

Rubik cube solution (v2)

1st layer

step 1 - make U cross (Note: colours must match with center of L,R,F,B too)

bring correct piece on R (2nd or 3rd layer)

if orientation is correct just rotate R

if it is not correct change orientation around 2nd layer axis

step 2 - complete 1st layer (corners)

bring correct piece on DBR (3rd layer)

a) if U color is on D then do D2 (store piece) R D R' now it's case c)

b) if U color is on R then do R D R'

c) if U color is on B then do D (store piece) R D' R'

2nd layer

step 1 - 2nd layer edge pieces (4 pieces)

find on D an edge piece that must go to 2nd layer

look the colour of piece on D and now let center-F be that colour

rotate D so that piece is on the opposite side

if other colour matches L, do F' D' F D (bring UFL to DFL) L D L' (restores corner piece and position 2nd layer piece)

if other colour matches R, do F D F' D' (bring UFR to DFR) R' D' R (restores corner piece and position 2nd layer piece)

Note: if piece to position/orient is on 2nd layer it's possible to lower the piece by swapping it with a piece on D, but sometimes if beginning positioning 3rd layer pieces, those on 2nd layer may lower themselves

Note 2: pieces on 3rd layer that haven't D center-colour can be moved immediately

3rd layer

step 1 - form cross on last layer

turn the cube upside-down

if two adjacent edge pieces are correct bring them to UF and UR and apply

B U L U' L' B'

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if two opposite edge pieces are correct (bring them to UR and UL) and
apply $B L U L' U' B'$
if no piece is correct apply one of the two formulas and evaluate again the
case

step 2 - solve U face

- a) if one corner has U-center colour on top, bring it to UFL
 - c) if more than one corner have U-center colour on top, bring a corner with
U-center colour facing F side
 - b) if no corner has U-center colour on top, bring a corner with U-center colour
facing L side
- apply $R U R' U R U U R'$ (rotates all corners except UFL and switch diagonals)
repeat the procedure till solution

step 3 - position top corners

switch UFL and UFR by applying $R' F R' B B R F' R' B B R R U'$

step 4 - position top edges

if one piece is correct let it be on B side
to cycle clockwise apply $F F U L R' F F L' R U F F$
to cycle counter-clockwise apply $F F U' L R' F F L' R U' F F$

Optional: Multicolored Cross

When cube is solved apply $R R L L U U D D F F B B$

Optional: Square In The Middle

When cube is solved apply $R L' U D' F' B R L'$