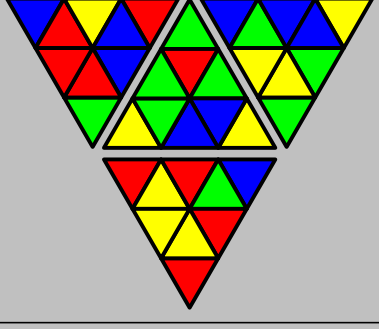
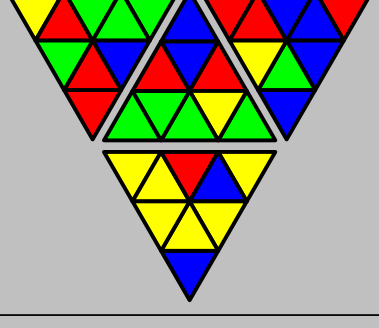
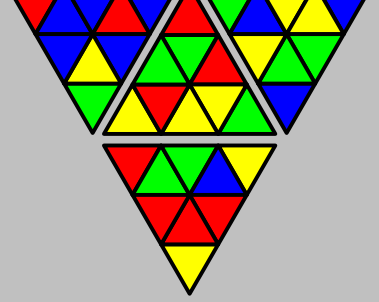
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	Uw'	Dw2	F	Bw	Uw2	L'
	Dw	Uw	L	B'	3Rw'	F
	L2	Uw	F	R	Fw2	R
	Fw	Bw	Lw2	Uw	3Uw2	Bw'
	R'	Rw'	F	D'	R	3Uw2
	B	Bw'	3Rw2	U2	R2	Dw'
	D	Rw'	D'	L2	U	Dw
	3Rw2	Rw	Uw	Fw2	Rw2	Dw2
	Fw'	R'	Lw'	3Rw'	Dw'	L
	F	L2	Uw'	3Rw2	R2	3Uw2
	Dw'	U'				
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	U	B'	D	Dw'	L'	Lw2
	R2	3Rw2	B	Uw'	Fw	D'
	3Fw'	Fw	3Uw'	U2	Bw'	U2
	Fw2	B2	Dw2	B	3Fw2	3Rw
	U	Lw'	3Rw	Uw2	Fw	Lw2
	Rw'	Uw				
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	R'	Rw2	Uw2	F'	B2	Uw
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	U	Rw	L	F'	Rw	L'
	U'	Dw2	B'	U'	L	Bw'
	Lw'	3Fw	Rw2	R'	B'	3Uw'
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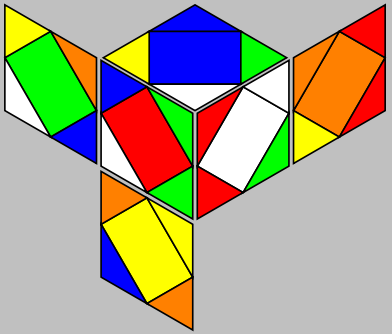
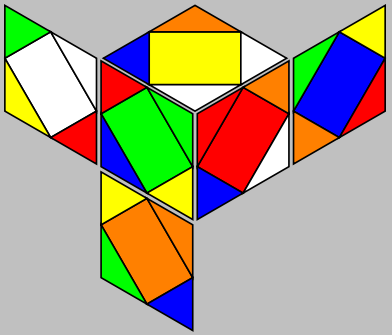
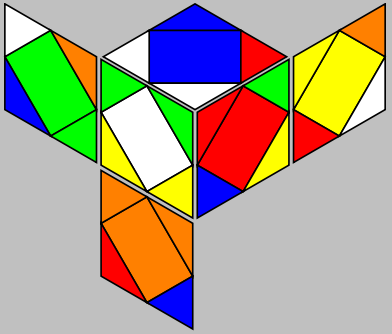
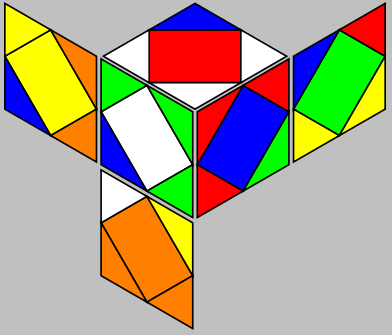
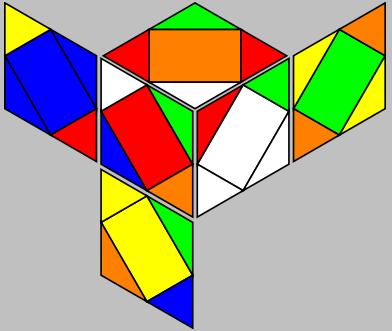
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U2	3Bw'	D'	R'	L	Uw2	F2																																																																																																					
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B'	D'	3Dw2	3Uw'	Bw'	3Bw'	Dw'																																																																																																					
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3Uw	F'	Bw	3Bw	Lw2	Dw2	3Lw																																																																																																					
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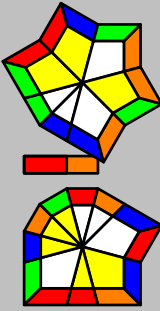
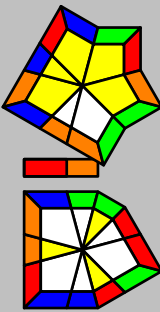
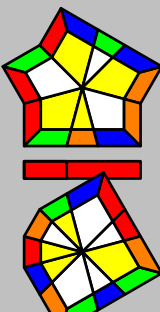
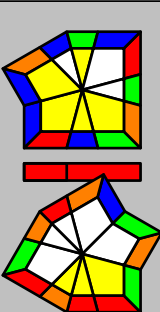
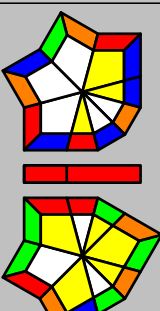
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B'	U'	L2	R																							
U	B'	L'	R2																							
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3.	<table><tr><td>D'</td><td>F2</td><td>D2</td><td>U'</td></tr><tr><td>F2</td><td>L2</td><td>D</td><td>L2</td></tr><tr><td>R2</td><td>U</td><td>B'</td><td>U2</td></tr><tr><td>B'</td><td>L'</td><td>U2</td><td>L'</td></tr><tr><td>U2</td><td>F'</td><td>R</td><td>D</td></tr><tr><td>U</td><td>Rw'</td><td>Uw'</td><td></td></tr></table>	D'	F2	D2	U'	F2	L2	D	L2	R2	U	B'	U2	B'	L'	U2	L'	U2	F'	R	D	U	Rw'	Uw'		
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F2	L2	D	L2																							
R2	U	B'	U2																							
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U2	F'	R	D																							
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1.	$D'$ $R^2$ $B'$ $D'$ $R'$ $D'$ $B^2$ $U'$ $R'$ $F^2$ $U$ $D^2$ $L^2$ $B$ $L^2$ $D^2$ $F$ $R^2$ $F^2$	
2.	$F^2$ $D'$ $L$ $F$ $L$ $U'$ $R'$ $D'$ $L^2$ $B'$ $R$ $U'$ $F^2$ $D$ $B^2$ $U'$ $R^2$ $U'$ $F^2$ $B^2$	
3.	$L^2$ $D^2$ $B$ $L^2$ $R^2$ $D^2$ $B$ $F^2$ $D^2$ $R^2$ $U$ $R^2$ $B'$ $U'$ $F$ $D$ $B'$ $R$ $B^2$ $L^2$	
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5.	$U^2$ $R$ $L^2$ $B'$ $D'$ $B'$ $U^2$ $L$ $D^2$ $F$ $U$ $L^2$ $F^2$ $D$ $L^2$ $D^2$ $B^2$ $U^2$ $B^2$ $U$ $R^2$	



