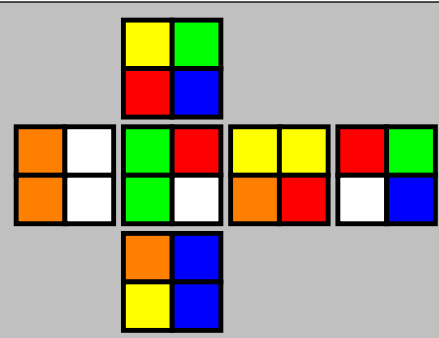
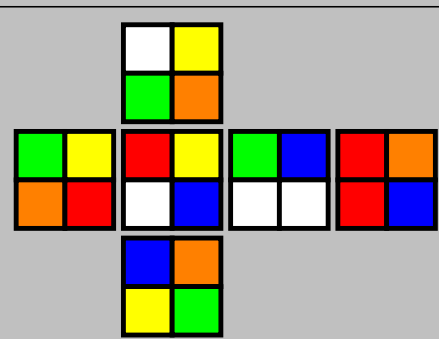
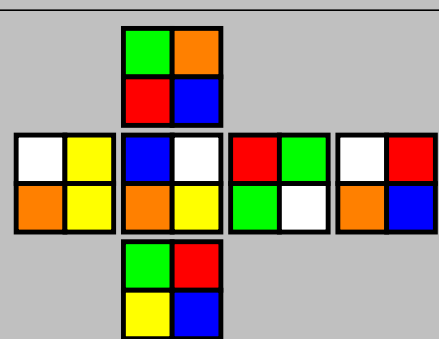
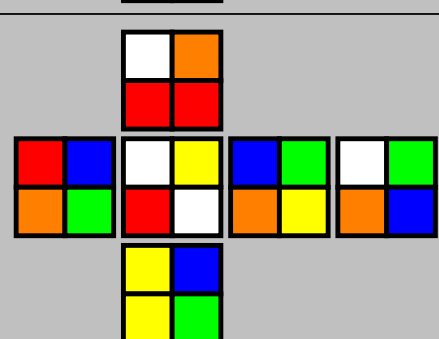
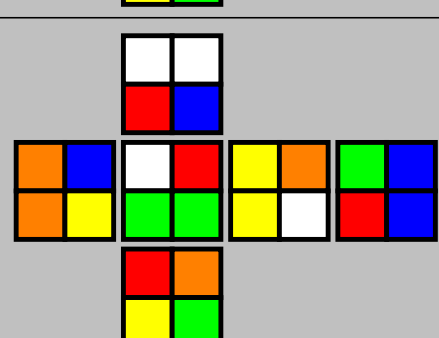
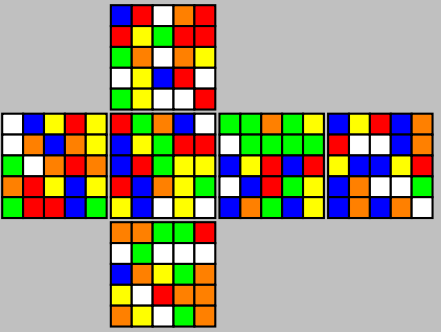
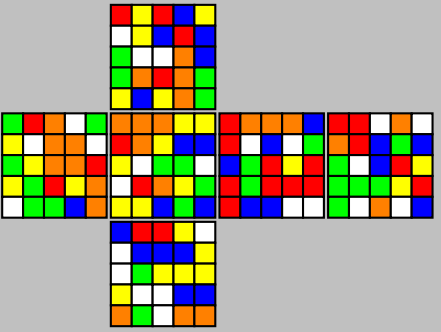
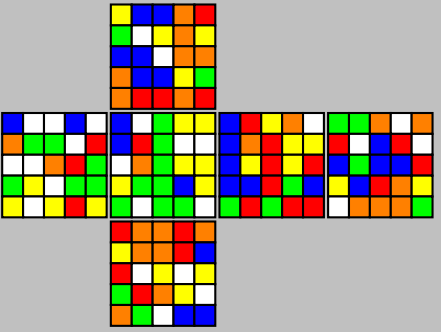
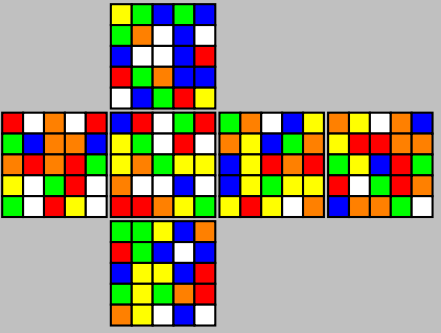
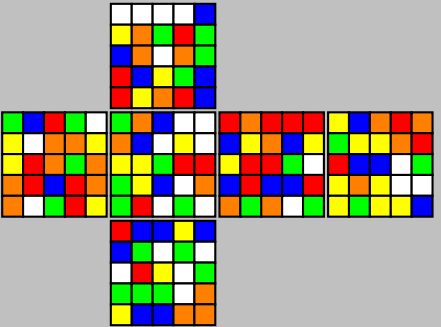


