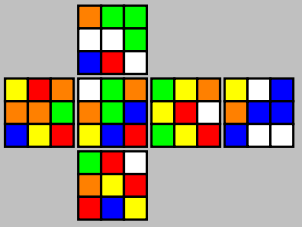
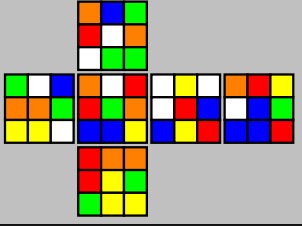
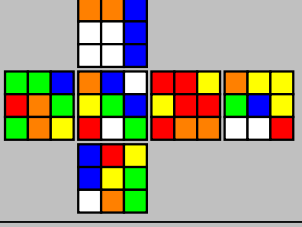
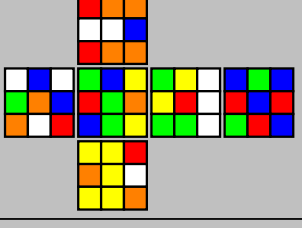
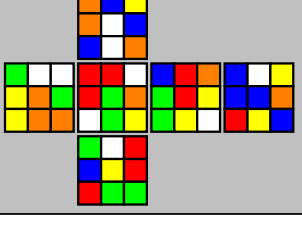
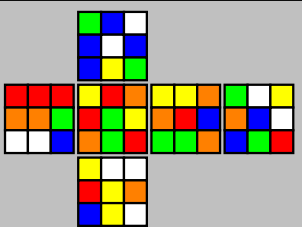
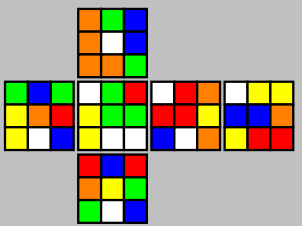
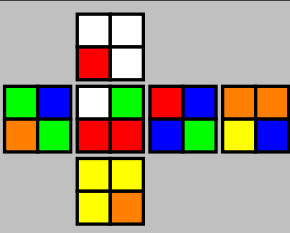
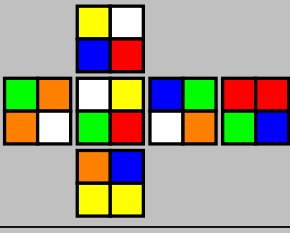
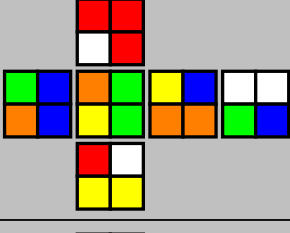
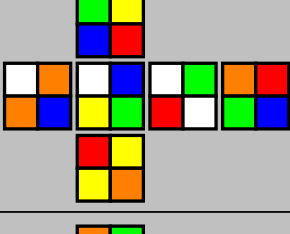
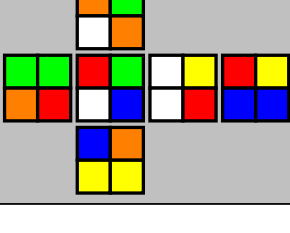
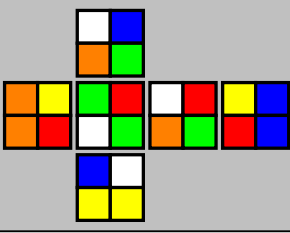
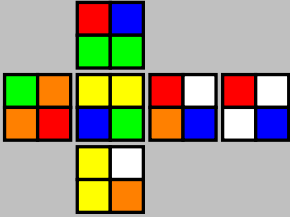


|                 |  |   |
|-----------------|--|---|
| 1.              | D2 F2 U2 L2 B2 U2 L' B2 L F2<br>L D' U F L' U R' F U' B'<br>L2 |    |
| 2.              | R2 U R2 D' R2 U B2 R2 B2 L<br>B L' D F2 R' D2 U' F' L U        |    |
| 3.              | R B2 L B2 F2 L' D2 L B2 U<br>L2 F D2 U R U F R2 F              |    |
| 4.              | U2 D' R D2 L2 U F B' D R2<br>B' U2 L2 D2 F2 U2 B2 R2 B' D2     |   |
| 5.              | L' F B U' L B2 D' F' D2 R<br>U L2 B2 D2 R2 U R2 F2 U2 R2       |  |
| Extra scrambles |  |   |
| E1.             | D2 U2 L R2 B2 R' U2 R2 F<br>U' L U2 B' D2 L2 U R2 B'<br>F'     |  |
| E2.             | L2 B2 R2 D2 U' F2 D' L2 D'<br>R2 U2 B L D F2 U' R' B<br>D R F2 |  |

|                 |                               |   |
|-----------------|-------------------------------|---|
| 1.              | R U' R' U R' F U R2 U2 R2 F   |    |
| 2.              | R2 U2 R U R' U2 F' R U' R U'  |    |
| 3.              | U' R F' R' F' U' R2 U' F R U' |    |
| 4.              | R F' U2 R2 F U' F R' U' F U'  |   |
| 5.              | U R U2 R2 U2 F R U R F R      |  |
| Extra scrambles |                               |   |
| E1.             | U R U2 R' F' R' U R' U' R U'  |  |
| E2.             | R' U' R U2 R U' F U F U2 F'   |  |

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# 4x4x4 Cube Round 1

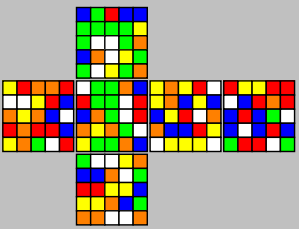
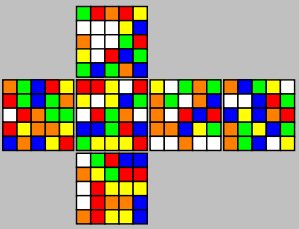
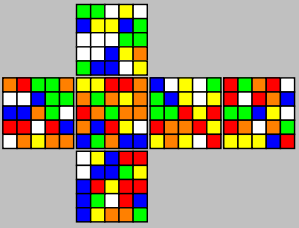
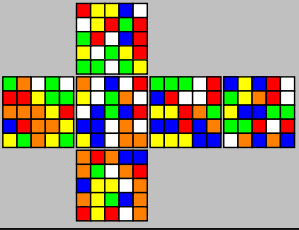
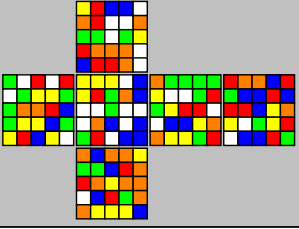
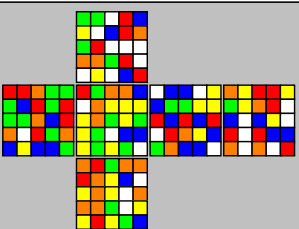
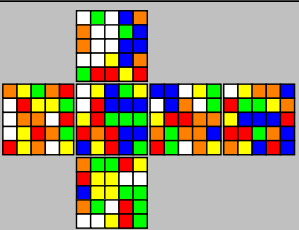
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|                 |     |     |     |     |     |     |     |     |     |     |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1.              | R   | L   | D2  | R   | F2  | B2  | R2  | L'  | B2  | L'  |
|                 | U'  | L2  | U'  | L'  | D'  | U   | L   | B   | R'  | Fw2 |
|                 | R'  | F'  | B   | Uw2 | R   | Fw2 | L2  | F2  | R   | Uw2 |
|                 | B'  | R2  | Uw  | L   | F'  | Rw2 | Fw2 | U   | Fw  | Uw  |
|                 | F'  | D2  | Fw2 | U   |     |     |     |     |     |     |
| 2.              | D2  | R2  | U'  | R   | D'  | B'  | L2  | F'  | R   | U'  |
|                 | L   | B2  | F2  | L   | R2  | D2  | L   | U2  | Fw2 | U   |
|                 | Rw2 | L   | U   | Fw2 | R'  | U'  | Fw2 | D   | U   | Rw2 |
|                 | F2  | Fw' | D   | R   | B   | D'  | L2  | Rw' | Fw  | B2  |
|                 | F'  | Rw  | Fw' | B'  |     |     |     |     |     |     |
| 3.              | U   | F'  | R   | B   | U'  | F'  | D'  | B'  | U2  | R'  |
|                 | B2  | U'  | R2  | D   | F2  | U'  | B2  | R2  | U'  | Rw2 |
|                 | F'  | U   | B   | Uw2 | D'  | Rw2 | F'  | D   | L2  | R2  |
|                 | Rw  | D'  | Rw2 | R'  | D   | Fw' | U   | D2  | R2  | Fw' |
|                 | Rw  | D   |     |     |     |     |     |     |     |     |
| 4.              | L2  | F2  | U2  | R2  | D2  | R2  | F'  | L2  | F'  | D'  |
|                 | B   | L   | B'  | D2  | L   | U   | L   | F'  | L   | F'  |
|                 | Uw2 | R'  | B   | F'  | Rw2 | B   | R'  | Fw2 | R   | F'  |
|                 | Rw2 | B   | Uw' | U'  | L   | F'  | U   | R   | Rw' | D2  |
|                 | Fw' | Uw2 | B2  | U2  | Rw  |     |     |     |     |     |
| 5.              | U2  | L2  | D2  | B   | U2  | F'  | R'  | B'  | D'  | U2  |
|                 | F2  | R2  | F2  | L   | U2  | R'  | L'  | F2  | Fw2 | Uw2 |
|                 | D'  | Rw2 | L   | U'  | L'  | Uw2 | U   | B2  | L'  | D   |
|                 | Fw' | F'  | U'  | Rw2 | L2  | U   | Uw  | L   | U'  | Fw  |
|                 | R'  | L   | Uw' |     |     |     |     |     |     |     |
| Extra scrambles |     |     |     |     |     |     |     |     |     |     |
| E1.             | R2  | F'  | L   | F2  | R2  | U   | B2  | R   | B   | R2  |
|                 | D2  | L   | U2  | R'  | B2  | L'  | U2  | L'  | B2  | R   |
|                 | Fw2 | Rw2 | R2  | Uw2 | R2  | D2  | R'  | F2  | Uw2 | F'  |
|                 | R2  | Uw' | F'  | Uw' | F'  | R2  | Rw' | B2  | L2  | Uw' |
|                 | Fw  | D   | F'  |     |     |     |     |     |     |     |
| E2.             | D'  | B2  | L2  | F2  | R2  | U'  | L2  | F2  | R'  | F2  |
|                 | U   | B   | D'  | U   | R   | D'  | L2  | D   | Uw2 | Fw2 |
|                 | U   | R'  | U   | Rw2 | D   | L   | Fw2 | B2  | Rw2 | L   |
|                 | Fw' | R'  | B2  | L2  | D'  | Fw' | B2  | Rw  | U'  | L'  |
|                 | Uw' | Fw  | B   |     |     |     |     |     |     |     |

