| 1. | Մ Մ' | B2 B | D U' | F2 R' | | | | R2 R | U' F' | L2 L2 | |
|------|-------------|----------------|----------|------------|----------|----------|--------------|---------|-----------|----------|--|
| 2. | U' F | B2 R | | U' F2 | | | B2 B2 | | B L | U2 | |
| 3. | | | R2 B2 | | | F2 F2 | U R | D F2 | | F | |
| 4. | R L | D' F2 | ВВ | U' D2 | B2 L2 | | F B | | F' U2 | ט' | |
| 5. | R2 R' | L' D2 | U' B' | | | | F2 D2 | | U' B' | B' R2 | |
| Extr | a scran | nbles | | | | | | | | | |
| E1. | В | D2 L' L' | | F2 2 R' | | | | | _ | | |
| E2. | L L L | F2 F' D2 | | | | | 2 U2 2 F' | | U2 2 B | 2 | |

| 1. | U R' F R2 U' F U2 F2 R2 F' R' | |
|------|--------------------------------|--|
| 2. | U' R' F U' F' U2 R2 U2 R2 U2 F | |
| 3. | U2 R F' R2 U F U' F U F U' | |
| 4. | R' U' R2 F U2 R U' F U' F' U2 | |
| 5. | R2 F U' R U R' U2 F2 U' R U' | |
| Extr | a scrambles | |
| E1. | R' F R2 U' R' U R U2 F' U' F' | |
| E2. | R' U2 R2 U' R2 U R U2 R' F U' | |

| | L2 | D' | В2 | U' | F2 | D | В2 | D' | R2 | U | |
|------|---------|-------|------|------|------|------|------|------|-----|------|--|
| | D2 | В | D2 | В' | R | В2 | L2 | F | L | U | |
| 1. | Fw2 | Rw2 | U | L' | В2 | Rw2 | L2 | R2 | U' | R2 | |
| | Fw2 | F' | U | R | Fw' | D | Fw' | Uw' | Rw | Fw | |
| | В' | Uw | Rw | U | | | | | | | |
| | F' | L2 | F | R2 | F' | L2 | В | F2 | U' | В | |
| | L' | F' | L | В | R' | B' | F | R' | В2 | Fw2 | |
| 2. | Rw2 | R' | F | Rw2 | В | Uw2 | F2 | U2 | R' | L | |
| | В' | F | Uw' | F' | Uw2 | L' | B' | Fw | Uw | R2 | |
| | L2 | Fw | F' | D2 | | | | | | | |
| | F2 | D' | R2 | D' | L2 | U2 | L' | F | U' | D' | |
| | F' | U2 | R' | D2 | F' | R2 | L | Rw2 | F | U' | |
| 3. | Rw2 | Fw2 | Uw2 | D2 | U2 | В | U | R2 | В' | L | |
| | Fw2 | Rw' | F' | D2 | U' | Fw2 | Rw | Uw | Fw | L | |
| | D2 | | | | | | | | | | |
| | F | L2 | U2 | В2 | R2 | L2 | В | L2 | D2 | В2 | |
| | R2 | U' | В | R2 | D' | R' | F | L2 | U | В2 | |
| 4. | Uw2 | Rw2 | D' | L2 | В | D2 | R2 | L2 | Uw2 | U' | |
| | В' | Uw2 | L | Fw2 | В' | R | Uw' | В2 | Rw' | Fw | |
| | F2 | Uw2 | F | U2 | | | | | | | |
| | F' | U2 | D2 | R2 | F | R2 | F2 | R2 | В' | R2 | |
| | F' | D | F | R | В2 | F | L2 | В | D' | F | |
| 5. | Rw2 | Uw2 | U | Fw2 | L' | D | Rw2 | D | R2 | Fw2 | |
| | U2 | L' | Fw | В | L2 | U2 | В | Rw | F2 | Uw2 | |
| | L | Fw' | D2 | Fw' | | | | | | | |
| Extr | a scrai | mbles | | | | | | | | | |
| | D | R | В | D | F2 | R2 | D | L2 | R | D | |
| | L2 | F | В2 | U2 | В2 | L2 | D2 | L2 | Uw | 2 F' | |
| E1. | В2 | Rw. | 2 L' | Fw. | 2 Uw | 2 D2 | Fw. | 2 U2 | В' | L | |
| | U' | Rw. | 2 B | Uw | ' F | Rw | Fw | В' | Rw | ' B2 | |
| | Uw2 | 2 Fw | Rw | ' | | | | | | | |
| | В2 | U2 | В2 | R2 | D2 | R2 | В | R2 | F2 | U2 | |
| | L2 | D' | L' | U | L2 | U2 | R' | F2 | Uw | | |
| E2. | R | F2 | R | D | R2 | Fw | | R2 | U | Rw2 | |
| | F' | Rw. | 2 Fw | ' D' | L | Fw | 2 B' | U | Rw | ' F | |
| | Uw | ' L' | Fw2 | 2 D2 | | | | | | | |
| | | | | | | | | | | | |