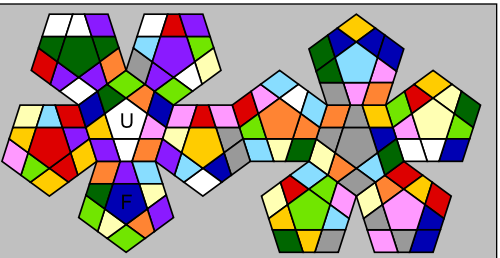
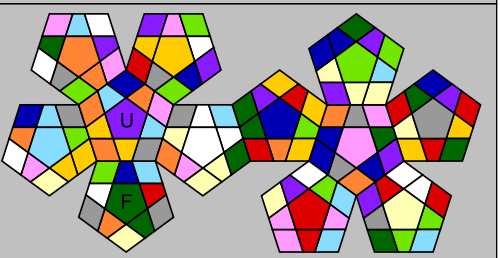
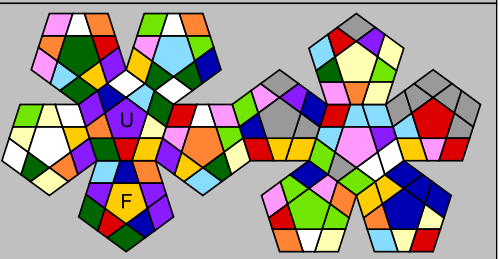
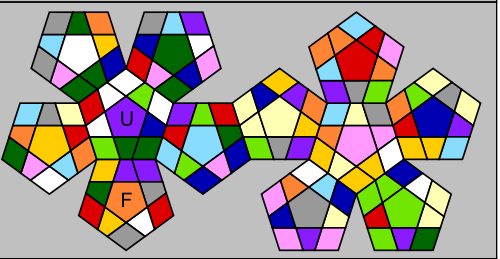
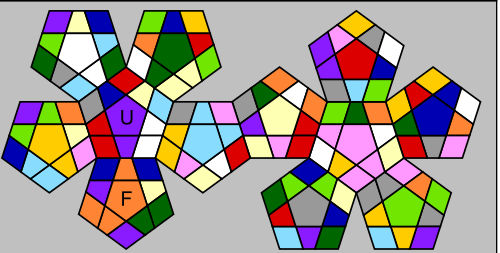
1.	$U B U L' R' L' B R' B' R B u l'$	
2.	$U B R' B R L U' R B R' L' l' r b'$	
3.	$R B L U B U' R U L' B U u l' r' b$	
4.	$B L R B' U' R' L' R L' U' L r' b'$	
5.	$U' L' U R' U B L R U' L R u' l r' b'$	