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# 5x5x5 Cube Round 1

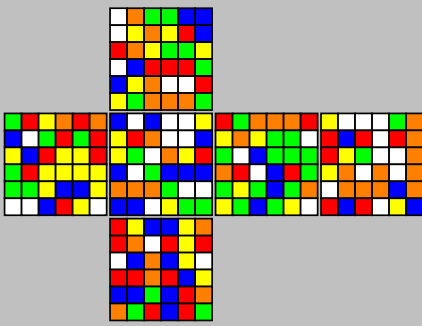
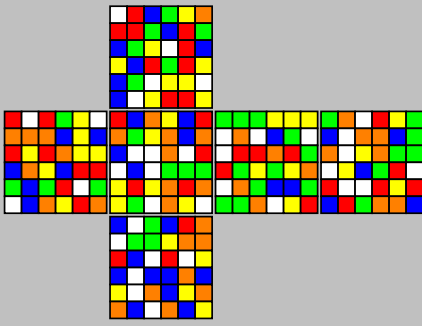
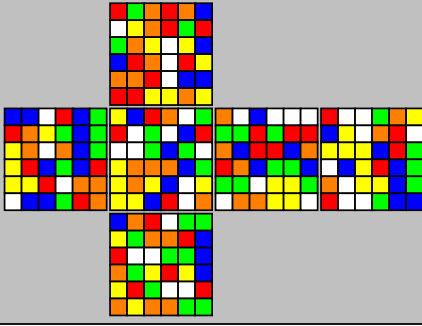
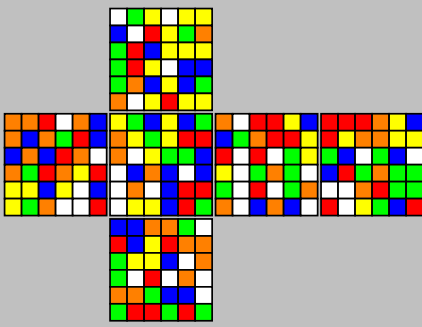
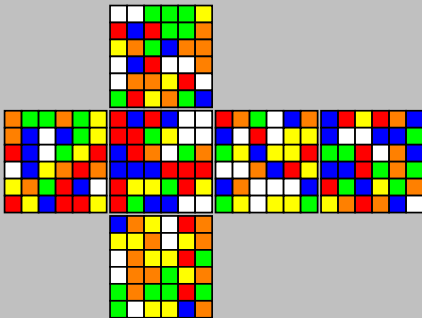
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|                 |   |   |
|-----------------|---|---|
| 1.              | U2 Rw' Fw L' D2 U Fw Bw' L R U B<br>Bw2 Rw D2 L' U2 Lw' D2 Dw F' Uw Bw' Dw<br>Rw2 L F2 D B Bw' Uw Bw Uw2 Lw2 Rw D2<br>Dw2 Fw2 D F D' Rw' U' Bw R2 Dw F' U<br>D L2 Bw2 Fw2 R' Fw F' Bw2 Dw' U2 B U2                |    |
| 2.              | B' Bw' Dw L' Uw2 Bw2 D Fw2 U2 Rw R' Fw<br>Rw Uw2 D R' Dw Rw' U' Bw' Lw' Rw2 U Bw<br>B2 Uw U2 D2 Dw Bw Lw2 Fw2 Dw' D' Uw' Lw2<br>Bw2 L2 Lw D R' Lw Rw D' Fw' Bw R' Dw'<br>Rw2 Uw2 Dw' R' L Rw' Lw Dw2 Rw2 F' L Uw' |    |
| 3.              | Bw' Uw' Fw Rw' F Uw' B' L2 Bw2 F2 Rw' Dw2<br>U' Bw' D' U2 B Uw2 Bw' Dw2 Bw' F' L2 B<br>Uw2 Dw Lw Fw2 Lw' Uw' R Rw D2 Dw2 Rw' B<br>R' Fw' L' Dw Bw2 D' Fw Uw' Fw2 D' B R2<br>L B' Uw' F Dw L R' B F D L' D         |    |
| 4.              | Lw' U Dw' F Rw Fw' R Rw' U F Fw' D2<br>U' R2 B' U2 F' Dw' R' Lw2 Uw U' Dw2 F2<br>Fw' U2 F' L R' Fw2 D Rw Fw Uw2 F2 Bw'<br>Lw B Bw F' Rw Dw Lw Rw Fw2 L2 Lw Dw2<br>Bw2 Fw2 L' Dw2 F' Fw' Lw' L F D2 Dw2 R          |   |
| 5.              | L' U2 L' F B2 Rw2 Lw Bw' Lw2 B2 Rw' Lw2<br>R' Fw L2 B2 Rw' F Lw' Rw Uw' U2 B U'<br>Bw U' Uw' D' Rw2 L U2 B2 Uw U2 L' Rw2<br>Bw' Rw2 R' Bw' U' Uw2 B Uw' Rw R2 Fw' F'<br>Lw' Bw' F R' D' F' D2 B' Lw' U D2 F'      |  |
| Extra scrambles |   |   |
| E1.             | D' U' Dw B' R2 B' Bw F' U' B R2 Fw'<br>Lw2 Rw' Bw' B2 F' R' L' B2 Uw' R' Fw R2<br>F' Fw' Dw2 Bw F' D' Lw2 F' Fw R' Uw' Fw2<br>R' B Bw' U R Fw2 Bw2 D L2 Fw2 R' Lw'<br>F D B Bw' D' F' R Rw' Bw U' Bw Fw2          |  |
| E2.             | Bw' R Uw2 L2 R Lw B2 Dw2 Uw D' Fw2 Rw'<br>B2 Fw' Uw2 Bw R2 Bw' Fw2 F' Uw2 Rw' D2 L2<br>U2 Bw2 Rw2 Lw2 D' Dw U' B L F' Bw R<br>L' Dw2 B' L2 U' Rw' Fw2 R Bw' F' Dw' F<br>Dw' Uw D' U2 Rw U2 Dw2 Bw' R Bw2 Fw' L'   |  |