| | U2 | Uw | Bw | D2 | Uw | Dw' | Fw | Dw2 | Fw2 | L' | Fw2 | Uw' | |
|-------|---------|-------|------|-------|-----|------|--------|-----|-----|-----|-----|-----|--|
| | Bw | Lw2 | F' | Fw | Uw | R' | L' | Dw | D | Rw2 | Uw | Bw | |
| 1. | Dw | Rw' | Lw | Uw | R | Fw2 | R2 | В | D' | Rw | L | F' | |
| ' | L' | Dw2 | Lw2 | U2 | Bw | U | Fw | Uw | Bw | U2 | R2 | Lw' | |
| | L2 | Fw | D' | Rw' | В' | R2 | Uw | U2 | D' | Dw | F | Fw2 | |
| | | | | | | | | | | | | | |
| | Lw2 | U2 | Dw' | В' | L | Dw2 | В' | U' | Fw | Uw' | Bw2 | Uw2 | |
| | Rw2 | D | F2 | L | Lw | Rw | R2 | F | Dw2 | D2 | R' | B2 | |
| 2 | Fw' | F | Dw | Lw' | Fw2 | Lw | U | Fw2 | Uw' | Dw2 | Fw' | Lw' | |
| 2. | U' | R | Rw | U' | D2 | B2 | Dw' | L' | F2 | Rw' | R | D. | |
| | U2 | Dw | Rw | Bw | U | Fw | Rw2 | Lw' | F | Fw2 | Dw2 | D' | |
| | 02 | 2,, | 2000 | 2,, | | - ** | 1000 2 | _,, | _ | | 2 2 | | |
| | R2 | Lw2 | Fw | Dw' | F' | R2 | L | U' | Bw | Lw' | D' | F2 | |
| | В | Bw | υ' | Dw' | Rw' | U2 | F | Lw2 | U' | Lw | В | Lw | |
| 3. | F' | Uw2 | R' | Dw | Fw | B2 | Rw' | D | R2 | U' | В' | F' | |
| J. | U' | B2 | Bw2 | F | Fw2 | Dw | Fw | Rw2 | L2 | R' | Lw2 | Bw2 | |
| | Ū | Lw | Dw | Rw | R' | Dw | L2 | R' | Rw2 | U2 | В | F2 | |
| | | | | | | | | | | | | | |
| | Dw | L2 | Bw2 | Lw' | Rw2 | Bw2 | R' | Fw' | R2 | Dw | R' | Lw' | |
| | В | Bw2 | F | U' | Uw2 | R' | Uw' | F2 | U | F | Fw' | L | |
| 4. | Uw' | R2 | Lw | Rw2 | Bw | L | R' | В' | Lw' | R | Bw | Lw' | |
| ٦. | R2 | U2 | L | Bw' | В | F | D' | R2 | L' | В' | L2 | F2 | |
| | D | Fw2 | Lw' | В | Dw | Lw' | L2 | Rw' | Dw | R' | Fw2 | L | |
| | | | | | | | | | | | | | |
| | В' | Bw | Fw2 | F | Uw' | D | U | Rw | Bw | Dw | U2 | D' | |
| | R2 | Dw | D' | R' | Uw' | Lw2 | Uw2 | Lw2 | F2 | Bw | Dw | U' | |
| 5. | R2 | Bw' | Fw2 | D | L2 | Rw' | Dw' | R' | Uw2 | D' | Lw | U' | |
| . | F2 | Dw' | В' | F' | L2 | Bw | U' | F' | D | U' | Dw2 | Uw2 | |
| | F | Dw2 | В2 | Bw | Dw' | Fw2 | В' | Lw' | Bw' | Fw | Uw | Fw | |
| | | | | | | | | | | | | | |
| Ext | ra scra | amble | S | | | | | | | | | | |
| | Dw | 2 D2 | L2 | R2 | Dw | F2 | D' | Dw2 | R2 | Lw' | Bw' | L' | |
| | B2 | | 2 Lw | U' | D' | | Lw' | | Rw2 | | | Rw2 | |
| E1. | _ | Fw | L L | Rw2 | | Bw2 | | U2 | Fw | D' | Dw2 | | |
| - ' · | U | L' | R' | Uw' | | F' | Bw' | | | | Uw' | B2 | |
| | U2 | Fw | F | R2 | Lw2 | D | Bw | В' | U' | F2 | D | Rw' | |
| | | | | | | | | | | | | | |
| | U | Rwi | 2 Bw | ' Dw2 | . U | Lw | Uw | Dw2 | F2 | L' | F | L2 | |
| | Uw | | L' | Dw2 | | Uw | F' | Fw | В | Uw | D' | R' | |
| E2. | Dw | D' | R2 | U' | Uw' | Bw' | Uw2 | R | Rw | Lw' | D' | В | |
| | F | Rw | D | Lw | Bw2 | F | Uw2 | R | L' | Dw' | F2 | R | |
| | В | D | Rw | ' F | L' | D' | L | Rw | Bw2 | В | D2 | Uw2 | |
| | | | | | | | | | | | | | |

