Remembering The Basic Rubik 3x3x3 Six Step Solution

Each sequence has a natural rhythm, but an easy mistake is to start off wrong. The Edge Mover and Corner Cycle start with U, the Edge Flipper (after parking the F) and the Edge Swapper start with R. To avoid forgetting your place, run the sequence in your head, or simply count 1,2,3,4,... as you go; two sets of 4 for the edge mover, 4 between the F's of the edge flipper, etc.

Edge Mover (for Step 2):

edge mover, FU -> FR: \((U R) (U- R-) , (U- F-) (U F)\)

Mixes the up layer but leaves the lower two layers unchanged except replaces FR with FU. Think of it as two pairs, the first starts with UR, and the second with U-F-.

Edge Flipper (for Steps 2 and 3):

degree flipper: F (R U) (R- U-) F-

Mixes the up layer and flips UF (leaving it in the UR position). Repeat at most three times to make all up edges have correct top color; if at least one up edge is correct already, start with the cube positioned so that UL is correct. Think of this as "parking" the front with F, doing (RU) (R-U), and then "unparking" the front with F-.

Edge Swapper (for Step 4):

degree swapper, UF<->UL: \((R U) (R- U) (R U^2) (R- U)\)

It's R R- R- interleaved with U U U^2 U. Starts with R, the R's alternate + and -, and the U's keep going clockwise, where the third is 180 degrees.

Corner Cycle (for Step 5):

corner cycle: \((U R) (U- L-) (U R-) (U- L)\)

It's U U- U U- interleaved with R L- R- L. Starts with U, the U's alternate + and -; remember that R and L- come first, and the next two must be R- and L.

Corner Rotator (for Step 6):

corner rotator: R- D- R D

Exchanges UFR and DFR; repeat 6 times to restore the cube. Step 6A does it 2 or 4 times. Also exchanges DBL and DBR; cube is mixed during Step 6, but lower layers will be solved again once the up layer is. Always complete the sequence before doing Step 6B; it is easy to forget the final D when you see the correct color on top.

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