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# 6x6x6 Cube Round 1

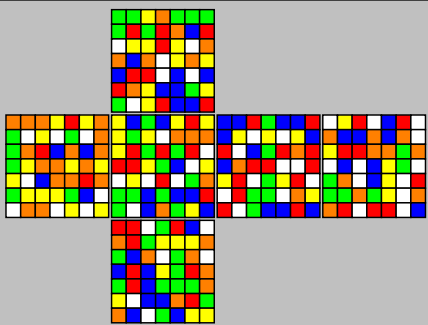
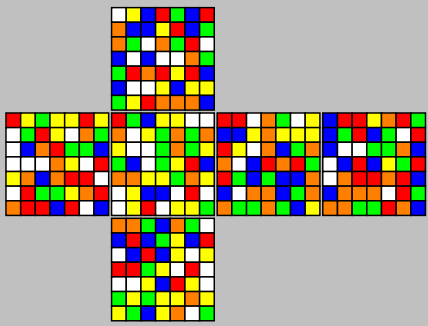
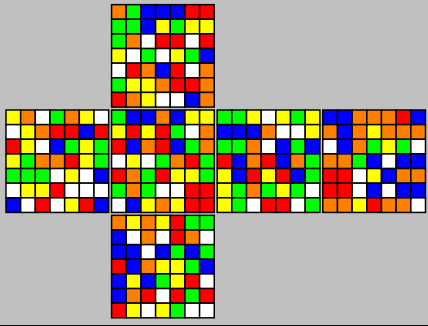
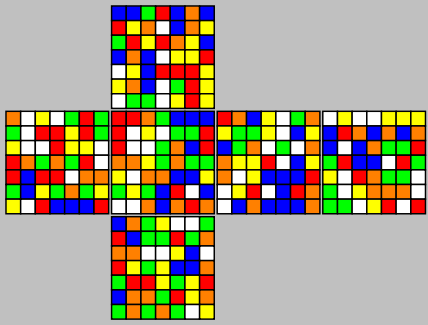
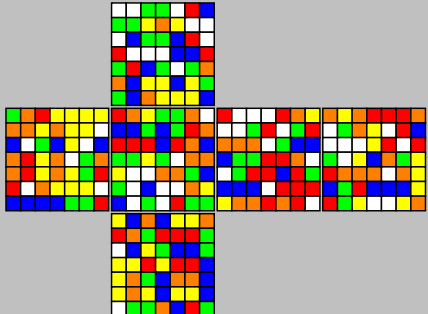
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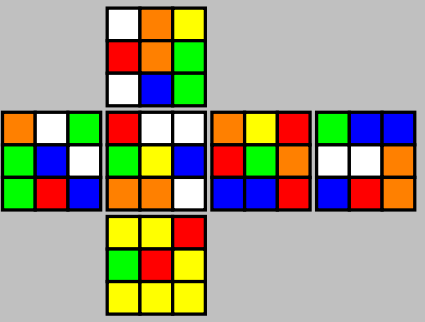
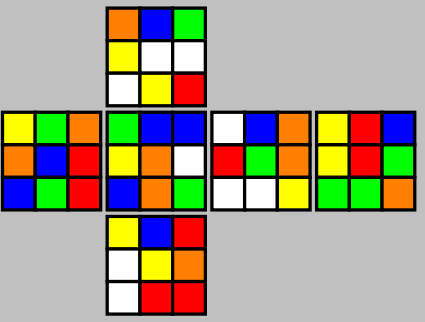
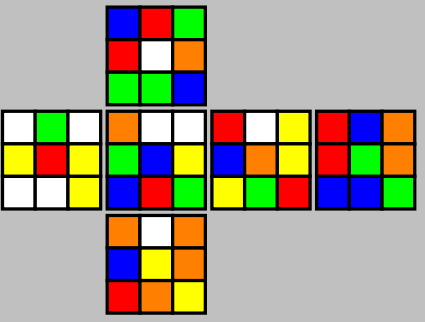
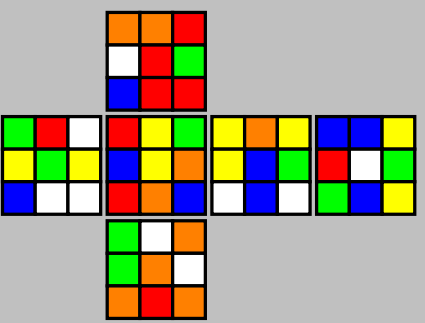
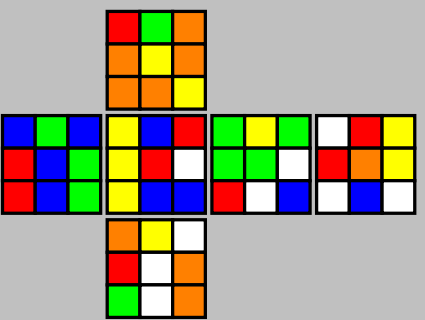
|                 |  |   |
|-----------------|--|---|
| 1.              | 3Rw2 Bw 3Fw2 3Rw2 F2 R2 3Fw2 Rw' 3Rw'<br>Fw2 R2 D F' L 3Uw2 U' D2 F2<br>Fw' D Bw' Dw2 U' B2 D2 Fw2 Bw'<br>U' Uw' F' L2 3Fw Lw Rw2 Fw2 F'<br>L2 Lw D' 3Fw 3Uw L Bw2 R2 D2<br>F' U' Rw D U2 Dw Bw 3Uw Lw<br>Uw 3Uw' Lw' Uw R2 F' Fw2 Rw2 3Fw'<br>Fw2 3Uw2 U2 3Fw Uw2 L Uw' L Dw<br>L' Dw2 Fw' Uw2 Rw 3Fw B' R                |    |
| 2.              | R2 B F' Lw L Dw2 3Uw 3Rw' R2<br>Bw Rw Fw' F' Dw' 3Uw Uw L' F2<br>L' Fw 3Rw2 3Uw Rw2 B2 L' 3Fw' Uw2<br>3Uw2 Fw2 L Dw R 3Uw2 Dw2 Uw' Rw2<br>B' 3Rw2 3Uw' Dw2 Bw F' 3Rw Bw2 Rw'<br>Fw 3Rw 3Uw Fw2 F' Bw Uw Lw B2<br>3Fw2 Bw2 R2 D2 R' F' Fw' Bw' 3Fw<br>B 3Uw Bw R2 3Uw Lw' Dw2 U Rw2<br>Bw2 Lw' Dw' 3Rw2 Fw2 Dw 3Rw2 Lw2     |    |
| 3.              | 3Rw2 D' R Lw 3Rw' 3Fw' U2 3Uw 3Fw<br>U2 B2 3Fw' F' R' Lw L F' Bw'<br>3Rw' Rw R2 Uw R2 3Fw2 3Uw F' Uw'<br>3Uw' F' B2 3Uw Dw2 R B Lw' F'<br>L Lw 3Uw' Uw2 3Fw R' Fw' 3Uw' Dw2<br>F2 Dw Rw' Bw' Dw' F' Dw2 F' Dw'<br>3Uw2 L2 D2 3Rw Uw L2 B' Uw Rw2<br>F' Dw' Bw2 B' 3Rw 3Uw 3Fw' Dw2 Fw'<br>Bw F' R' Bw2 D' Rw2 3Fw2 D       |   |
| Extra scrambles |  |   |
| E1.             | L' Bw' 3Fw' Uw' 3Rw2 F2 R' Fw 3Uw<br>F' L2 D' R' Dw B2 R' B Bw'<br>L2 3Rw Lw2 F' Bw' U2 3Uw2 Uw' L2<br>D2 U2 Lw' Rw2 3Uw' Bw' D' Fw2 R2<br>L2 3Rw2 Dw Uw' Rw F' U2 Rw Dw2<br>3Fw2 Rw2 Fw L' D2 3Fw' U2 Uw 3Fw'<br>3Rw2 3Uw R 3Fw' Fw' U2 Uw' 3Uw' 3Rw2<br>Dw Lw2 B' Uw 3Fw2 R2 Bw L' F'<br>D2 R Rw' Dw2 U2 3Uw' L' 3Uw'    |  |
| E2.             | 3Fw' Dw Lw 3Fw Rw Dw2 B F2 3Fw<br>Fw' Uw' U B Rw' 3Rw' U2 L' 3Fw2<br>Lw' 3Fw' Dw' 3Fw2 U2 Fw Dw2 3Fw2 Dw<br>3Rw' 3Fw2 Bw2 F' U' 3Fw2 Dw R Lw'<br>Rw2 3Uw2 Rw Fw' U L' Rw 3Uw' Fw'<br>Bw' Uw' Fw2 Bw' L Rw' B2 R2 Dw'<br>L 3Uw Lw' Rw' U2 3Uw B Lw Dw2<br>U2 3Fw' Uw U2 Fw' 3Rw B F' Uw'<br>3Rw 3Uw' 3Rw 3Fw Dw2 D2 Bw' 3Rw |  |

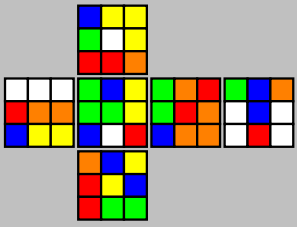
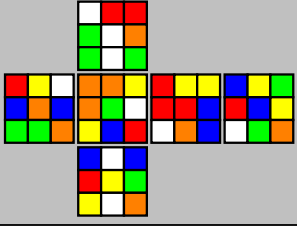
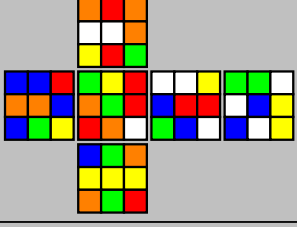
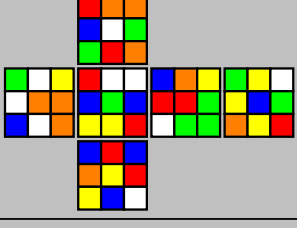
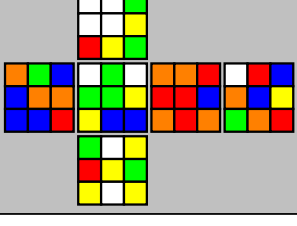
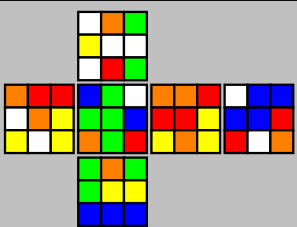
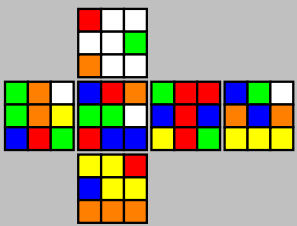
2015/08/07