6x6x6 Cube Round 1 NU_CUBING_10-04-2015

| | U2 | 3Rw2 | Fw' | 3Fw' | F' | Rw | R' | F | Uw' | |
|------|----------|-------|------|------|------|------|------|------|------|--|
| 1 1 | Rw | Uw' | Bw2 | Uw' | Fw' | 3Rw' | Dw' | Uw | Lw' | |
| | U | R | Bw' | U' | Bw' | Dw' | Fw' | 3Uw | U' | |
| | В2 | Dw2 | Bw2 | 3Fw2 | R2 | 3Rw | Uw' | Lw | В' | |
| 1. | 3Fw2 | Uw | В | Dw' | 3Rw | L | В2 | D | L2 | |
| '- | Dw' | 3Rw | L | Rw | Lw | R | 3Uw | Uw' | Rw | |
| | Lw' | L' | U | Bw2 | Uw2 | Lw | D2 | Bw2 | B2 | |
| | L' | Rw2 | | U | 3Uw2 | Uw2 | Dw' | 3Fw' | F2 | |
| | Bw' | R2 | Lw | Dw2 | Fw' | Rw2 | Dw' | U' | 1 4 | |
| | | 102 | Δ VV | DW2 | T. M | 1002 | | | | |
| | 3Fw | 3Uw2 | Lw2 | F2 | L' | 3Rw | D | Fw | 3Uw2 | |
| | F2 | Fw | 3Fw2 | U2 | Rw2 | Bw | Lw' | U2 | B2 | |
| | 3Fw | F2 | Dw2 | 3Uw' | D | R' | В | Uw' | Lw' | |
| | D' | 3Uw' | Bw | F | R2 | 3Rw' | 3Fw' | D | Uw2 | |
| 2. | L2 | Fw | F' | R | Uw2 | Rw' | Fw | Rw | Bw2 | |
| ۷. | Fw' | Dw' | L2 | 3Uw' | 3Fw' | D2 | | В | F2 | |
| | R2 | Bw2 | | Lw2 | L | 3Uw' | L2 | Fw2 | 3Rw | |
| | Lw' | Uw2 | R | Bw2 | U | Fw2 | Rw2 | U' | R | |
| | 3Fw2 | Fw | U' | D' | 3Uw | Lw | L2 | R2 | 10 | |
| | JI WZ | | | | 30W | | | 102 | | |
| | Bw | 3Rw' | Uw2 | Dw | В | Uw | Lw2 | R2 | Uw | |
| | 3Uw2 | Rw' | 3Fw' | D2 | Lw2 | R2 | B2 | U2 | 3Fw' | |
| | U | D' | Bw' | L' | Lw2 | F2 | R2 | В | R | |
| | В2 | 3Rw2 | Uw2 | 3Fw2 | Fw2 | Dw | В' | L' | D2 | |
| 3. | Dw2 | 3Fw | L' | F' | 3Rw | L' | U2 | 3Fw2 | L' | |
| ا ٠٠ | D2 | Fw | L2 | R2 | Bw' | Lw2 | R' | 3Uw2 | Uw' | |
| | 3Rw2 | 3Fw' | Rw' | Dw | Rw | Bw | D | L2 | 3Fw' | |
| | F | 3Rw2 | 3Fw2 | 3Rw2 | U | Rw | R2 | Dw | F | |
| | ъ2 | Bw | Uw | Bw' | Dw' | R | B' | 3Fw' | _ | |
| Evti | ra scrar | | | | | | | | | |
| | | | | | | | | | | |
| | Lw2 | 3Uw | | D | Dw | Rw2 | Fw | Rw2 | R | |
| | Dw' | Rw | Uw' | U' | Bw | В2 | 3Uw2 | Fw' | B2 | |
| | 3Uw: | 2 B' | 3Uw' | Lw2 | Dw' | Fw' | 3Uw | Dw | F' | |
| | Uw' | R2 | 3Uw' | R | Dw | Uw' | 3Uw2 | == | Uw | |
| E1. | Bw' | L' | U | Rw' | Dw | 3Uw2 | | 3Fw | U | |
| | 3Fw | | D' | Fw | R | 3Rw' | | 3Rw' | D | |
| | 3Uw | ' Lw2 | В | 3Rw2 | Rw2 | R' | U2 | R | D' | |
| | R' | 3Fw | 'Bw2 | 3Uw | Uw' | Rw' | D2 | L2 | 3Fw2 | |
| | L | Fw2 | Bw2 | U' | R2 | D | L' | 3Uw2 | | |
| | U | Fw2 | В2 | R' | L' | 3Fw2 | | L2 | Bw' | |
| | В2 | F2 | Lw2 | Dw | L2 | Lw' | 3Rw2 | | R2 | |
| | Uw' | 3Fw | | | В2 | U' | В | U2 | Rw' | |
| | Lw' | 3Rw2 | 2 D | В2 | Fw2 | 3Fw | F' | Lw' | Bw2 | |
| E2. | 3Uw | Lw | Bw | Lw | L2 | 3Rw | R2 | Rw | Uw2 | |
| | U' | L | Bw | Dw | Lw2 | L2 | Rw' | Bw' | F2 | |
| | 3Fw: | 2 Uw | U | Fw' | Rw' | Fw2 | В2 | Rw | F | |
| | 3Rw | | Fw2 | Rw | Uw | R | D2 | 3Uw2 | U' | |
| | Bw' | U2 | R | U | В' | U' | 3Fw | F | | |
| 1 | 1 | | | | | | | | | |

