

Rubik's Cube Solution – Reference Sheet

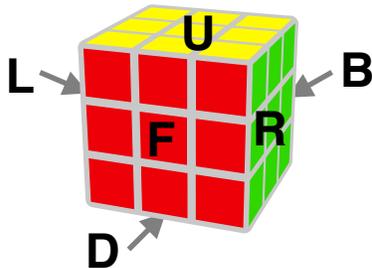
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Based on solutions by Shelley Chang and Tyson Mao.

Notation

The cube has six sides:

- Up
- Left
- Front
- Right
- Back
- Down



Clockwise

U L F R B D

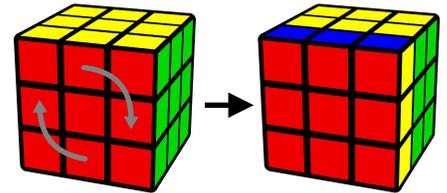
Counter-Clockwise

U' L' F' R' B' D'

Double Turns

U2 L2 F2 R2 B2 D2

Example Move: F



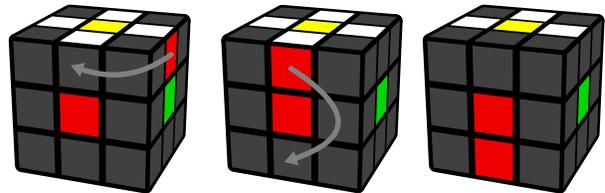
Daisy

Place four edges with white around the yellow center.



Cross

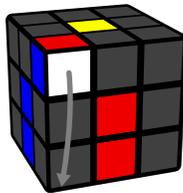
Move four white edges onto the white side.



Solve each petal by aligning it and placing it.

First Layer Corners

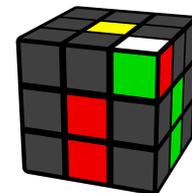
Select corners with white in the top layer and move them down one at a time.



Left Trick =
U' L' U L



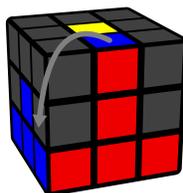
Right Trick =
U R U' R'



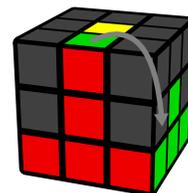
(Right Trick) × 3 =
(U R U' R')³

Middle Layer (Edges)

Select an edge, perform this sequence, then reinsert the corner again using the previous step.



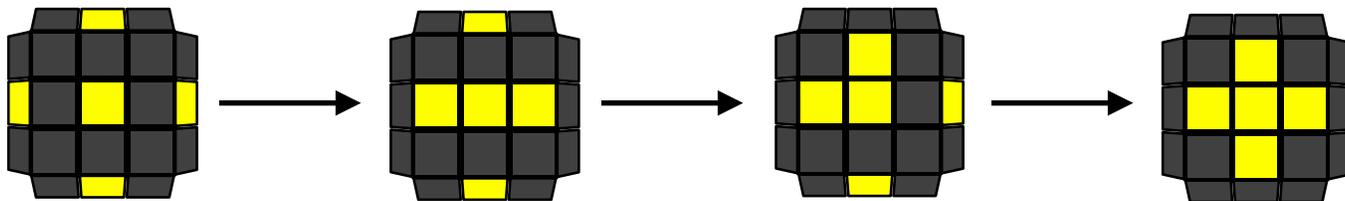
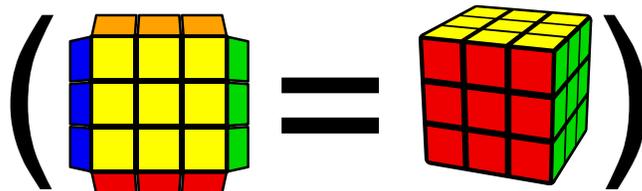
Left Trick + Re-Insert =
U' L' U L → Re-Insert



Right Trick + Re-Insert =
U R U' R' → Re-Insert

Last Layer Edge Orientation

Make sure the cube matches the diagram every time before you apply a sequence of moves.



$$F + \text{Right Trick} + F' = F (U R U' R') F'$$

$$F (U R U' R') F'$$

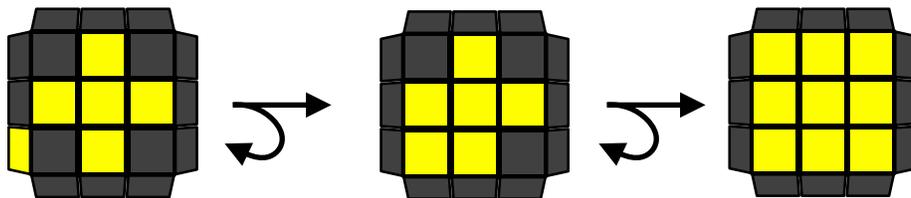
$$F (U R U' R') F'$$

Last Layer Corner Orientation

Count the number of corners with yellow facing up.

Not 1

Exactly 1

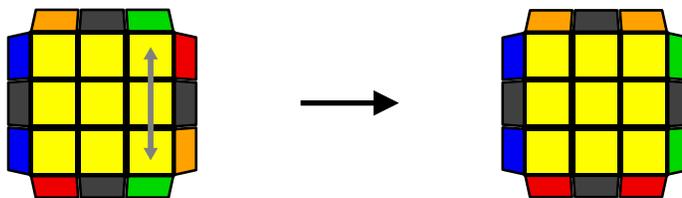


$$\text{Right Sune} = (R U R') U (R U^2 R')$$

$$\text{Right Sune} = (R U R') U (R U^2 R')$$

Last Layer Corner Positions

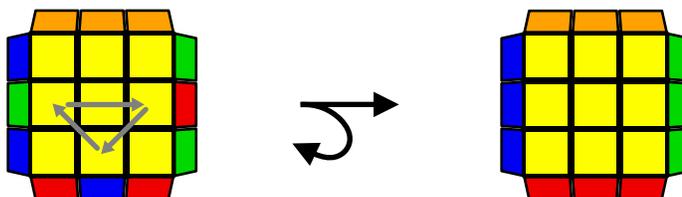
Align two corners on the left side if possible.



$$\text{Niklas} + \text{Right Sune} = (L' U R U' L U R') (R U R') U (R U^2 R')$$

Last Layer Edge Positions

Place a solved last-layer edge in the back if possible.



$$\text{Right Sune} + U + \text{Left Sune} + U' = (R U R') U (R U^2 R') U (L' U' L) U' (L' U^2 L) U'$$