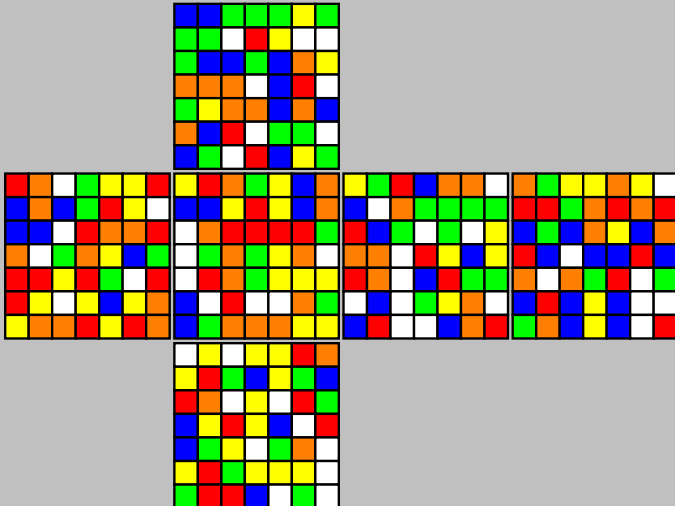
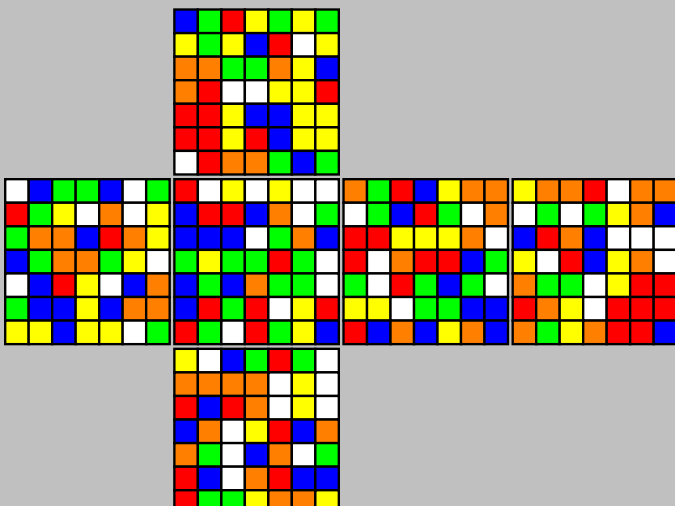
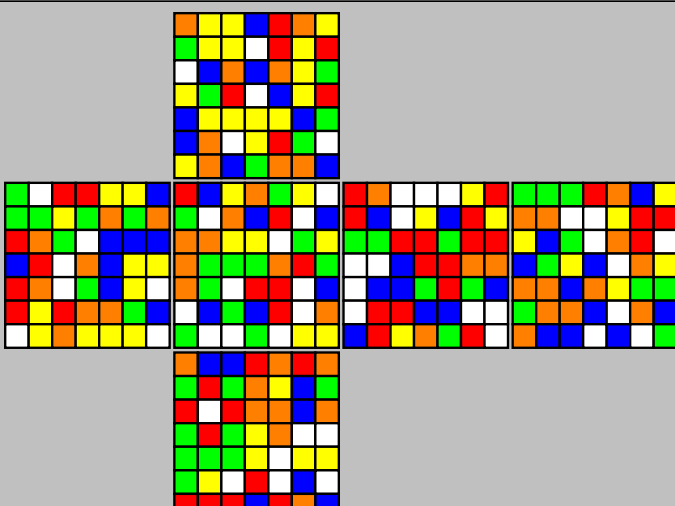
1.	<p>B L2 B' L2 U2 F2 U2 B</p> <p>L2 B2 D2 R' F D2 R D2</p> <p>U2 R' D' F' L'</p>	
2.	<p>F2 U' F2 D' B2 F2 U' R2</p> <p>D2 F' D' U2 L' U2 F' R</p> <p>B L' U R</p>	
3.	<p>U2 L2 B' U B' D2 L F</p> <p>U2 B2 L' F L2 B2 L2 B2</p> <p>U2 F' B2</p>	
4.	<p>R2 B' D' R U2 L' U' L</p> <p>U' B U' B2 U' B2 R2 D'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