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

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

2019-05-18

minx  
Scrambles for 2019-05-18

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'	
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'	
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	
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'	
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'	
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	R-- D++ R++ D-- R-- D++ R-- D-- R-- D++ U	
	R-- D++ R-- D++ R-- D-- R-- D++ R++ D++ U	

1.	<div>UR4- DR4+ DL5- UL5-</div> <div>U4+ R5+ D1- L4-</div> <div>ALL5+ y2 U1+ R2+</div> <div>D1+ L3+ ALL4+ DR</div>	
2.	<div>UR2+ DR2- DL3- UL1+</div> <div>U0+ R2- D2- L0+</div> <div>ALL6+ y2 U0+ R5+</div> <div>D2+ L5+ ALL4+ UR</div> <div>DR DL UL</div>	
3.	<div>UR1- DR3+ DL1+ UL2+</div> <div>U2+ R5- D5- L5-</div> <div>ALL4- y2 U5+ R5-</div> <div>D2+ L0+ ALL0+ UR</div>	
4.	<div>UR2- DR3- DL4- UL6+</div> <div>U5- R6+ D0+ L6+</div> <div>ALL4- y2 U5+ R4+</div> <div>D4+ L1+ ALL4- UR</div> <div>UL</div>	
5.	<div>UR2- DR2+ DL1- UL4+</div> <div>U6+ R1- D6+ L2+</div> <div>ALL0+ y2 U6+ R1-</div> <div>D5- L1+ ALL3- DL</div> <div>UL</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]

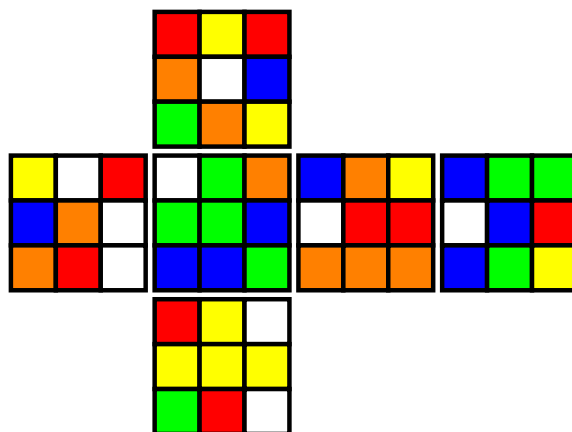
Scrambles for 2019-05-18  
333fm

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

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

DO NOT FILL IF YOU ARE THE COMPETITOR.