7x7x7 Cube Round 1 NU_CUBING_10-04-2015

| | | | | | | | | | | | 1 |
|------|----------|---------|----------|------|--------|-----------|---------|-----------|----------|---------|----------|
| | Uw' | U' | F2 | 3Fw | R' | Bw2 | F2 | Dw2 | U | Rw | |
| | Dw2 | F2 | Lw | F' | 3Uw | F2 | Uw' | В' | 3Lw | D' | |
| | Fw2 | Uw2 | Dw2 | R2 | Rw' | В2 | 3Lw2 | Rw2 | U' | Fw2 | |
| | 3Uw2 | Lw | R' | 3Dw | Bw2 | Fw | Uw' | Lw2 | В | 3Dw2 | |
| | 3Rw' | U' | Dw | Lw' | Fw | Lw2 | R2 | D | Bw2 | 3Dw | |
| 1. | Dw | Rw2 | F' | Uw | F2 | 3Rw2 | 3Lw' | D | 3Bw | 3Fw2 | |
| | 3Lw | R' | Rw | | Lw' | 3Fw' | U' | Fw | F | Dw | |
| | Rw | Bw | R | | L2 | 3Dw' | Fw' | D | 3Rw' | 3Uw | |
| | Fw | 3Dw2 | Uw' | 3Bw' | Fw | Dw2 | D2 | Bw | Dw | D | |
| | 3Bw | Fw | 3Fw' | Rw' | Lw | 3Fw' | Uw' | L | U' | R' | |
| | JDW | T. M | JI. W | ICW | шw | JI W | OW | ш | 0 | 10 | |
| | L | D2 | 3Uw2 | Lw' | Rw | R2 | 3Dw | В2 | Uw' | L' | |
| | Rw | 3Fw' | 3Uw | L2 | F2 | 3Uw' | Bw | 3Rw2 | Lw2 | D | |
| | Uw | U | 3Lw' | D | 3Uw2 | В2 | Dw | U' | F2 | Fw' | |
| | В | L2 | Uw' | L2 | В2 | U' | Dw2 | F | 3Uw | 3Rw' | |
| | Uw2 | 3Uw | Fw2 | | Bw2 | В2 | Rw2 | 3Dw2 | U | Fw' | |
| 2. | Uw | Bw2 | Dw2 | U2 | 3Rw2 | L | 3Bw' | В | 3Fw' | Uw' | |
| | Bw' | 3Dw' | Uw2 | | L' | 3Fw2 | Uw' | L2 | Rw2 | Dw2 | |
| | Uw | Lw2 | L2 | | Lw | Dw | 3Rw | Lw | L2 | 3Bw | |
| | Bw | Lw | B' | Lw | 3Lw | 3Fw' | 3Bw | | Rw | 3Uw' | |
| | R2 | Lw' | | | U' | Fw | 3Fw2 | | D2 | 3Bw | - |
| | I\Z | шw | JDWZ | JUWZ | U | T. M | JI. M Z | 30W | מע | SDW | |
| | Lw | 3Bw2 | В | Rw | Fw | Uw2 | 3Uw2 | R2 | Uw | F | |
| | U' | 3Uw' | Rw | Bw2 | 3Dw2 | Fw' | Uw2 | Lw | Rw | 3Dw | |
| | Fw' | U' | F2 | Rw' | В' | Rw' | D | Bw2 | Uw2 | R | |
| | Bw' | В | R2 | 3Dw' | Lw | 3Bw' | D' | 3Fw | 3Lw2 | Fw | |
| | 3Uw2 | Fw2 | L' | | 3Uw2 | Dw2 | L2 | R | Uw2 | R2 | |
| 3. | 3Dw' | 3Lw | | В' | 3Lw | 3Dw | Dw | Lw | В' | Rw | |
| | 3Rw' | В' | | | L' | F2 | 3Fw' | Lw' | F' | 3Uw2 | |
| | Rw2 | U | В | | Lw' | Dw2 | Rw2 | Lw2 | 3Rw | Dw' | |
| | в2 | Uw2 | U | | U' | 3Lw | 3Uw | Dw' | F' | Lw' | |
| | F | U' | | | Lw' | Uw | Lw' | Rw' | 3Bw' | Bw2 | |
| | _ | 0 | JICWZ | 30W | | OW | ъw | 1000 | 3DW | DWZ | |
| Extr | ra scra | mbles | 5 | | | | | | | | |
| | Rw' | 3Bw | L2 | Bw | Rw2 | 3Fw' | Bw2 | Lw' | F2 | 3Uw | |
| | 3Lw | | | Dw | Bw' | 3Fw2 | | F' | Dw | 3Fw | |
| | L2 | 3Fw2 | | Rw | Lw2 | Dw2 | 3Fw2 | _ ט' | Lw2 | 3Lw2 | |
| | Uw2 | 3Dw | | 3Bw2 | | 3Bw' | 3Lw' | Fw2 | Bw2 | D | |
| | F' | R | 3Lw | Dw2 | Lw' | 3Rw2 | | L2 | U | 3Uw' | |
| E1. | | 2 L2 | 3Uw | Uw | 3Rw2 | | 3Rw' | Lw | R2 | 3Lw | |
| | | 2 Bw' | 3Dw | F' | | 2 Rw2 | Bw2 | D | U' | 3Rw2 | |
| | 3Bw | | | Lw2 | 3Uw | 3Lw | B2 | Dw | 3Uw' | 3Dw2 | |
| | U | L2 | 3Bw2 | | Fw | 3Uw | F | Dw2 | Fw2 | U' | |
| | D | 3Fw | | D' | U' | Rw | Bw | U2 | 3Dw | Rw2 | |
| | | JI W | Τ 44 | 2 | | 1000 | _ VV | 02 | 3 D W | 1447 | |
| | L' | В | 3Bw | F' | Bw | D2 | 3Uw' | 3Dw2 | Uw | U' | |
| | 3Bw | 2 R' | L | 3Bw2 | 2 3Dw2 | | | Fw | 3Rw' | Rw2 | |
| | F2 | R | Dw | D2 | 3Uw' | | F2 | 3Fw2 | U' | Uw2 | |
| | В2 | 3Bw | 3Uw2 | | Lw' | 3Bw' | | | Rw' | Dw2 | |
| | R' | 3Uw | | Bw | 3Lw | | Uw2 | Bw2 | 3Rw | Rw' | |
| E2. | 3Bw | | Uw2 | 3Bw2 | | L' | 3Uw | Fw' | Uw' | U2 | |
| | Bw | Fw | L | D2 | | 2 Uw2 | D' | Dw | В2 | 3Dw2 | |
| 1 | | 3Rw | | Rw2 | Uw | R' | 3Bw | Dw | D | U | |
| | F'W/ | | | | | | | | | | |
| | Fw2 | | | | | | | Bw | U' | | |
| | L2 Rw | D Uw | L Fw2 | 3Rw' | 3Fw2 | | Lw2 | Bw 3Fw | U' Dw | R F2 | |