1.	$R U' R^2 U R^2 U^2 F' U' F' U^2 R^2$	
2.	$U' R U R U' F' R^2 F U' F U^2$	
3.	$R' F U' R U' R U R^2 U' F U$	
4.	$U' R U^2 F' R^2 F' U' F' R U R$	
5.	$R U^2 R^2 F U' R^2 U' R' U F U^2$	

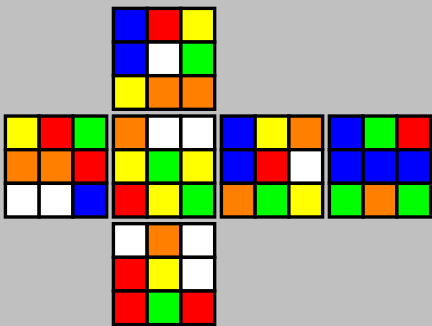
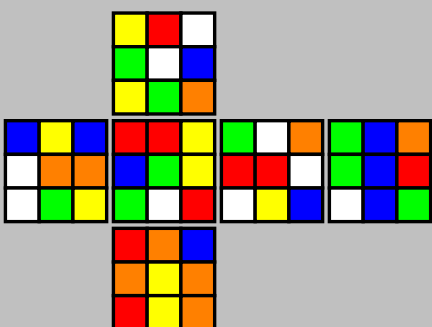
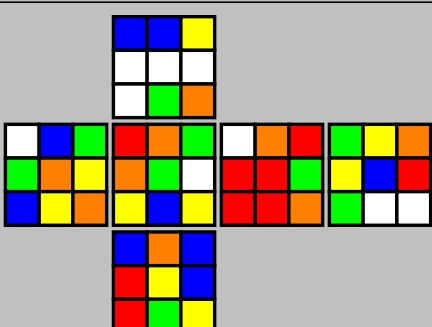
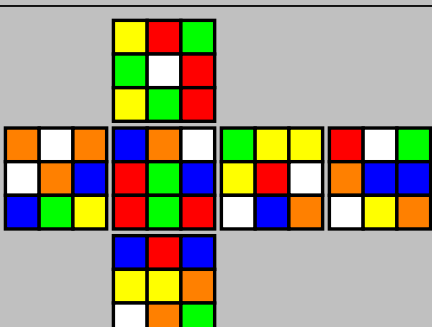
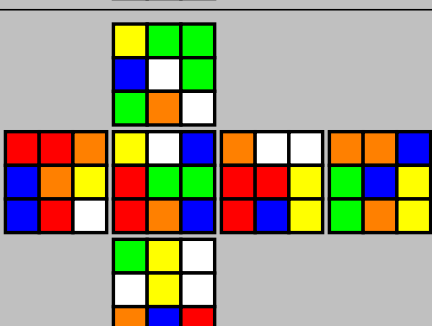
1.	F2	U2	Uw2	L	U	F2	Fw
	B2	D2	U'	R'	Uw2	Rw'	U'
	R	Rw2	F'	U2	R'	B'	L2
	R'	D'	Fw	U2	F'	L'	Uw'
	R2	Rw2	B2	L'	B	R	Rw2
	Uw2	B'	Fw	R2	B2		
2.	L'	Fw2	Uw'	B2	D	B'	L2
	F'	Fw2	D2	Uw2	F	R2	Fw'
	U	Uw	R'	D	R'	Uw'	R
	B	Uw'	U2	Fw	D2	R	Uw2
	R	D2	Rw	Fw	U'	Rw2	F2
	Rw	Fw	D'	Fw2	R'		
3.	Rw2	B	U'	B'	L2	R'	Fw
	L2	D	U2	B	L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