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



Scramble: R' U' F U L2 F2 L2 U2 B2 U' B2 D' R2 F D2 L' R B' D' R U L' B2 F2 R' U' F

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

## 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]

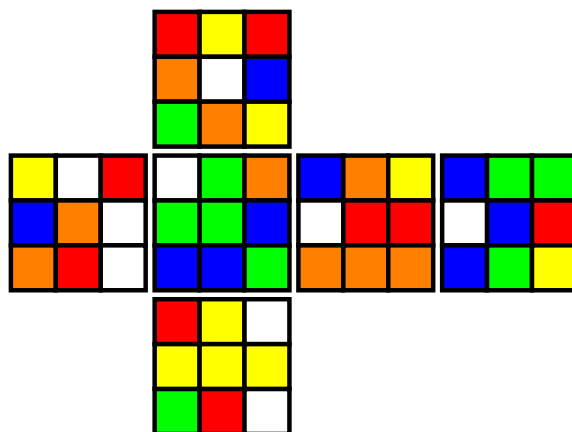
Scrambles for 2019-05-18  
333fm

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

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

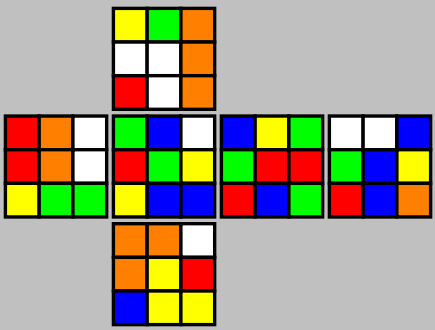
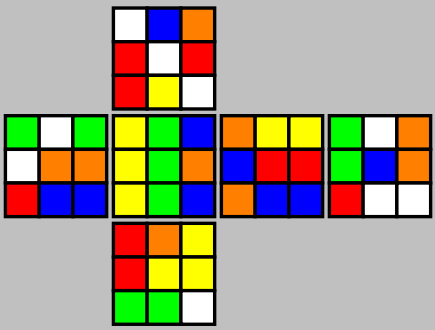
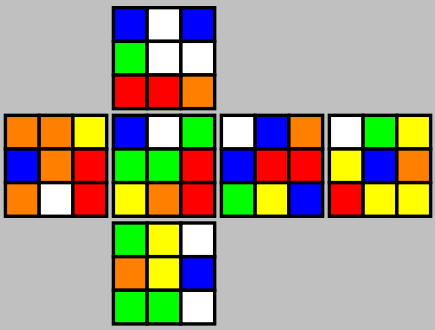
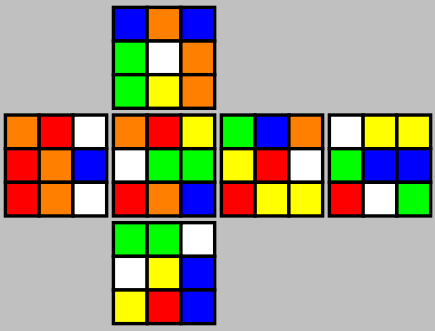
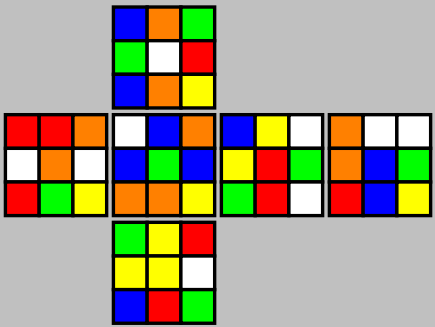
DO NOT FILL IF YOU ARE THE COMPETITOR.

