

Updated Stages
2&3

You CAN do the
Rubik's
CUBE



Solution Guide
3x3 Rubik's Cube
Unlock the Secret!

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GET TO KNOW YOUR RUBIK'S CUBE

STAGE 1:

DEFINITIONS OF RUBIK'S CUBE PIECES

THE PARTS:

EDGE PIECES

PIECES WITH TWO (2) COLORS. THERE ARE TWELVE (12) EDGE PIECES LOCATED IN THE MIDDLE ROWS.



CORNER PIECES

PIECES WITH THREE (3) COLORS. THERE ARE EIGHT (8) CORNER PIECES LOCATED ON THE CORNERS.



CENTER PIECES

PIECES WITH ONE (1) COLOR. THERE ARE SIX (6) CENTER PIECES LOCATED IN THE CENTER OF EACH FACE, CENTER PIECES **DO NOT MOVE** AND REPRESENT THE COLOR OF THEIR FACE.

WHITE **YELLOW** **ORANGE** **RED** **GREEN** **BLUE**



CENTER PIECE COLORS ARE ALWAYS OPPOSITE EACH OTHER:

- **WHITE** OPPOSITE **YELLOW**
- **ORANGE** OPPOSITE **RED**
- **GREEN** OPPOSITE **BLUE**

EACH FACE OF THE CUBE IS REPRESENTED BY A LETTER

R = Right Face - Right side of the cube



L = Left Face - Left side of the cube



U = Up Face - Top side of the cube



D = Down Face - Bottom side of the cube



F = Front Face - Front side of the cube



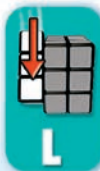
B = Back Face - Back side of the cube



A letter with an "**i**" after it means an inverse or counter-clockwise move when looking at that face directly.

VERY IMPORTANT

When making the moves below hold your Cube full-face front with logo on top as shown. Dark grey on the pictures means the color does not matter. Each move is a $1/4$ turn rotation.



THE DAISY METHOD TO SOLVE THE WHITE CROSS

STAGE 2:

Holding Your Cube:

Begin by holding the Cube with the **YELLOW** center piece on the **UP** face.



Find the 4 edge pieces that have a **WHITE** tile and place them so the **WHITE** tile is on the **UP** face. The **WHITE** tiles on the edge pieces should go around the **YELLOW** center to make a daisy. It doesn't matter whether or not the other color tile of the edge matches anything.

Tips:

- Sometimes, when you place the edge, the **WHITE** tile is not on the **UP** face.

You do this



and get this



To "**flip the edge**"- hold the Cube so the edge that needs to be flipped is on the **RIGHT (R)** face and make these turns..



When you have placed all 4 WHITE edges on the UP face, the UP face will look like this:



You're almost there! Now look at the **FRONT** face of the Cube. If the **FRONT** tile of the **UP** edge piece does not match the **center** tile color, turn the UP face until it does.



or



Then make 2 **FRONT** face turns so that the WHITE tile is now on the DOWN face.



or



Repeat these two moves until all the WHITE tiles are on the DOWN face. Flip your Cube over to see the WHITE Cross (and 2 matching tiles on each of the sides)!

Congratulations!

If your Cube has a WHITE Cross that looks like this picture, you can move to **Stage 3!**



STAGE 3:

Solve the WHITE CORNERS



Your Goal

Holding Your Cube:

The WHITE Cross is on the UP face while you are solving the WHITE Corners.

Rotate the DOWN (D) face until a corner is directly below its intended location by matching the colored tiles to the centers of the faces the corner is between. In these examples, the RED-BLUE-WHITE corner is between the RED and the BLUE face.

If your Cube looks like this, with the WHITE tile on the FRONT face:



If your Cube looks like this, with the WHITE tile on the RIGHT face:



If your Cube looks like this, with the WHITE tile on the DOWN face:



Repeat Stage 3 for all 4 Corners.

Tip:

If a Corner with a WHITE tile is on the UP face, move it to the BOTTOM layer:



Congratulations!

If your WHITE layer looks like the picture here, you have completed one-third of the Cube and you can move to **Stage 4!**



SOLVE THE MIDDLE LAYER

STAGE 4:

Holding Your Cube:

With the **completed WHITE layer** on the **DOWN** face, now you have to solve the middle layer, which means positioning the 'edge pieces' in the correct place.

- Create a vertical line by rotating the UP (u) face until the front color of the edge piece on the UP (u) face without YELLOW on it matches a side center piece. The color on the edge piece's UP (u) face will determine the direction the edge piece should move.



Your Goal

- 1) If you're moving the edge piece in the same direction as indicated in the picture, then follow the sequential moves pictured below:



- 2) If you're moving the edge piece in the same direction as indicated in the picture, then follow the sequential moves pictured below:



Continue these steps until all the edge pieces are in the correct position.