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

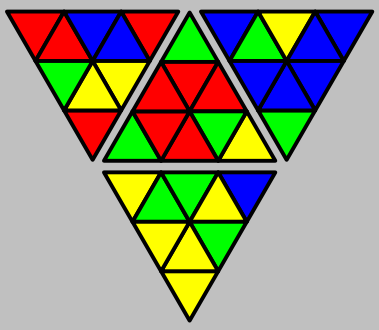
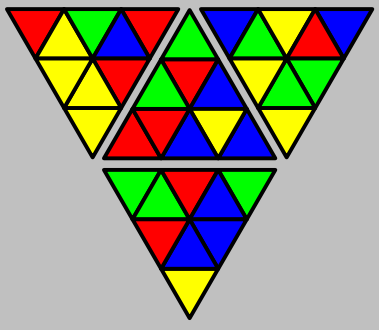
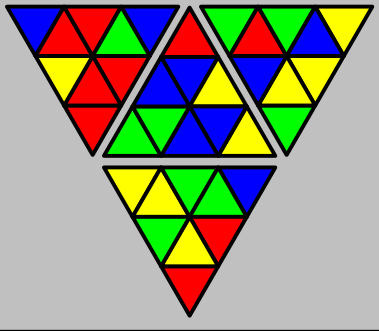
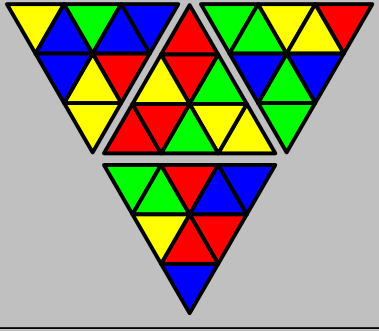
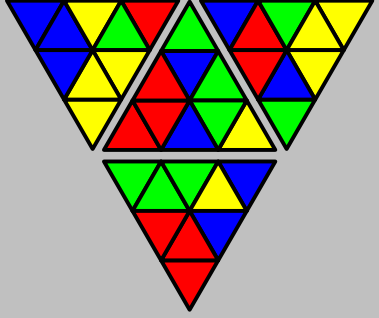
1.	F	Fw'	Lw	3Fw	F	U
	Dw'	D	L'	Fw'	Lw	Dw'
	Fw'	L2	Lw'	Uw'	3Fw2	3Rw
	Fw2	L'	Bw2	3Fw	D'	Dw2
	3Rw	Lw	D'	U	3Rw'	R'
	U	F2	B	L2	Dw'	Bw2
	Dw'	Lw	Bw'	L	3Uw2	U2
	Uw	B'	U	L2	Dw	3Rw2
	Rw	3Uw	B'	Bw	L2	Uw2
	3Uw	3Fw'	Rw'	3Fw2	D	F2
	3Fw'	L2	3Fw2	3Rw2	R	D
	B2	Fw2	L'	Bw'	Fw'	3Uw
	F'	3Fw2	Bw'	U2	3Fw	Rw2
	Bw2	D				
2.	F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

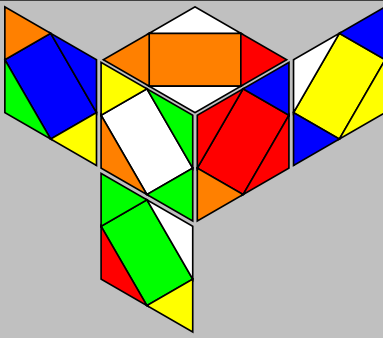
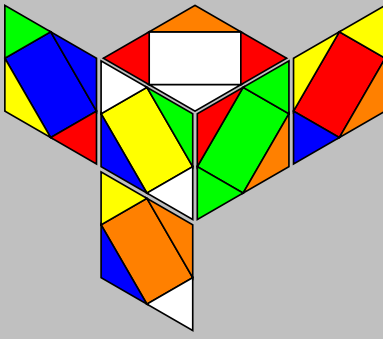
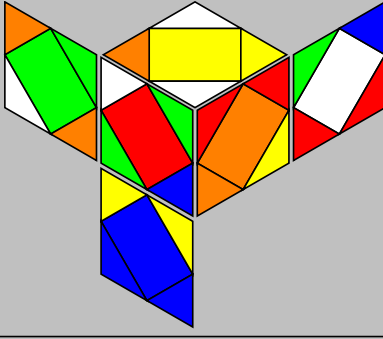
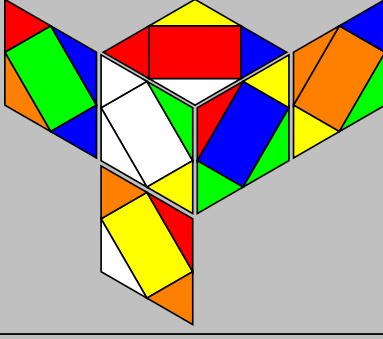
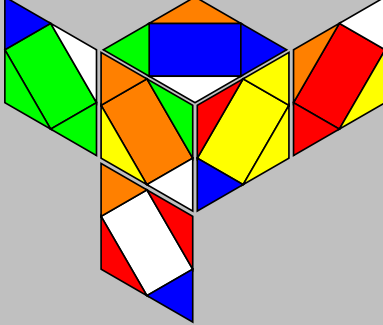
1.	<table><tr><td>3Bw</td><td>Bw'</td><td>Fw</td><td>B2</td><td>L2</td><td>D</td><td>R'</td></tr><tr><td>3Dw'</td><td>Uw</td><td>R'</td><td>3Lw</td><td>D2</td><td>U'</td><td>3Rw</td></tr><tr><td>B</td><td>3Dw'</td><td>Rw</td><td>F'</td><td>Lw</td><td>Dw'</td><td>R</td></tr><tr><td>B'</td><td>3Rw2</td>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