# 7x7x7 Cube Round 1

## NU\_CUBING\_10-18-2015

|                 |   |   |
|-----------------|---|---|
| 1.              | 3Bw2 F' D' 3Lw' U2 Bw' D' Lw B2 3Rw2        |    |
|                 | B' R U 3Rw 3Bw' D Bw U 3Bw 3Rw2             |   |
|                 | Bw' Lw2 B' 3Rw Bw' R' 3Uw2 3Fw Bw 3Uw       |   |
|                 | B' 3Fw2 3Bw2 L' Dw 3Rw' Uw2 3Lw2 L Rw       |   |
|                 | 3Fw 3Rw' F2 R Dw 3Bw' U2 3Dw' Dw' B'        |   |
|                 | Bw' Uw' D L2 3Fw' L 3Bw D' 3Dw2 3Lw         |   |
|                 | R2 3Rw' D' L2 3Fw2 Fw F' Rw' U' Rw'         |   |
|                 | 3Bw' Rw' Lw 3Uw' B Fw2 3Bw2 Uw' L 3Lw2      |   |
|                 | Lw Dw2 R' D2 Bw' 3Dw' Fw' Uw' Bw U2         |   |
|                 | Bw 3Fw2 Dw2 Uw' 3Lw2 3Rw Rw' Bw Uw Dw       |   |
| 2.              | F2 U2 3Uw Dw' 3Lw Bw2 3Dw2 3Uw' 3Bw' 3Rw'   |    |
|                 | Fw Bw2 U2 Fw F' 3Fw2 3Lw Uw2 L Fw'          |   |
|                 | 3Dw 3Bw' 3Rw 3Fw2 Rw2 3Bw' 3Rw2 L2 Fw B'    |   |
|                 | L' 3Dw2 Fw' L2 R2 3Fw D2 F' 3Uw' Bw2        |   |
|                 | F' 3Lw U Rw2 U 3Fw' Uw2 Bw' 3Dw Bw'         |   |
|                 | Fw' Uw U 3Rw2 Lw F' B 3Lw 3Fw' Dw           |   |
|                 | 3Bw' B Dw2 3Rw' 3Dw2 Dw Rw' 3Dw B2 Lw       |   |
|                 | Dw' Bw' D2 Lw2 3Rw' Fw' Rw 3Bw' 3Fw 3Rw2    |   |
|                 | 3Fw2 Lw2 Dw' F' Uw2 3Uw2 B2 U 3Fw' 3Uw      |   |
|                 | Fw 3Rw2 Lw' 3Fw2 Dw' 3Uw R Uw2 Lw' 3Uw2     |   |
| 3.              | B' 3Dw' 3Bw' 3Lw' Fw2 Rw2 F' 3Uw F' L'      |   |
|                 | 3Bw' L' 3Rw' D F' L2 Fw2 Lw' Dw F2          |   |
|                 | Rw D2 Rw2 Fw Dw Uw2 Fw' 3Rw2 3Bw2 Rw2       |   |
|                 | 3Lw' 3Bw' Rw2 3Fw' 3Dw2 Uw2 3Rw2 Rw' L' Uw' |   |
|                 | 3Rw2 3Lw' Dw2 3Fw' Fw' Rw2 D2 Fw 3Lw2 3Fw'  |   |
|                 | Fw' Uw 3Lw' Uw2 Lw2 Fw' 3Bw U' Lw' Fw2      |   |
|                 | Dw2 D' Rw 3Rw' Uw Fw2 B' 3Bw2 3Uw 3Rw'      |   |
|                 | 3Lw2 Bw2 Lw' 3Bw 3Fw' 3Rw Uw R2 Rw 3Fw      |   |
|                 | 3Lw' 3Fw2 3Dw' 3Fw2 Uw 3Rw' Uw' R2 F' B     |   |
|                 | Uw2 Lw2 Rw' 3Uw' Dw L2 3Uw Lw' Rw2 U        |   |
| Extra scrambles |   |   |
| E1.             | Rw' Bw Rw2 B2 3Dw2 3Bw2 Dw2 R' 3Lw 3Bw2     |  |
|                 | U' Bw F' Lw U 3Rw 3Fw Bw2 3Uw' 3Fw'         |   |
|                 | R' 3Uw2 3Lw2 Fw' Dw2 3Bw' B F2 Lw2 3Lw'     |   |
|                 | Uw 3Uw Dw' 3Bw2 R' 3Uw' Uw' L' F' Lw        |   |
|                 | 3Fw2 D U2 Dw' 3Dw Uw Fw2 F' D2 3Lw'         |   |
|                 | F2 Rw' D2 3Bw' Fw 3Lw' D Lw' U L2           |   |
|                 | R B Bw' R2 Rw 3Dw' R' 3Bw 3Uw' Uw           |   |
|                 | 3Fw R' Uw' D2 Dw' Lw2 B2 3Fw2 F' Lw2        |   |
|                 | 3Rw2 D U Dw Rw' R' 3Lw2 F' 3Uw Dw2          |   |
|                 | 3Bw2 B2 Uw2 3Dw' 3Bw 3Dw' 3Uw F' 3Bw B2     |   |
| E2.             | Lw2 Fw' F 3Dw2 Fw2 3Uw2 R' Rw 3Uw' Rw2      |  |
|                 | 3Lw2 Bw2 D Lw 3Dw2 U' 3Lw2 3Uw 3Bw 3Rw      |   |
|                 | L' Rw2 B' 3Dw Uw2 Rw2 3Uw' Bw2 L' 3Lw       |   |
|                 | F' L' R' D2 3Lw2 L2 F2 Dw' 3Lw Fw2          |   |
|                 | 3Bw' B2 R 3Uw' L' Dw 3Uw 3Rw D R            |   |
|                 | 3Uw 3Lw Lw' Bw2 U2 Fw2 3Rw2 Dw2 3Rw2 3Fw2   |   |
|                 | D Lw B R Bw2 Fw' Lw' Dw' Bw' Dw'            |   |
|                 | B2 R 3Dw 3Bw' Rw' 3Uw 3Lw L D' U            |   |
|                 | 3Rw' 3Dw2 F 3Dw Rw 3Dw2 F2 3Lw' F' Bw'      |   |
|                 | Uw' R 3Dw2 B Lw' 3Fw' F2 L' 3Lw' Rw         |   |

|                 |   |   |
|-----------------|---|---|
| 1.              | B' R2 B R2 B' U2<br>R2 B2 L' D B2 L<br>F2 R F' R D F'<br>U2 Fw Uw'    |    |
| 2.              | U2 B D2 B' F U2<br>B D' B F2 D F'<br>U' B2 F D2 R' F<br>Uw'           |    |
| 3.              | U R2 U B2 U' R2<br>B2 R B2 D R2 B<br>U' F R' F2 L D<br>B' Uw2         |   |
| Extra scrambles |   |   |
| E1.             | D L2 U' F2 L2 D<br>U2 R D2 B L F<br>D' B2 D U L' B'<br>U' Fw' Uw      |  |
| E2.             | L2 B2 U2 R U2 B2<br>R2 B2 R2 D B2 F<br>D B' D' F2 R B2<br>D F2 Rw2 Uw |  |

|                 |   |   |
|-----------------|---|---|
| 1.              | F2 L2 F2 D B2 U L2 U' R D<br>R' B' R' B U2 F2 L' F' L'        |    |
| 2.              | F2 R2 D' R2 D' U' B2 D' R2 F'<br>D' B2 R' U' F R2 D2 L' B' D2 |    |
| 3.              | D' F2 D B2 R2 U' R2 F L D'<br>R2 U' B' F2 L' B U' R' F'       |    |
| 4.              | L2 F2 D2 R2 F' U2 F' D2 L B'<br>R F U' B' R U' L' B2 L'       |   |
| 5.              | F2 U2 L2 D U2 L2 D L U L2<br>B2 D U' B F2 D' B D2             |  |
| Extra scrambles |   |   |
| E1.             | L2 R2 F2 U' F2 U L2 B2 D<br>B' L' U2 F U2 R B2 L R'<br>F'     |  |
| E2.             | L' D2 R' U' L2 U2 B R U'<br>F2 L F2 U2 F2 L' U2 R L'<br>U2 F2 |  |





NU\_CUBING\_10-18-2015  
3x3x3: Fewest Moves Round 1  
Scramble 2 of 3

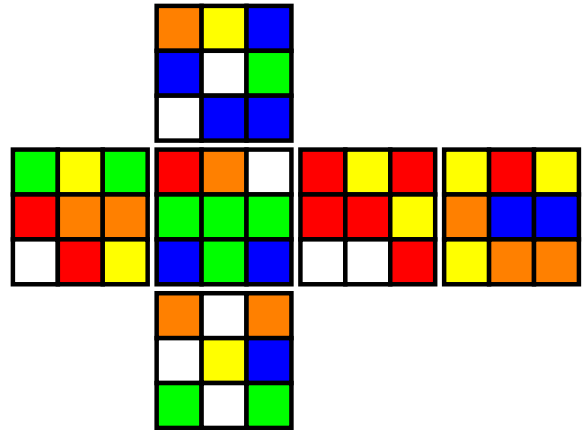
- Notate your solution by writing one move per bar.
  - To delete moves, clearly erase/blacken them.
  - Face moves F, B, R, L, U, and D are clockwise.
  - Rotations x, y, and z follow R, U, and F.
  - ' inverts a move; 2 doubles a move. (e.g.: U', U2)
  - w makes a face move into two layers. (e.g.: Uw)
  - A [lowercase] move is a cube rotation. (e.g.: [u])
- 
- You have 1 hour to find a solution.
  - Your solution length will be counted in OBTM.
  - Your solution must be at most 80 moves, including rotations.
  - Your solution must not be directly derived from any part of the scrambling algorithm.

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

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

DO NOT FILL IF YOU ARE THE COMPETITOR

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



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

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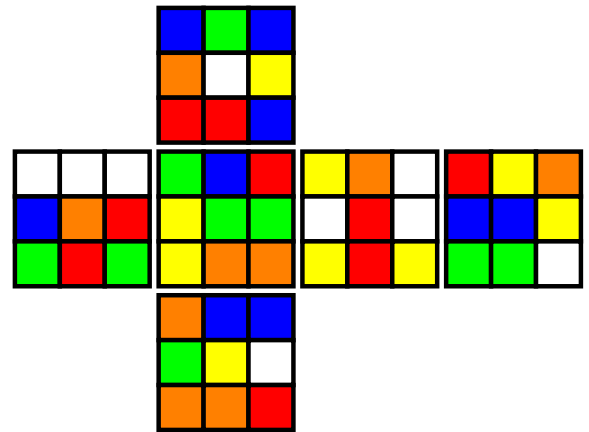
NU\_CUBING\_10-18-2015  
3x3x3: Fewest Moves Round 1  
Scramble 3 of 3

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

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

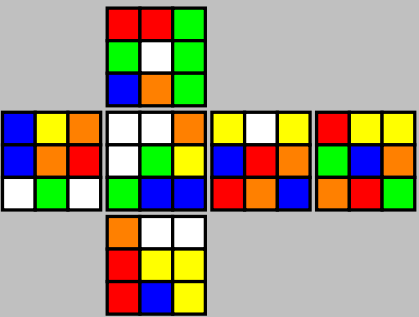
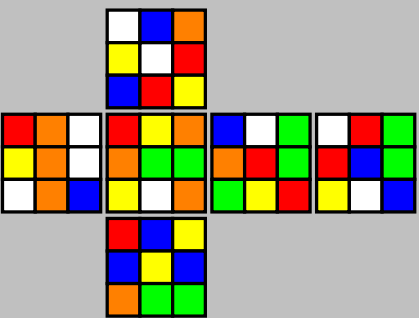
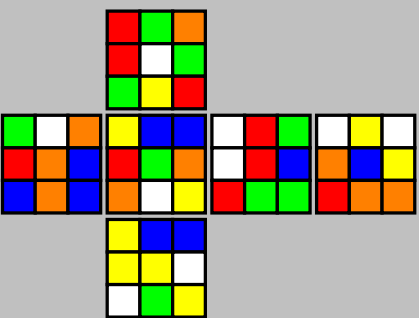
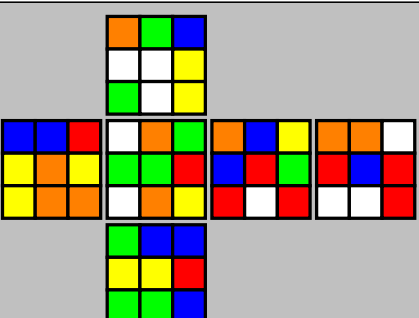
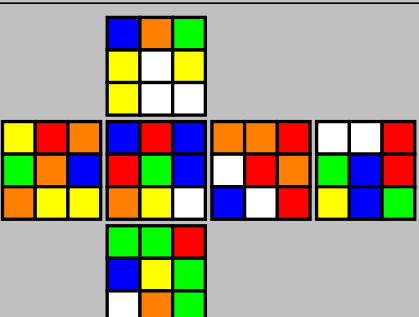
DO NOT FILL IF YOU ARE THE COMPETITOR