| 1. | F2 : | D I | L' B2 | 2 L2 2 R' 2 Fw | F'] | _ | L2 R | |
|------|----------------------|---------------------|----------------------|----------------------|----------------|--------------|----------|--|
| 2. | L2 B' F2 R2 | B' D2 U' F | L2 L2 B Rw | F2 R' D Uw' | D2 U2 R' | R: R F | | |
| 3. | L2 : | D' E | J L; 3' R 3 R; | | | | 3' | |
| Exti | ra scramb | oles | | | | | | |
| E1. | | D' | | J2 L2 J2 R | | U2 D | B' B' | |
| E2. | | | F2 I | J2 D' J' F2 | | | B U2 | |

| 1. | B' F | R R2 | | B L2 | | | D L2 | | | L' | |
|------|----------------|---------|--------------------|---------|------------|----------|--------------|---------|----------|----------|--|
| 2. | U R' | | U' U2 | | U R2 | L F | | U' F | R' L2 | U2 | |
| 3. | L2 F | B2 D | L2 R | | D2 U2 | | | R' | B2 | L | |
| 4. | U2 U2 | | U2 D | B2 U | F2 L' | | U2 U' | | L2 B | R' L' | |
| 5. | D2 F | F' L | U2 B | B F2 | F2 U | L2 R' | B' D' | R' U | F2 | U2 | |
| Extr | a scran | nbles | | | | | | | | | |
| E1. | D' B D2 | R2 | B2 2 D | | L' 2 D' | | 2 U' 2 L2 | | | | |
| E2. | F2 L2 R' | 2 в' | 2 U2 L' 2 U' | В' | | | | | U2 L' | | |

Fewest Moves

- 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.

| NU_CUBING_10-04-2015 |
|-----------------------------|
| 3x3x3: Fewest Moves Round 1 |
| Scramble 1 of 3 |

| Competito | or: |
|-------------|---------------------------|
| WCA ID: | |
| DO NOT FILI | IF YOU ARE THE COMPETITOR |
| Graded by: | Result: |
| | |

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

| | | | | |
|------|------|------|------|------|
| | | | | |
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Fewest Moves

- 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.

| NU_CUBING_10-04-2015 |
|-----------------------------|
| 3x3x3: Fewest Moves Round 1 |
| Scramble 2 of 3 |

| Competitor: | |
|----------------------|-------------------|
| WCA ID: | |
| DO NOT FILL IF YOU A | RE THE COMPETITOR |
| Graded by: | Result: |
| | |

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

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Fewest Moves

- 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.

| NU_CUBING_10-04-2015 |
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| 3x3x3: Fewest Moves Round 1 |
| Scramble 3 of 3 |

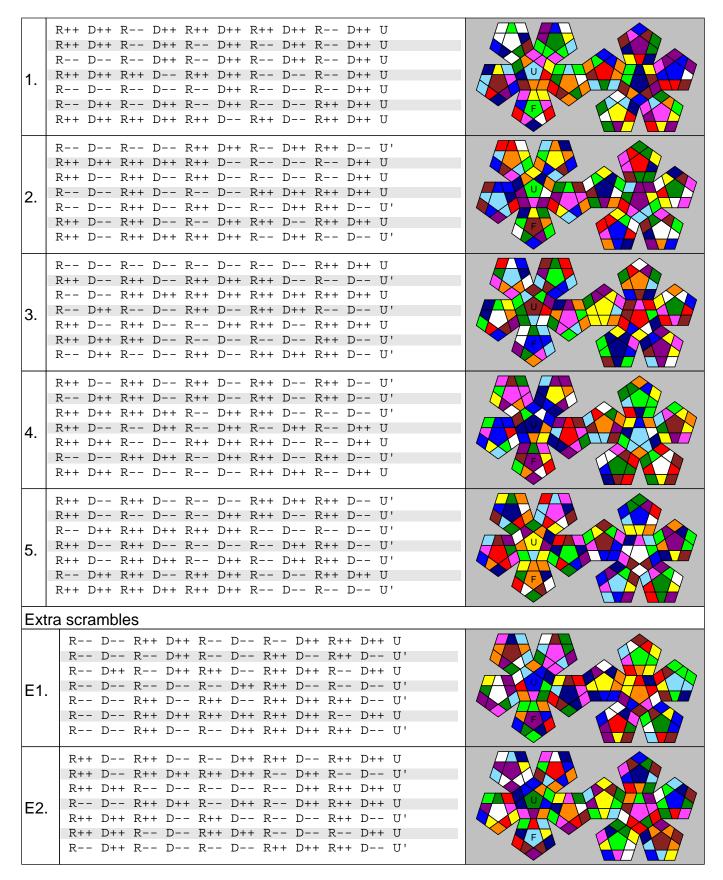
| • | or: | |
|--------------|----------------------|-------|
| DO NOT FILL | IF YOU ARE THE COMPE | TITOR |
| Graded by: _ | Result: _ | |
| | | |