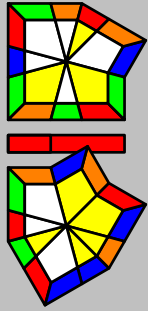
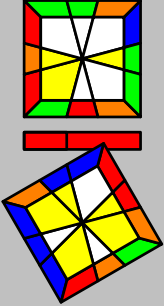
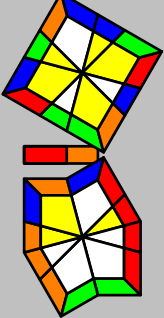
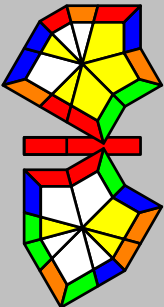
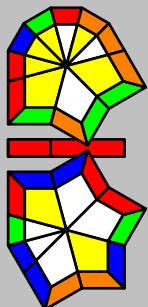
1.	<div> R      F2      D2      L  F2    D2    L'    F2  R'    U2    F2    D'  L'    B'    D'    L'  U     L     R2    D  B     Uw' </div>	
2.	<div> L2    F2    U2    F2  L'    D2    L    D2  F'    U'    R    D'  U2    B'    R    U  B'    F2    D2    Rw'  Uw2 </div>	
3.	<div> U2    F      U2    F2  D2    F      L2    B2  R2    B'    L2    D'  L     B'    L2    D'  B     F2    D2    R2  Fw'   Uw' </div>	

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



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

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

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

2019-06-04

minx  
Scrambles for 2019-06-04

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' 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>UR4+ DR0+ DL1- UL1+</div> <div>U1- R2- D4- L1-</div> <div>ALL6+ y2 U2- R1-</div> <div>D6+ L5+ ALL3+ UR</div> <div>DR DL UL</div>	
2.	<div>UR4+ DR4+ DL2- UL5+</div> <div>U4- R1+ D4- L1-</div> <div>ALL6+ y2 U6+ R3+</div> <div>D3- L0+ ALL1+ UR</div>	
3.	<div>UR3+ DR5+ DL1+ UL3+</div> <div>U3+ R4- D2- L4+</div> <div>ALL3- y2 U6+ R3+</div> <div>D5- L1+ ALL5+ UL</div>	
4.	<div>UR5- DR0+ DL0+ UL1-</div> <div>U1- R5+ D3+ L3-</div> <div>ALL3+ y2 U0+ R4+</div> <div>D5- L2- ALL2- UR</div> <div>DR DL</div>	
5.	<div>UR5+ DR2+ DL5- UL0+</div> <div>U0+ R2- D4- L2-</div> <div>ALL3- y2 U3+ R0+</div> <div>D3+ L4+ ALL5+ 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]

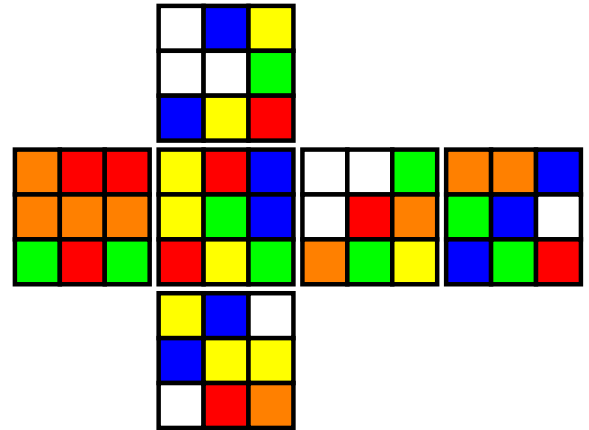
Scrambles for 2019-06-04  
333fm

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

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

DO NOT FILL IF YOU ARE THE COMPETITOR.