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



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

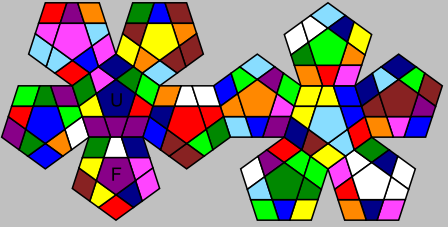
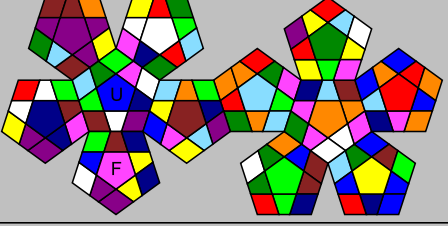
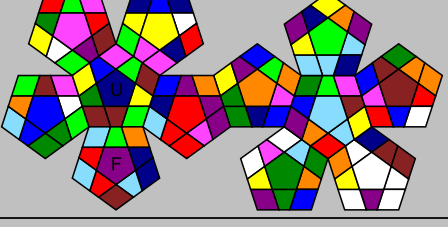
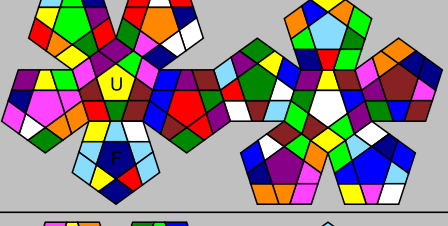
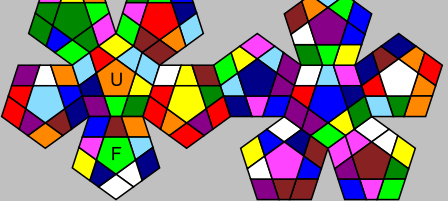
[illegible]

|                 |   |   |
|-----------------|---|---|
| 1.              | R2 D' B R2 L2 D' F' B'<br>L' B R' D L2 B2 R2 F2<br>D2 R2 D'     |    |
| 2.              | U R' D F' L B2 R2 B'<br>U F' B2 R2 U F2 B2 L2<br>F2 U' D2 L2 U' |    |
| 3.              | D' R F2 U B' L D R<br>U B R2 F2 U2 D2 R2 U2<br>D2 B2 R D2 R2    |   |
| Extra scrambles |   |   |
| E1.             | F2 B' U D2 B R' D F<br>U' R L2 U2 B2 U2 D2 B<br>R2 B U2 F'      |  |
| E2.             | L U2 R2 D2 B2 L F2 R<br>F2 R' B2 F L U2 L D'<br>L' B' R F R'    |  |

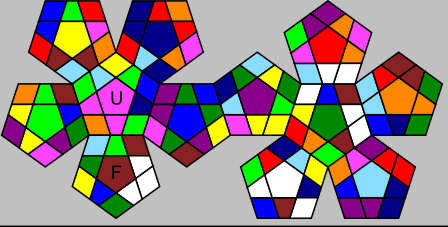
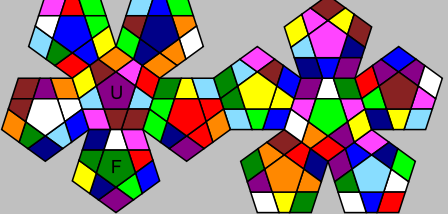
2015/08/07

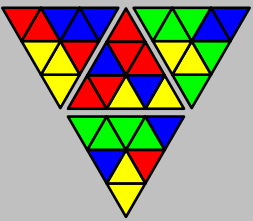
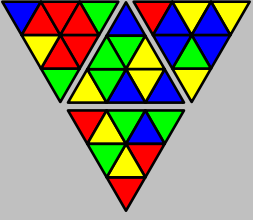
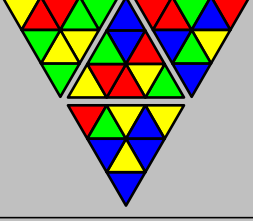
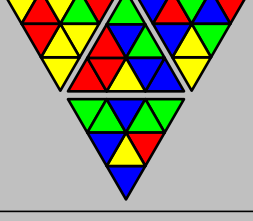
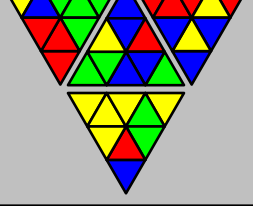
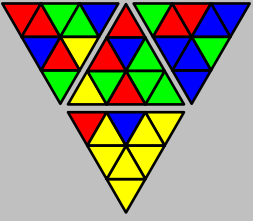
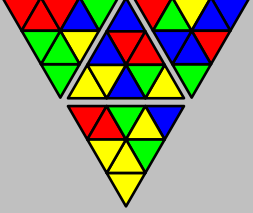
# Megaminx Round 1

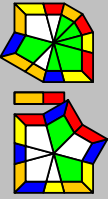

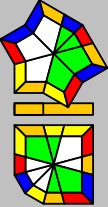
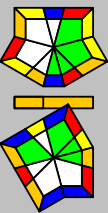
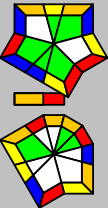

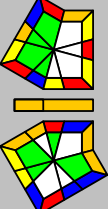
## NU\_CUBING\_10-18-2015

|    |  |   |
|----|--|---|
| 1. | R++ D-- R++ D++ R++ D-- R++ D++ R-- D++ U<br>R-- D-- R++ D++ R++ D-- R-- D++ R-- D++ U<br>R++ D++ R++ D++ R++ D++ R++ D-- R++ D-- U'<br>R++ D++ R-- D++ R++ D-- R++ D++ R-- D-- U'<br>R-- D-- R++ D++ R-- D-- R-- D-- R-- D++ U<br>R++ D-- R++ D++ R++ D-- R++ D-- R-- D++ U<br>R-- D-- R-- D++ R++ D++ R-- D++ R++ D-- U'         |    |
| 2. | R-- D++ R++ D++ R-- D++ R++ D-- R-- D-- U'<br>R-- D-- R++ D++ R-- D++ R-- D++ R-- D-- U'<br>R-- D++ R-- D-- R-- D-- R-- D-- R-- D-- R++ D++ U<br>R-- D-- R++ D++ R-- D-- R++ D++ R++ D++ U<br>R++ D++ R-- D-- R-- D++ R++ D++ R++ D++ U<br>R++ D-- R-- D++ R++ D++ R-- D-- R++ D++ U<br>R++ D-- R++ D++ R-- D++ R++ D++ R-- D-- U' |    |
| 3. | R++ D++ R++ D++ R++ D++ R++ D++ R++ D++ U<br>R-- D++ R++ D-- R-- D-- R++ D-- R-- D++ U<br>R-- D++ R-- D-- R++ D++ R-- D++ R-- D-- U'<br>R-- D-- R-- D-- R-- D-- R++ D-- R-- D++ U<br>R-- D-- R-- D++ R-- D++ R++ D-- R-- D-- U'<br>R++ D++ R-- D-- R-- D-- R++ D++ R-- D-- U'<br>R++ D++ R++ D-- R++ D-- R++ D++ R-- D++ U         |    |
| 4. | R++ D++ R-- D-- R-- D++ R++ D-- R-- D-- U'<br>R++ D++ R-- D-- R++ D++ R++ D-- R++ D++ U<br>R++ D-- R-- D-- R-- D++ R++ D++ R-- D++ U'<br>R-- D++ R-- D-- R++ D-- R-- D++ R-- D-- U'<br>R++ D++ R-- D++ R-- D++ R-- D++ R-- D++ U<br>R-- D++ R++ D++ R-- D-- R++ D-- R++ D++ U<br>R++ D++ R-- D++ R-- D++ R-- D-- R++ D++ U         |   |
| 5. | R-- D-- R++ D-- R++ D-- R-- D-- R-- D-- U'<br>R++ D++ R++ D-- R-- D-- R-- D++ R++ D++ U<br>R-- D++ R-- D++ R++ D++ R++ D-- R++ D++ U<br>R-- D-- R++ D-- R-- D++ R-- D-- R++ D-- U'<br>R++ D-- R-- D-- R++ D++ R-- D-- R-- D-- U'<br>R-- D++ R++ D-- R-- D++ R-- D++ R-- D++ U<br>R++ D-- R++ D++ R-- D++ R-- D-- R-- D++ U         |  |