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

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| 1. | B' L2 R | D2 F U | L2 R' F | F' D D2 | D2 L2 | B D | | U2 D' | |
|------|----------------|------------------|----------------|---------------|----------|--------|--------------|--------------|--|
| 2. | R2 D U' | F2 L2 R2 | D2 | F2 F2 | | | B2 R' | F2 F | |
| 3. | R2 U2 B' | | F' F2 D2 | | R F' | | U' F2 | | |
| Extr | a scran | nbles | | | | | | | |
| E1. | י ט | 2 R B 2 F2 | | D' B2 | | | U2 F2 | ? F' ? B2 | |
| E2. | B B' R2 | | | F2 | | | ? F' ? D' | U' F2 | |

Megaminx Round 1 NU_CUBING_10-04-2015



| 1. | LU'L'ULR'U'RB'LU'lb' | |
|-----|-------------------------------------|--|
| 2. | R' L' U' B R L' B R B' R' L' l r b' | |
| 3. | L' B' U' L' B L' R L' U' L B r b | |
| 4. | RU'R'L'BRBL'U'B'Rul | |
| 5. | L'B'R'LULB'LR'LRu'l'r | |
| Ext | ra scrambles | |
| E1. | LUBR'BLB'L'BL'R'ul'b | |
| E2. | L' R' L U B' U R' L R' L B' u l' r | |

Square-1 Round 1 NU_CUBING_10-04-2015

| 1. | (4,3) (6,-3) (-5,0) | / | (3,6) (0,-5) (4,-1) | / | (3,0) (-3,-3) (1,0) | | (2,-4) | / | |
|-----|--------------------------------------|---|-----------------------------|---|-----------------------------|-----|----------------------------|-------|--|
| 2. | (-3,5) (4,-5) (-3,0) | / | (-5,1) (-1,-3) (-5,0) | / | (0,-3) (6,-3) (-2,0) | / | (2,-1) (3,0) (4,0) | / | |
| 3. | (0,2) (3,-3) (-3,-2) (-4,0) | / | (4,-5) (0,-3) (4,0) | / | (-3,0) (-2,0) (0,-1) | / | (5,-1) (-3,0) (2,0) | / / | |
| 4. | (0,-1) (3,0) (-2,-3) (6,0) | / | (1,1) (2,-4) (2,-2) | / | (0,-3) (0,-2) (-2,-2) | / | (3,0) (0,-3) (-1,0) | / / / | |
| 5. | (-5,0) (-5,0) (2,0) | / | (-1,5) (-3,0) (-2,0) | / | (1,-2) (5,-3) (-2,-3) | / | (2,-4) (-3,0) (-2,0) | / | |
| Ext | ra scrambles | | | | | | | | |
| E1. | (2,-4) | / | (-3,6) (1,0) (4,-2) | / | (-3, -3) |) / | (-3,0) | | |
| E2. | (-3,0) | / | (-3,3) (3,0) (-3,-4) | / | (5,-3) | / | (0,-3) | | |

| 1. | UR3- R4+ U5- | DR3+ D4+ R5- | DL5+ L2- D2+ | UL6+ ALL0+ L4+ | U3- y2 ALL1- | | |
|------|--------------------------|--------------------------|--------------------------|----------------------|--------------------|-----|--|
| 2. | UR5- R4+ U2- | DR5- D1+ R4- | DL5- L4- D0+ | UL6+ ALL1+ L4+ | U1+ y2 ALL5+ | | |
| 3. | UR0+ R5+ U2- DL | DR6+ D4- R5- | DL6+ L6+ D3- | UL1+ ALL5- L0+ | | | |
| 4. | UR6+ R0+ U5+ UR | DR1+ D5+ R2- DR | DL3+ L3- D2- DL | UL2+ ALL5- L2+ | U2- y2 ALL4+ | | |
| 5. | UR2- R6+ U1+ DL | DR2+ D5+ R0+ UL | DL0+ L2- D1- | UL2- ALL2- L5+ | U6+ y2 ALL3- | | |
| Extr | a scramble: | S | | | | | |
| E1. | UR1+ R4+ U0+ DR | DR4+ D3+ R4+ DL | DL1+ L4- D1- | UL1+ ALL1+ L1+ | | 000 | |
| E2. | UR5- R5- U5- UR | DR5+ D5+ R1- DL | DL6+ L2- D2+ UL | UL3+ ALL1- L6+ | U1+ y2 ALL5- | | |