NOTE: If one of the edge pieces is already in the middle row, but in the wrong position, then do either one of the sequential moves, and it will move to the top layer. Then you can do the appropriate sequential moves to position it in the correct location of the middle layer.

Congratulations!

If your bottom two layers look like this picture, you can move to **Stage 5**. You are two-thirds of the way done!



STAGE 5:

SOLVE THE YELLOW CROSS

Holding Your Cube:

- 1) Match the **YELLOW** pattern on the **UP (u)** face of your cube to one of the **YELLOW** patterns shown on the Cubes below.
- 2) Then follow the correct sequence.



Your Goal

Tip:

- **YELLOW** edge pieces on the **UP (u)** face do **NOT** need to match on the side pieces... yet!

1st Step : Make a **YELLOW** Cross



Proceed to the **2nd Step** on the next page.



Then match the result to State 3 or 4, hold the Cube to match that State and do that sequence.



SOLVE THE YELLOW FACE... GET ALL THE YELLOW ON TOP



Your Goal

2nd Step: Make all the corners YELLOW

NOW, look at the UP (u) face and match your UP (u) face to one of the states below.

State 1. If **no corner** cubes are YELLOW on the UP (u) face, you must have a YELLOW tile on the LEFT face as shown.



State 2. If **one corner** cube is YELLOW, hold your Cube to match the picture and do the sequence below.



State 3. If **any two corner** cubes are YELLOW, don't worry about their position. You **MUST** have a YELLOW tile on the FRONT (F) face of the LEFT corner as shown.



Do this sequence **1, 2 or 3 times** to achieve a complete YELLOW UP (u) face. After each sequence, orient the cube to **REMATCH** the UP (u) face to the appropriate state and repeat the sequence until all corners are YELLOW.



Congratulations!

If your Cube looks like this picture, you can move to **Stage 6!**



POSITION THE YELLOW CORNERS CORRECTLY

STAGE 6:

Holding Your Cube:

- 1) While holding the Cube as shown, twist the UP (u) face until at least 2 corners are in the correct location. 2 corners **MUST** be in the correct location as **A, B** or **A, D** or **B, C** as shown below. If all 4 corners are in the correct place then proceed to **2nd step** on next page.



Your Goal

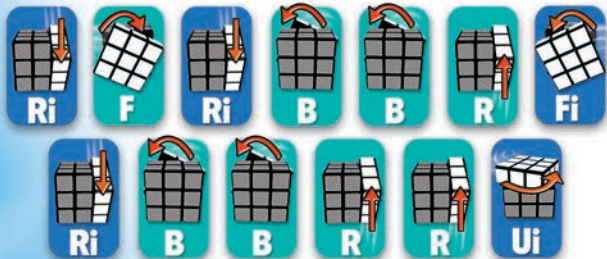
1st Step: Position YELLOW corners correctly

While holding your Cube as shown above, look at the UP (u) face. Place the 2 correct corners in the BACK **A, B** or diagonally **A, D** or **B, C** across from each other.

Top U
Face



If Corners **A** and **B** are in the correct place then to switch **C** and **D**, do the sequence below:



If you need to **switch diagonal corners** like **B** and **C** or **D** and **A**, then do the sequence once. Then, orient the Cube so the 2 correct Corners are in the BACK and do the sequence again.

Congratulations!

If your Cube looks like this picture, you can move to the **2nd Step!**



POSITION YELLOW EDGES CORRECTLY

2nd Step: Position YELLOW edges correctly

Top U Face



If 1 edge is correct and 3 edges are incorrect, orient the Cube so the face with the correct edge is the BACK (B) face. Then, determine if the edge pieces need to move **clockwise** or **counter-clockwise** and do the correct sequence below.

Top U Face



If all 4 edges are incorrect, then do either sequence below once, and then determine what direction the three edge pieces need to move and do the correct sequence below.

To cycle **E F G** Clockwise or **E F G H** Clockwise



To cycle **E F G** Counter-Clockwise or **E F G H** Counter-Clockwise



Your Goal

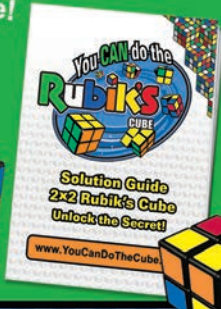
Congratulations!



Check us out online at

www.YouCanDoTheCube.com

Your next challenge:
Try the 2x2 or 4x4
Rubik's Cube!



- Borrow from our Cube Lending Program
- Purchase a Rubik's Cube Education Kit
 - Make a Rubik's Cube Mosaic
 - Host a Team Competition

Thank you to Tyson Mao, Jasmine Lee, and Dan Harris
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Thank you to all of the Daisy Method contributors

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