### Extra scrambles

|     |  |   |
|-----|--|---|
| E1. | R-- D-- R++ D-- R++ D-- R++ D-- R-- D-- U'<br>R++ D-- R++ D-- R++ D++ R-- D-- R++ D-- U'<br>R++ D++ R-- D-- R++ D-- R-- D++ R++ D++ U<br>R-- D-- R++ D-- R-- D++ R++ D++ R-- D++ U<br>R++ D++ R-- D++ R++ D++ R-- D-- R-- D++ U<br>R-- D++ R-- D-- R++ D-- R-- D++ R++ D-- U'<br>R++ D++ R-- D-- R++ D-- R-- D++ R++ D-- U'  |  |
| E2. | R++ D++ R++ D-- R-- D++ R-- D-- R-- D-- U'<br>R-- D-- R++ D-- R-- D++ R++ D-- R-- D-- U'<br>R++ D++ R++ D-- R-- D++ R-- D-- R++ D-- U'<br>R++ D++ R++ D-- R-- D++ R-- D++ R++ D-- U'<br>R-- D-- R-- D-- R++ D++ R-- D++ R++ D-- U'<br>R-- D++ R-- D++ R-- D-- R-- D-- R++ D++ U<br>R-- D++ R++ D++ R-- D-- R-- D++ R-- D++ U |  |

|                 |                                      |   |
|-----------------|--------------------------------------|---|
| 1.              | R' B' R' U' B' R' L' B R' L' B r'    |    |
| 2.              | U R' B' L R U B' U L' B' R u l' r b  |    |
| 3.              | R' U' B' R' U L' B U' L U' L l r' b' |    |
| 4.              | L R L' R U R U' R' L' U L' u' b'     |   |
| 5.              | L' R' L U' R' L' U' L' R L' B r b    |  |
| Extra scrambles |                                      |   |
| E1.             | R' L B U R B U B' L' U' B' u l'      |  |
| E2.             | B U' L' U B L' U' B' L' B' L' u' r   |  |

|                 |  |   |
|-----------------|--|---|
| 1.              | $(-2, -3) / (-1, -4) / (1, -2) / (0, -3) /$<br>$(-4, 0) / (0, -3) / (3, -1) / (1, 0) /$<br>$(4, -4) / (-4, 0) / (0, -5) / (-1, 0)$                 |    |
| 2.              | $(-2, 0) / (3, 6) / (-4, 5) / (3, 0) /$<br>$(3, 0) / (4, -2) / (0, -1) / (-3, -3) /$<br>$(1, -4) / (0, -4) / (-4, -4)$                             |    |
| 3.              | $(1, 0) / (3, 0) / (3, -3) / (-1, -1) /$<br>$(3, 0) / (-2, -2) / (-1, 0) / (-3, 0) /$<br>$(4, 0) / (6, -1) / (5, 0) / (2, 0) /$<br>$(-4, -5)$      |    |
| 4.              | $(0, -1) / (-2, 4) / (3, 0) / (-1, -4) /$<br>$(6, -2) / (-3, -3) / (0, -5) / (2, -2) /$<br>$(-5, -4) / (4, -5) / (6, -4)$                          |   |
| 5.              | $(1, 0) / (-1, 2) / (-5, 4) / (-3, 0) /$<br>$(-4, -4) / (-5, -3) / (-3, -3) / (1, 0) /$<br>$(0, -4) / (2, 0) / (-3, -2) / (0, -4)$                 |  |
| Extra scrambles |  |   |
| E1.             | $(4, 0) / (-4, -4) / (0, -3) / (-5, -2) /$<br>$(2, -4) / (-3, -5) / (3, 0) / (3, 0) /$<br>$(-4, 0) / (4, -4) / (3, 0) / (-4, 0) /$<br>$(6, 0)$     |  |
| E2.             | $(0, 2) / (-5, -2) / (0, -3) / (2, -4) /$<br>$(-2, -2) / (-1, 0) / (0, -3) / (0, -1) /$<br>$(0, -4) / (0, -2) / (-5, 0) / (2, -3) /$<br>$(-3, -1)$ |  |

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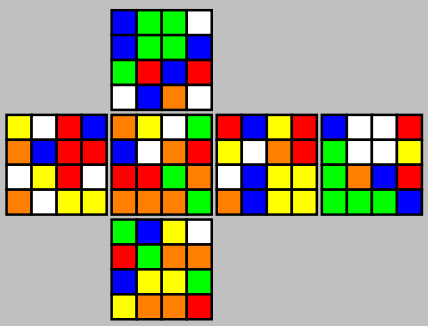
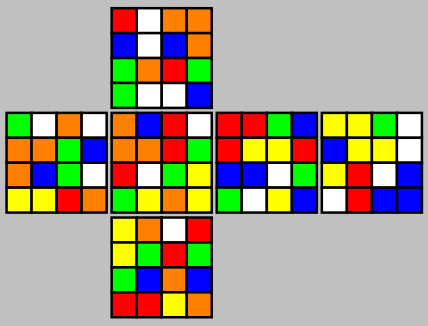
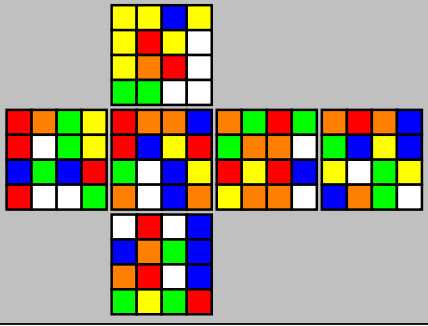
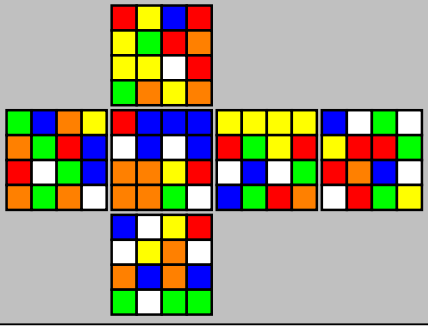
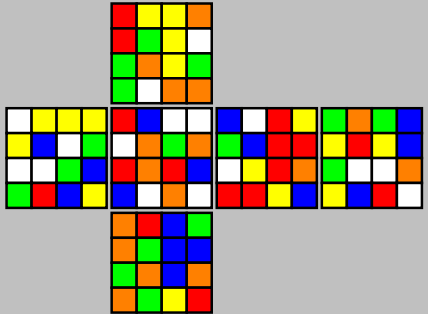
Rubik's Clock Round 1  
 NU\_CUBING\_10-18-2015

|                 |   |  |
|-----------------|---|--|
| 1.              | UR3- DR2- DL1+ UL4- U1-<br>R3- D1- L3+ ALL0+ y2<br>U4+ R2+ D3+ L2- ALL0+<br>UR DL       |  |
| 2.              | UR0+ DR4- DL5+ UL3- U1+<br>R0+ D1+ L5+ ALL4+ y2<br>U0+ R1+ D1+ L2- ALL5+<br>UR DL       |  |
| 3.              | UR0+ DR2+ DL5+ UL4- U0+<br>R2+ D5- L3- ALL0+ y2<br>U1- R3+ D2+ L4- ALL1-<br>UR DL UL    |  |
| 4.              | UR2+ DR5- DL4+ UL3- U5-<br>R0+ D2- L1+ ALL5- y2<br>U6+ R4+ D6+ L3- ALL5+<br>UR DR DL UL |  |
| 5.              | UR2- DR3+ DL4+ UL6+ U5+<br>R4+ D4- L4+ ALL4+ y2<br>U2+ R1+ D3+ L4- ALL5-<br>DR          |  |
| Extra scrambles |   |  |
| E1.             | UR0+ DR3- DL1- UL3- U1-<br>R4- D6+ L3+ ALL2+ y2<br>U3+ R4+ D6+ L1- ALL3-<br>UR DR DL UL |  |
| E2.             | UR5+ DR2- DL2+ UL4- U6+<br>R6+ D3+ L3- ALL2- y2<br>U3+ R1- D2+ L0+ ALL0+<br>UR DR DL UL |  |



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4x4x4 Cube: Blindfolded Round 1  
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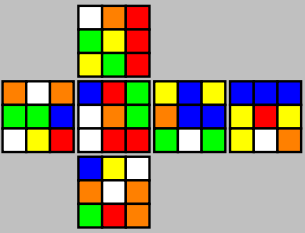
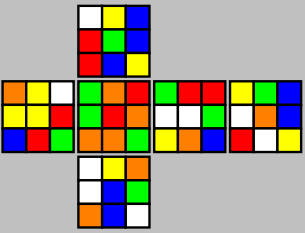
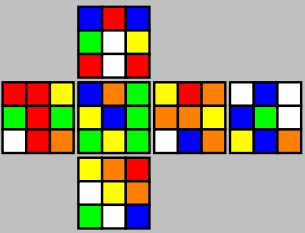
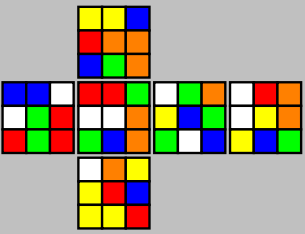
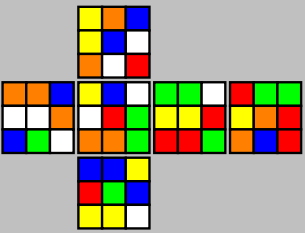
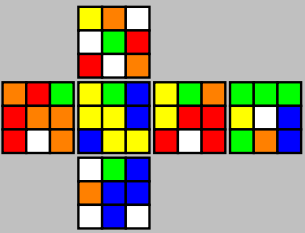
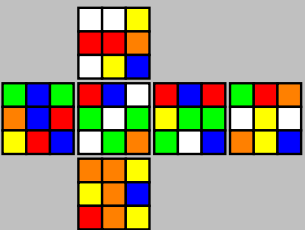
|                 |  |   |
|-----------------|--|---|
| 1.              | U' D' R' F2 B D F' L<br>B L' B2 L2 F L2 D2 F'<br>L2 D2 L2 B Rw2 Fw2 F2 U'<br>Rw2 F Rw2 Fw2 B F2 Uw2 D<br>L B2 F2 Rw' L' D Uw Fw2<br>B2 Rw B2 Uw F2 x2 y2   |    |
| 2.              | F' R2 B' D2 U2 B U2 R2<br>D2 R2 L B D' F U R<br>D' L2 B L' Uw2 Rw2 D2 Rw2<br>U' L2 F' U R2 B2 Uw2 F<br>U' Rw U' F2 Rw2 Fw2 D2 Uw<br>R' Fw Rw' R2 B L2 x2 y |    |
| 3.              | D' B' R' U D R' U' R2<br>B F2 U2 L2 U D2 R2 L2<br>D' B2 R2 D Uw2 L2 F Rw2<br>D' F2 R2 Fw2 B U R2 B'<br>Rw Fw2 B' R' L2 Uw2 B D<br>Uw' B2 L' Uw R z y       |   |
| Extra scrambles |  |   |
| E1.             | R' U F2 B2 R2 U R' B'<br>U' R D2 R2 B R2 F B<br>D2 F U2 F D2 Uw2 L F'<br>Uw2 Rw2 L F Rw2 F' Rw2 F2<br>Uw' R Uw2 D2 B Fw' R2 Fw<br>Rw' B2 L2 B x y          |  |
| E2.             | D2 B2 R' F2 R B2 L F<br>B' L D B L2 U' L D<br>L Fw2 Rw2 U F U' Rw2 Uw2<br>Rw2 Fw2 F U2 R2 Rw' D2 F2<br>B Rw2 U Rw' Uw F2 Rw F'<br>Uw2 R y'                 |  |