| 1. | L' F' F2 L2 F2 Rw' | R' R' L R2 L' Fw' | F2 D2 F2 B U B2 | L B2 R2 L2 B2 z | D2 U2 Fw2 Uw2 Fw | B' L2 Uw2 R2 R2 | D' B2 L' Uw' F2 | B'RB'B'Fw2U2 | |
|-----|-----------------------------------|----------------------------------|-------------------------------------|------------------------------------|-------------------------------------|------------------------------|----------------------------|-----------------------------|--|
| 2. | D2 U2 F Fw2 Fw' U2 | B D' D2 R' D' | L2 B' F2 Uw2 F' Rw' | D2 L2 Fw2 U2 Rw2 F2 | B U2 Uw2 Rw2 Fw2 Uw' | R2 F2 U' F2 R | U2 R' L L' Rw' | F2 U2 D' U2 Fw | |
| 3. | U' D2 U2 B Uw2 L | L2 L B' U L2 Fw | D2 B' Uw2 Fw2 Uw2 R' | B2 U Fw2 D D | R2 L2 U' U2 Fw y2 | U' U2 B Fw2 Uw | L2 D Uw2 F2 Rw | U' F D' Rw F' | |
| Ext | ra scram | bles | | | | | | | |
| E1. | R F D Fw2 R Rw' | F2 | U2 U Fw2 D2 R2 Uw' | F' B2 Uw2 Rw2 F' z' | D2 R2 U D Uw' Y' | U2 L2 Rw2 Fw2 Rw | F D' D' Rw L2 | L' L2 L2 F' Uw | |
| E2. | F2 U L' Fw2 Rw2 U' | | | F D2 F2 L2 Uw' B' | B2 F2 Rw2 F Fw2 | R | F' L B' Fw2 Rw | L2 U2 U2 Uw' D' | |

5x5x5 Cube: Blindfolded Round 1 NU_CUBING_10-04-2015

| | D | В | Dw' | Uw' | D | F | Dw' | Fw2 | |
|-----|----------|----------|---------|------|-------|------|--------|-----|--|
| | Uw2 | F | R | Dw' | Lw | U | Lw' | В2 | |
| | Rw | U | L' | F' | Uw' | Lw' | L' | D | |
| | В' | Rw2 | D2 | U2 | Dw2 | Fw2 | U2 | R2 | |
| 1. | Lw' | Fw2 | Lw | B' | Uw' | Rw | R | U2 | |
| | F | R2 | Uw' | U2 | Dw | F | U | Uw2 | |
| | Lw2 | Dw | B2 | F2 | Rw' | R2 | D | R | |
| | | | | | ΙζW | NΔ | ע | K | |
| | Rw' | Uw | Fw | 3Rw2 | | | | | |
| | D' | F' | L' | В | U' | F | В' | R' | |
| | Rw2 | В | R2 | Dw | Uw2 | L | Rw | U2 | |
| | Lw' | Bw | R | D2 | Fw' | Rw | R | L' | |
| | Lw' | Uw' | Fw2 | L2 | Uw2 | D | Lw' | Dw | |
| 2. | R | Rw2 | Fw | F' | R' | В | Rw2 | R2 | |
| | Uw' | F' | Fw' | В' | Rw | Fw' | B' | R | |
| | F | B2 | Uw2 | Rw | F | R' | Rw | L | |
| | U' | B2 | | | | | ICVV | П | |
| | U · | BZ | Rw' | R | 3Rw' | 3Uw | | | |
| | L | В' | L | Lw | F' | В' | U2 | Bw2 | |
| | F | Lw2 | В' | U | Uw | R | Uw' | R' | |
| | U ' | Uw | D2 | R | Bw | Uw2 | L2 | Fw' | |
| | Lw | Rw2 | R' | D' | Rw' | Uw2 | Rw2 | Bw2 | |
| 3. | F | Rw | Lw | Uw2 | Lw2 | Uw' | F2 | Lw' | |
| | Dw2 | U | L | B2 | Bw' | F' | Dw | Uw | |
| | Lw2 | Fw' | L2 | D' | Rw' | L | Lw2 | B2 | |
| | Bw2 | Dw' | Uw | B2 | 3Rw' | 3Uw2 | 11 W 2 | D2 | |
| | DWZ | DW | OW | בע | JICW | JUWZ | | | |
| Ext | ra scran | nbles | | | | | | | |
| | В | Dw | F | Dw2 | U ' | Fw | В | F | |
| | D' | Uw' | U2 | Dw2 | F | R' | L2 | F | |
| | R2 | Lw | L' | D2 | В' | R' | Lw2 | Fw | |
| | D | Dw2 | - F' | Fw | Dw' | L2 | U | F' | |
| E1. | R2 | U' | Dw | R' | U' | Rw2 | D2 | Rw | |
| | R2 | D | U' | Rw | Bw2 | Dw' | U | Rw' | |
| | L2 | Lw2 | Uw | Fw' | Rw | B' | Bw | U | |
| | Bw2 | U | Bw | L | 3Rw | 3Uw' | DW | | |
| | DWZ | U | υW | L | JICW | JUW | | | |
| | F | Bw2 | Rw' | D' | В' | F' | Fw' | Rw' | |
| | Uw2 | F | U' | D2 | Fw2 | U2 | Rw' | Uw2 | |
| | L2 | Fw | F' | Rw2 | L | F | Bw | Fw' | |
| | Uw2 | В' | Fw | R | U2 | Lw2 | D | Dw2 | |
| E2. | Bw | _ ' ט | Bw' | L' | F2 | U' | Dw ' | L | |
| | Fw | Bw' | F2 | В' | D | R | Rw2 | Bw' | |
| | F2 | U' | Lw' | Uw2 | L | Rw | Bw2 | B' | |
| | Dw2 | В | Rw2 | 3Rw' | | | _ ,, _ | _ | |
| | 2002 | | 1002 | 2100 | 2 0 W | | | | |