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



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

[illegible]

## 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]

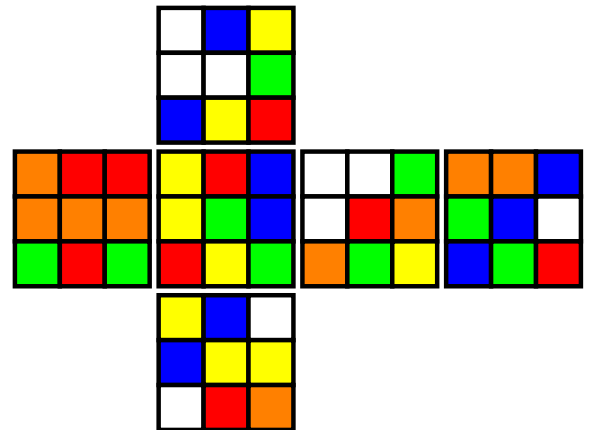
Scrambles for 2019-06-04  
333fm

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

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

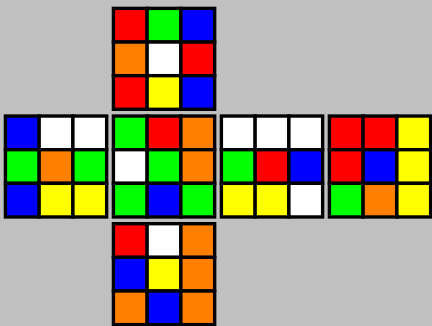
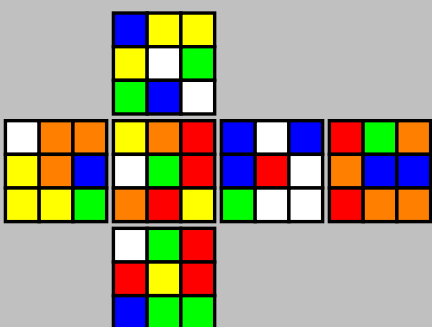
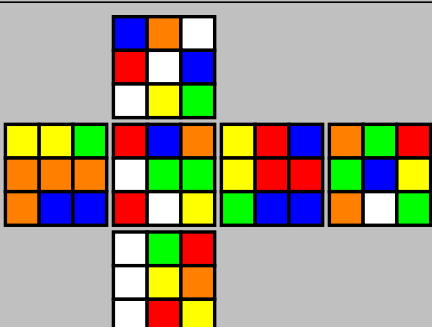
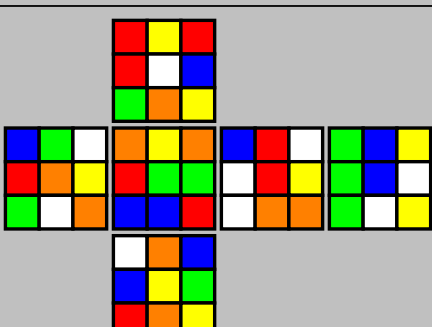
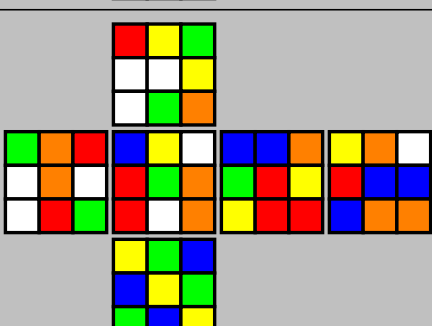
DO NOT FILL IF YOU ARE THE COMPETITOR.