2015/08/07

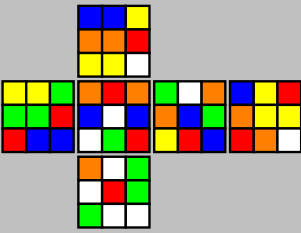
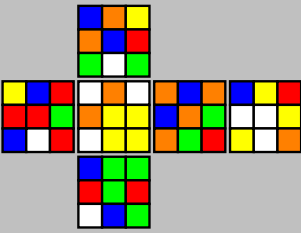
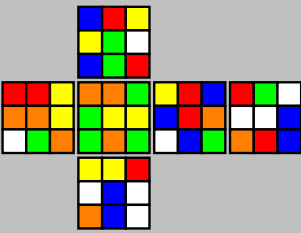
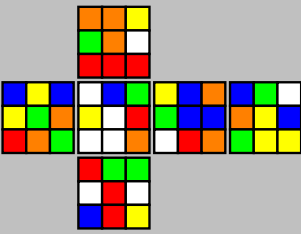
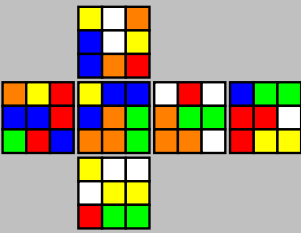
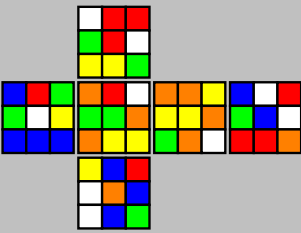
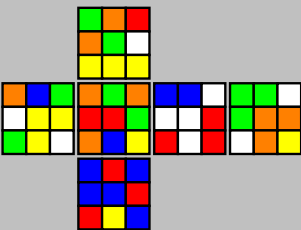
## 5x5x5 Cube: Blindfolded Round 1

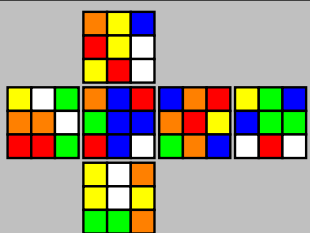
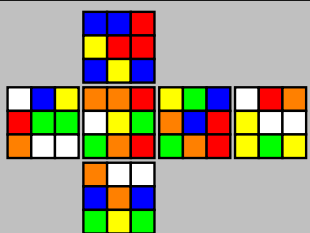
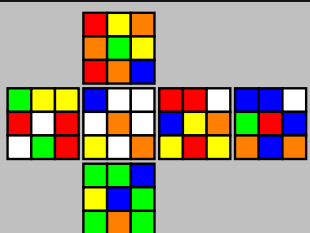
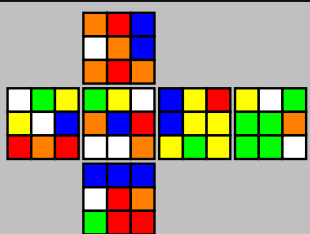
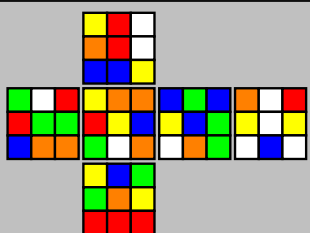
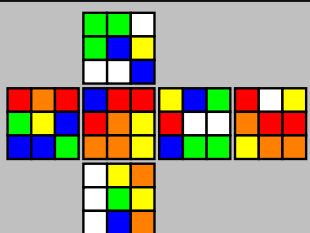
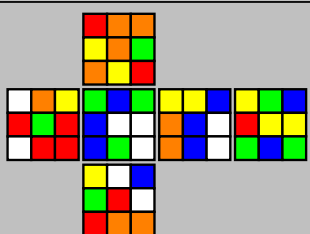
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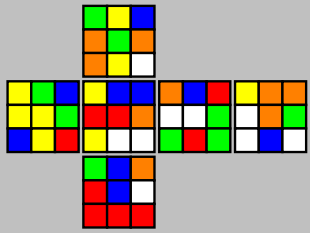
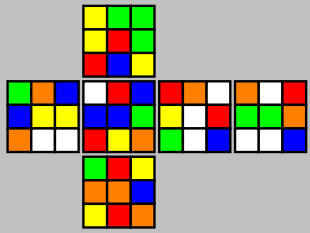
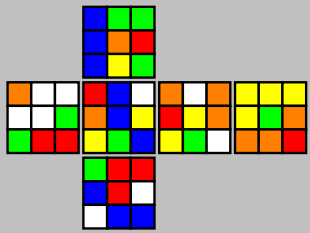
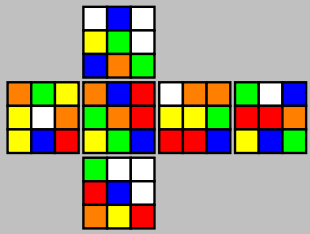
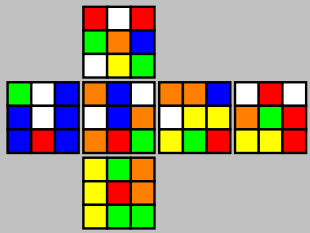
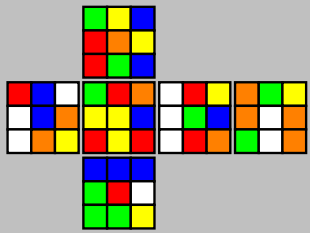
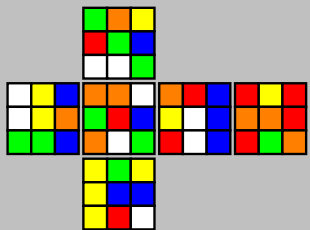
|                 |     |     |     |     |      |      |     |     |
|-----------------|-----|-----|-----|-----|------|------|-----|-----|
| 1.              | Bw2 | Dw' | Rw2 | U2  | Fw   | R    | Dw2 | D'  |
|                 | Rw2 | Dw2 | B   | L   | F2   | L    | Uw' | L2  |
|                 | R'  | Rw  | Fw  | Dw2 | U2   | Rw   | Lw2 | R   |
|                 | D'  | R'  | Dw  | Fw' | F'   | U    | Lw' | R2  |
|                 | Fw2 | R2  | Rw  | Lw2 | F'   | Uw   | L   | Uw  |
|                 | L2  | Fw' | D   | B'  | Uw2  | B2   | L2  | F'  |
|                 | D   | Rw2 | Bw2 | Uw' | R    | U2   | Rw2 | B'  |
|                 | Uw  | Fw  | Lw' | Fw  | 3Fw' |      |     |     |
| 2.              | Dw' | U'  | Uw' | Rw' | F2   | L    | Dw2 | R'  |
|                 | F'  | D2  | B'  | R2  | Uw'  | Rw'  | F'  | R'  |
|                 | Rw  | Fw2 | Dw' | Uw' | Lw   | Uw2  | L   | Rw' |
|                 | Uw  | D   | Lw' | Rw2 | R    | F'   | Rw2 | Lw  |
|                 | F'  | Lw2 | Uw' | F2  | D    | R    | Uw' | U   |
|                 | L'  | F2  | Fw' | D'  | Bw2  | U    | Bw2 | B'  |
|                 | R   | Bw2 | Lw2 | D'  | U    | Uw2  | B   | Rw2 |
|                 | B2  | L'  | B   | Dw' | 3Fw  | 3Uw2 |     |     |
| 3.              | Fw  | F2  | Rw  | Uw' | U'   | Bw'  | R'  | U'  |
|                 | D'  | Dw2 | F2  | R2  | B2   | Bw'  | R   | L   |
|                 | U2  | D   | Lw  | Rw  | Bw'  | L2   | U   | Dw  |
|                 | Fw2 | U2  | F2  | R'  | Rw'  | Uw'  | U2  | B   |
|                 | U'  | F'  | R'  | Uw  | D'   | F2   | Fw' | Bw  |
|                 | U'  | Fw' | R2  | Fw' | B'   | L'   | F'  | Bw2 |
|                 | R2  | Rw  | D   | Bw  | Fw'  | Dw'  | Bw' | U'  |
|                 | D   | Lw' | D2  | Dw  | 3Rw2 | 3Uw2 |     |     |
| Extra scrambles |     |     |     |     |      |      |     |     |
| E1.             | B2  | Fw  | Lw  | Dw2 | R'   | Uw   | L2  | Bw  |
|                 | Rw2 | R'  | Lw  | Bw' | Rw   | B'   | Uw2 | U2  |
|                 | Dw  | Fw' | Lw' | Bw2 | Uw2  | B    | D'  | F'  |
|                 | L   | Bw2 | Rw' | Uw2 | Rw'  | L'   | R'  | B'  |
|                 | Uw' | F'  | D2  | F'  | D'   | Fw'  | D'  | Lw2 |
|                 | D'  | Uw' | F'  | Bw' | D2   | Lw   | B   | Dw' |
|                 | B   | Lw  | Rw' | U2  | Dw2  | L'   | Fw  | R   |
|                 | Fw2 | Uw2 | U   | Bw' | 3Uw2 |      |     |     |
| E2.             | Dw2 | D   | U2  | R   | Dw2  | Lw   | B'  | U'  |
|                 | Lw2 | L'  | Dw' | D'  | Fw   | Dw'  | Lw  | U'  |
|                 | Bw' | Fw2 | F2  | D'  | U2   | B    | F2  | D2  |
|                 | Uw  | L'  | Dw  | R2  | U2   | Fw2  | Uw  | U   |
|                 | L2  | Lw2 | U'  | D'  | B2   | F2   | Uw' | Fw2 |
|                 | Lw  | Rw' | B2  | Rw  | Bw2  | Fw'  | B   | Rw' |
|                 | Uw2 | L2  | Uw  | L'  | R'   | Dw'  | Rw  | D2  |
|                 | B'  | Dw2 | D2  | Fw' | 3Fw' | 3Uw  |     |     |