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

| 8. | L2 R D | D B B | '] | L2 L2 J | R2 B F2 | D2 D2 U | 2 | U2 | U L Uw | | |
|-----|-----------------------|----------------------|------------|----------------|---------------|---------------|---------|----------------|----------------|---------|--|
| 9. | F2 D2 Fw | L2 R' Uw | | D' U' | | F2 D2 | | U L' | L R' | B' U | |
| 10. | D2 R' | | D2 R2 | B2 U | R' R | D2 F2 | L D' | F' B2 | D' | F | |
| 11. | B2 D2 | U2 B | L2 F | F U | D2 L' | | | R2 D2 | | F | |
| 12. | R B' | F2 R2 | L2 D | U2 R2 | L2 B' | U2 U | R R' | D' F2 | F' Rw | D' | |
| 13. | L2 D B2 Rw2 | U F2 R 2 Uv | 2 t ' t | R2 J' J2 | D R' F | B2 B D | | L2 D2 B2 | F2 L F' | | |
| 14. | F' R2 B' Uw2 | L2 F2 R2 | 2 I | 3 O F2 | F L D2 | D2 B R | | L2 D D | B2 U' Fw | 1 | |

| 15. | F F' B' Rw2 | D2 D2 R | F B2 F2 | R2 U L' | D2 B' B | B F' U' | R2 D2 B2 | | |
|-----|-----------------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------|--|
| 16. | B' L2 D | D2 B2 U | R2 R' F2 | D2 B D2 | B' D R2 | D2 F' Uw' | B R2 | | |
| 17. | L2 L2 L' | U2 D' U2 | B2 B' F | R2 F' D | U' L L | B2 D' Fw' | D B | | |
| 18. | F2 L2 U Uw2 | D2 D2 R' | B' R B' | L2 D2 D' | B' B F | L2 F' L | D2 D2 Fw | | |
| 19. | U2 D' L2 Uw' | L2 L2 F | F2 R R | R2 U F2 | D' R2 L' | L2 U' D | R2 B Fw | | |
| 20. | D' F2 Uw | | B2 U D F' | B2 U | | U L2 U' B2 | ? R ? L | B Fw | |
| 21. | F2 R' Uw | | D2 R' R' F' | D2 D | | R2 D2 D' U2 | | F2 Fw | |

| 22. | F2 B' Uw | L2 R' | | R2 B2 J2 B2 | D2 U' | F2 F2 | | U D2 | L Rw | |
|-----|----------------------|----------------|----------------|-----------------|---------------|----------|----------------|-----------------|---------|--|
| 23. | B2 L' F2 | R2 D2 R' | 2 R | ' F2 D' D | U B Ri | | B2 R | F2 U | | |
| 24. | L2 F2 R' | U2 R D | 2 L F: | 2 L | R F B | 1 | D2 L' L | R2 D' Uw | 1 | |
| 25. | B2 D B' | D' B2 L | | | F: L: B | 2 | D F2 Rw2 | F2 L2 Uw | | |
| 26. | R2 U' R' Uw | F2 R2 D | | F2 | D R F | 1 | U2 B2 U | R2 L Rw | 1 | |
| 27. | D L2 F2 Uw | F2 U2 R | | ' D | B: L: R | 2 : | F2 D D2 | D L' Rw | • | |
| 28. | D L2 B2 Uw | R2 F L | 2 U R: F | | L | 1 | L2 D2 U' | D2 R' Rw2 | 2 | |

| 29. | D2 B2 L' | B2 D' R | R2 L' U | D R2 F | L2 U L | U2 L2 D2 | L2 D' Rw2 | | |
|-----|-----------------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------|--|
| 30. | U' L2 B' | L2 U2 F' | U' R' R' | B2 B2 Fw | U D2 Uw2 | R' U | F' R2 | | |
| 31. | U2 L2 R | L2 U D' | D' R' F | F2 B L2 | U2 D2 U2 | B2 L2 Rw2 | D' F Uw | | |
| 32. | B2 F Uw | L2 D L' R | | D2 U | B' U2 R B | 2 L2 D2 | | U ' Rw | |
| 33. | F2 R2 L' Uw' | D2 B D | F' R2 U' | R2 D B | B F' R' | F2 D2 U' | D2 B F2 | | |
| 34. | D2 L2 R2 Uw' | R2 F U | F2 R' L | U2 U2 D' | B2 B B | U2 D' D | B' U2 Rw | | |
| 35. | U2 F' F' | L2 L2 L | B2 U' B | D L R' | B2 F2 D | U' U Rw2 | R2 B' Uw | | |

| 1. | LRLU'B'LRUR'B'L' | |
|-----|--------------------|--|
| 2. | LRLRUB'L'ULBU | |
| 3. | LRLRU'B'UB'L'U'B | |
| 4. | LRL'R'BL'RLR'BU | |
| 5. | LR'L'BURU'B'U'B'L' | |
| Ext | ra scrambles | |
| E1. | LRL'URB'LR'L'B'L' | |
| E2. | LRL'UL'RLBU'LB | |