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

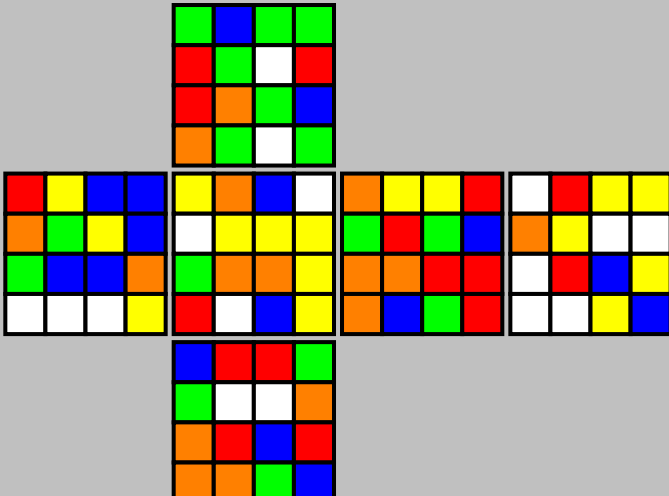
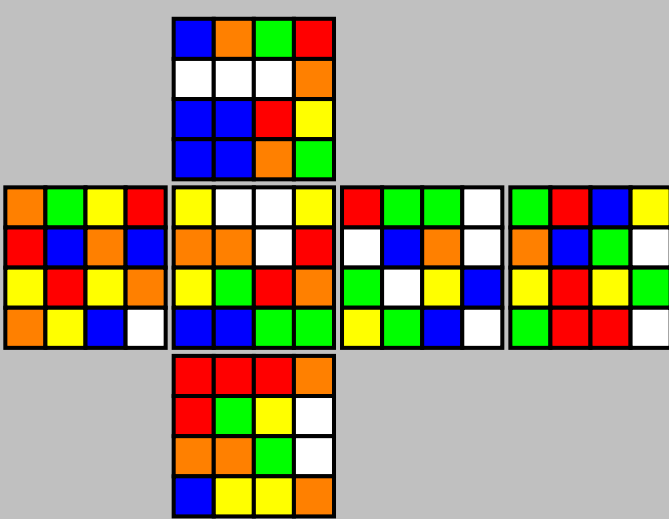
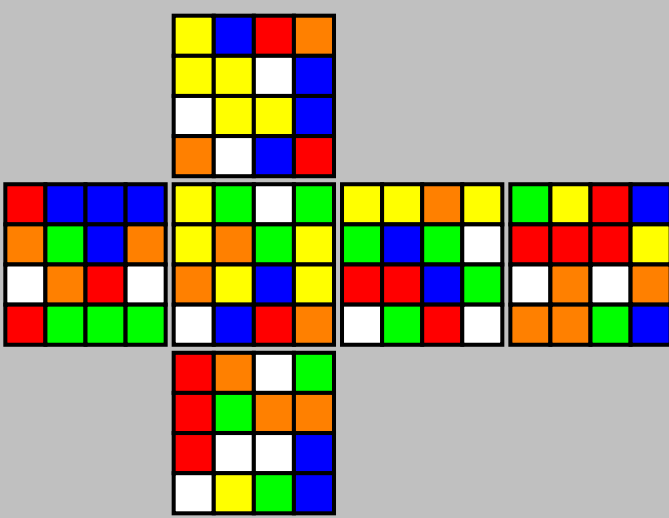