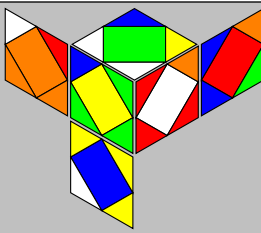
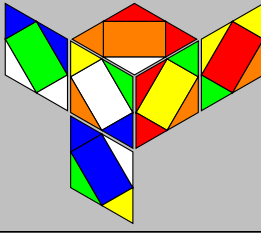
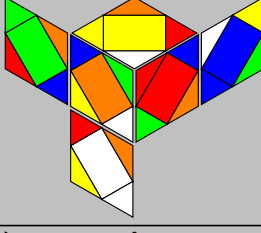
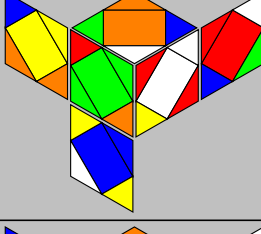
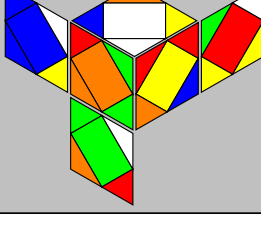
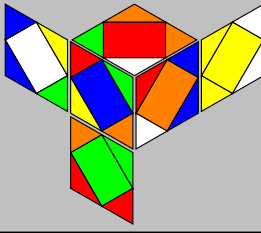
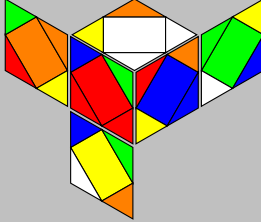
|    |   |   |
|----|---|---|
| 1. | U' F2 R2 B2 U' L2 R2<br>U' F' D U' F' R F'<br>D2 L R B F' Rw2 Uw'       |    |
| 2. | F2 R D2 L2 R' U2 L' R' D' L'<br>D R B2 D' R B R U2 Rw Uw                |    |
| 3. | R2 D2 B R2 F2 L2 U2<br>R2 F2 L U F' L B2<br>D2 F' U R2 F' Uw2           |    |
| 4. | D' F2 D2 U2 L2 D U F R' F<br>R B R' D F U2 L2 F' D2 Fw<br>Uw            |   |
| 5. | F2 R2 D2 B' L2 B' F'<br>R2 F' U' L D2 U R<br>D' B L U' B2 U Rw'<br>Uw   |  |
| 6. | R2 F' D2 L2 F' R2 B' U2 F D'<br>L2 U2 R' B' U2 L D' L2 B2 U2<br>Rw      |  |
| 7. | L2 D R2 U2 F2 D2 F2<br>U' F' R F2 L2 D2 U2<br>B D' U' R B' R Fw'<br>Uw' |  |

|     |     |     |    |    |    |     |     |
|-----|-----|-----|----|----|----|-----|-----|
| 8.  | F2  | L2  | U' | B2 | D' | F2  | R2  |
|     | U'  | L   | R  | D' | F2 | L'  | R   |
|     | U'  | R2  | B' | U  | F  | R   | Uw2 |
| 9.  | U   | F2  | D' | B2 | U  | F2  | U   |
|     | B2  | L2  | U' | L' | D' | U   | F'  |
|     | R   | B2  | U2 | F' | U' | L'  | F'  |
|     | Rw2 | Uw' |    |    |    |     |     |
| 10. | B2  | R2  | B2 | D2 | L2 | R2  | U'  |
|     | B2  | D2  | L2 | F' | D  | R'  | F'  |
|     | L'  | U   | B' | U  | R' | B   | D2  |
|     | Fw  | Uw' |    |    |    |     |     |
| 11. | R'  | B2  | L' | R2 | B2 | F2  | D2  |
|     | R   | B2  | R2 | B' | L' | D'  | L   |
|     | U2  | L'  | R' | F' | U  | B   | Rw  |
|     | Uw2 |     |    |    |    |     |     |
| 12. | B2  | U   | B2 | L2 | D' | L2  | D'  |
|     | U2  | B'  | U2 | B  | L  | D'  | B'  |
|     | R2  | U'  | F  | R' | B2 | U2  | Rw  |
|     | Uw2 |     |    |    |    |     |     |
| 13. | U'  | R2  | D2 | U  | F2 | D   | F2  |
|     | L2  | U   | R  | U' | L  | R   | F'  |
|     | D'  | U2  | F2 | U' | F' | Rw2 | Uw' |
| 14. | F2  | D   | B2 | U2 | F2 | D   | B2  |
|     | D   | R2  | U  | L' | F  | D2  | U   |
|     | R   | B'  | D2 | U  | B  | D   | Rw2 |
|     | Uw  |     |    |    |    |     |     |

|     |  |   |
|-----|--|---|
| 15. | B2 U2 L F2 L' B2 U2 L2 R U<br>L' B R2 U L' D' B' D L2 D'<br>Fw Uw    |    |
| 16. | R2 B D2 F2 L2 F' U2<br>R U2 F' D F' U B<br>L2 B2 R' D U' Rw' Uw2     |    |
| 17. | B2 U2 L2 F U2 L2 U2 F R2 B'<br>D2 L B' R2 D2 B L2 D' B F2<br>Rw      |    |
| 18. | B2 D2 L2 D U2 B2 F2 L2 D' R'<br>F' L2 F2 L' R2 U2 R B R' D2<br>Fw Uw |   |
| 19. | R2 F2 U2 F R2 B2 F<br>U2 F D U2 L2 R' D<br>L2 U' B F2 L B Uw'        |  |
| 20. | B2 U2 B2 U F2 R2 B2<br>D2 R2 B' R2 D' B' L<br>R' F D B' F' R Fw'     |  |
| 21. | D B2 U B2 R2 U' F2 R2 B2 R<br>U' F D F D2 R B' L U' B2<br>Rw Uw      |  |

|     |   |   |
|-----|---|---|
| 22. | F2 D2 U2 F2 R' U2 F2<br>L U L2 U R' D2 U<br>B R2 U' L F Rw2             |    |
| 23. | D L2 F2 D' B2 U L2<br>D B' U F' D' R' U2<br>L D2 F2 L' U Fw' Uw         |    |
| 24. | D2 B2 U2 R' U2 B2 L2<br>U2 B2 D B2 F2 U B<br>R2 F' R' D' U Rw Uw'       |    |
| 25. | R2 D2 L2 F2 R2 F2 U'<br>B' D B' U F' L F2<br>U L' D2 F2 R' Fw Uw2       |   |
| 26. | D2 B2 D2 L F2 L' D2<br>B2 U2 L2 B' F' R' B'<br>D B F2 U F' U2 Fw'<br>Uw |  |
| 27. | F2 R2 B2 D2 L2 U2 R2<br>B2 U' L2 D' R F U<br>R' F R U B F2 Rw'<br>Uw'   |  |
| 28. | U' R2 U2 F2 U F2 L2 B2 U' R<br>F D2 B' D2 L F U' L2 F' D2<br>U2 Fw Uw   |  |

|     |  |   |
|-----|--|---|
| 29. | D F2 U F2 U B2 D2 L2 D' L2<br>U' L B' R2 D2 U2 F' D' U2 R<br>U Rw Uw     |    |
| 30. | U2 B2 F L2 B' F2 R2<br>F' U2 L F2 R' B' F<br>U' L' D2 F L' D' Fw'<br>Uw2 |    |
| 31. | U B2 D2 L2 F2 R2 U'<br>L2 D L D' L2 B' R<br>D2 U' R D B2 U2 Fw<br>Uw2    |    |
| 32. | U' F2 U B2 R2 F2 L2<br>D2 L2 F' R' B U L'<br>F' L2 F' U R D Rw<br>Uw'    |   |
| 33. | D2 R2 U2 R2 F' U2 B<br>F' R2 D U F U2 L'<br>F2 L2 U' R' F D2 Fw<br>Uw2   |  |
| 34. | U2 L2 D2 F' D2 R2 B<br>F2 D2 F2 L F U F<br>D' R2 F' R D2 B2 L'<br>Fw Uw' |  |
| 35. | D' R2 F2 D2 U2 R2 F L2 D2 R2<br>D B L B' F L D F' Rw Uw                  |  |

|                 |                              |   |
|-----------------|------------------------------|---|
| 1.              | L R L B' R' U' R' L' U B L   |    |
| 2.              | L R L B' U' R' L R L B' L'   |    |
| 3.              | L R B R B' L' R U B' L' R    |    |
| 4.              | L R U R' L' U' R U' B U' B'  |   |
| 5.              | L R L B' R' L B' U R' U' B'  |  |
| Extra scrambles |                              |   |
| E1.             | L R' B' U' R' L B' R B' L R' |  |
| E2.             | L R L R' L' R' B L' B R' L   |  |