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



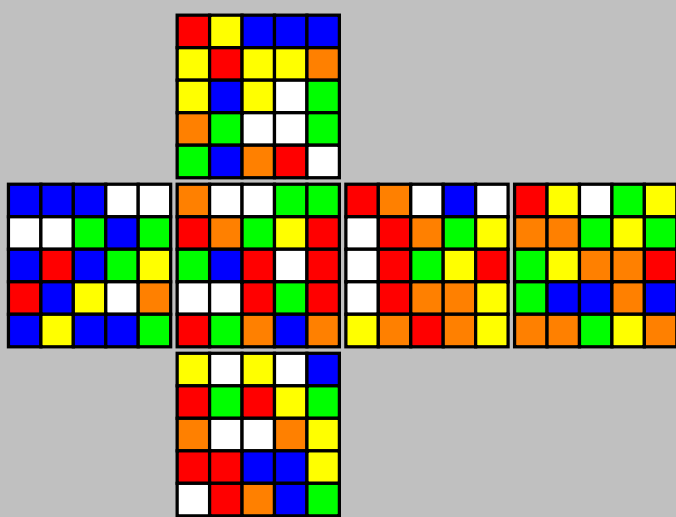
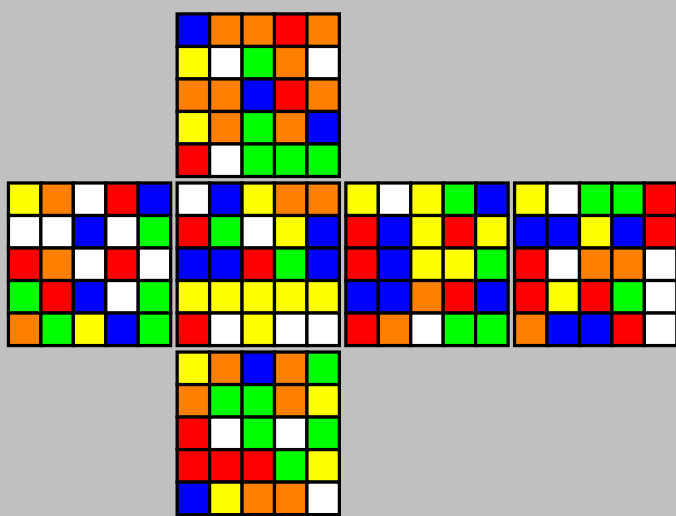
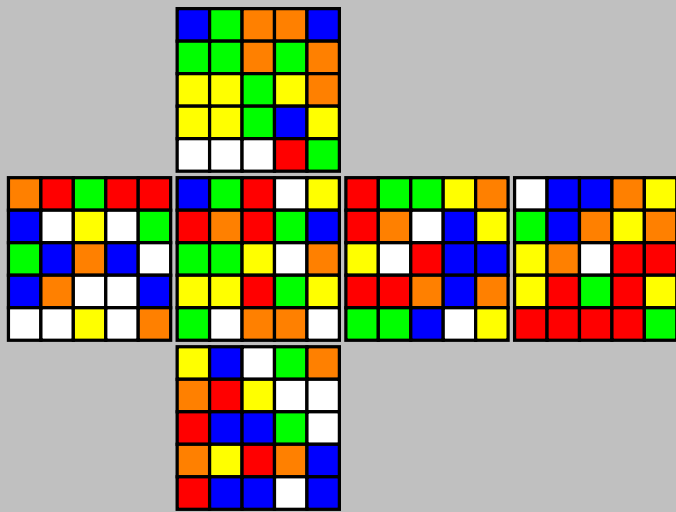
Scramble: R' U' F U L2 F2 L2 U2 B2 U' B2 D' R2 F D2 L' R B' D' R U L' B2 F2 R' U' F

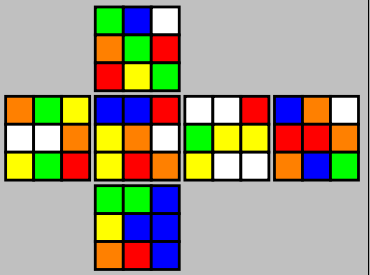
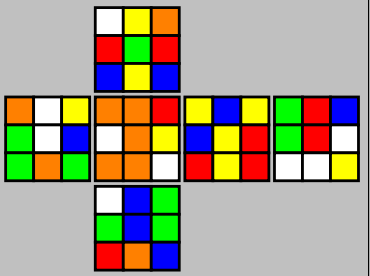
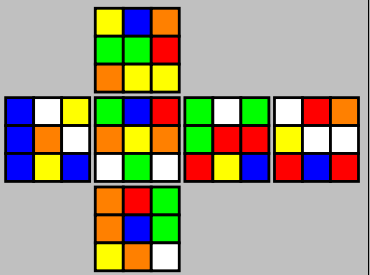
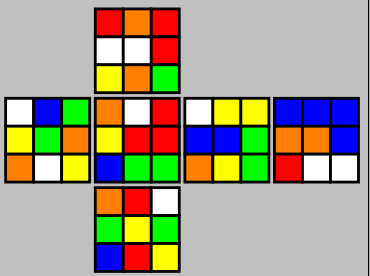
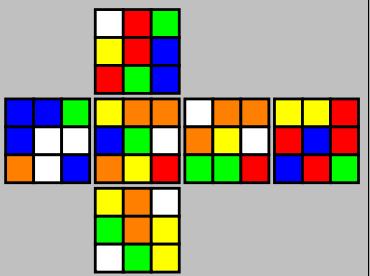
This image shows a full page of blank graph paper. The grid consists of evenly spaced horizontal and vertical lines forming small squares across the entire area. There are no margins, text, or other markings on the page.

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



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

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

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

6.	B2	D2	F2	L2	B	L2	R2
	B	D2	L'	R	B	F2	U
	R	D	F	L'	U'	F	Rw
	Uw2						