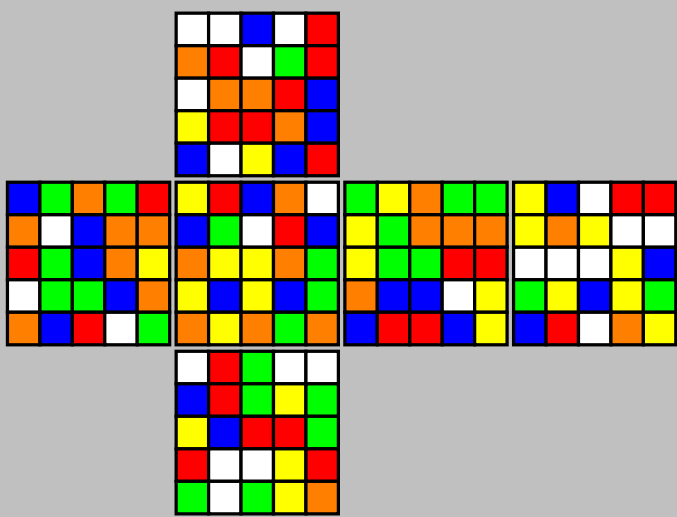
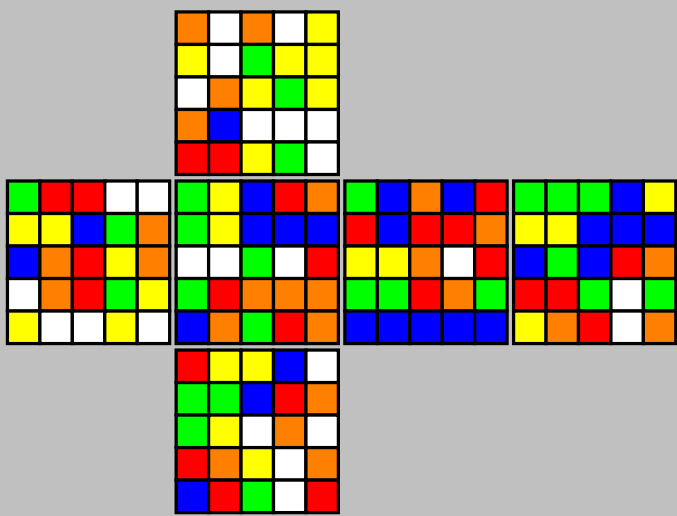
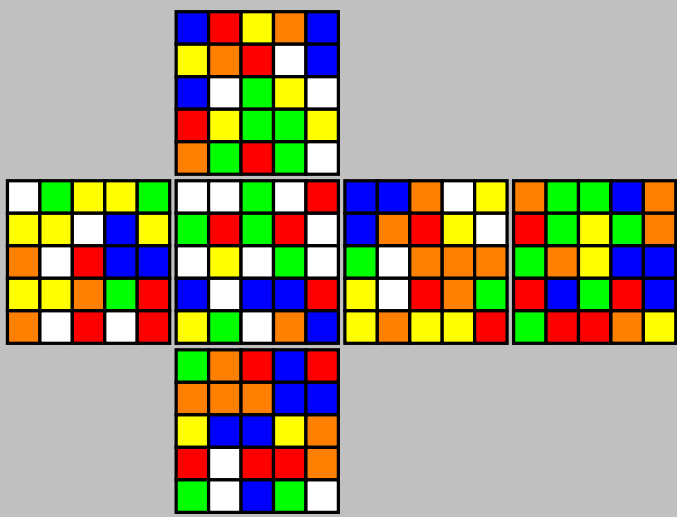
Scramble: R' U' F R' B2 D2 L' B2 U2 L' U2 R' F2 U2 F' L' D' F2 U L R2 D2 F R' U' F

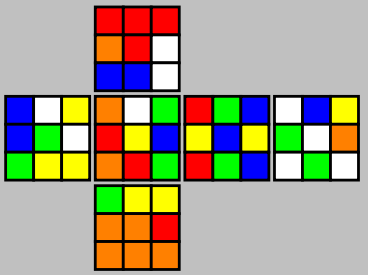
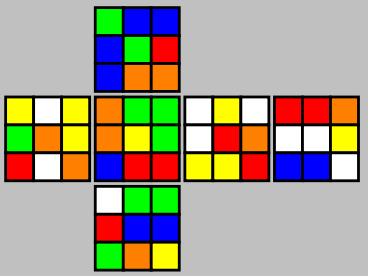
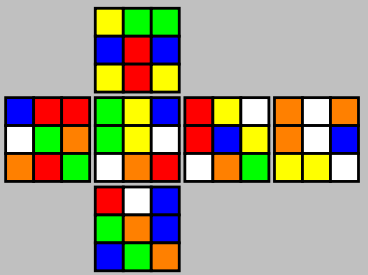
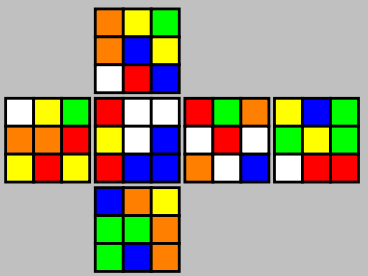
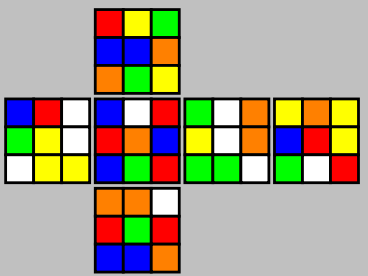
[illegible]

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



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

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

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

6.

F      U2    B      U2    B2    L2    U2

F    D2    U    R'    D'    F'    L'

R    D    B'    F2    U2    L'    Fw'

Uw