Solving the Rubik's cube

First step

First constitute the 1st side. For example the white face. During this 1st face, the 1st row must also be correct, that means that the 3 blues together in the 1st row, the 3 greens together in the 1st row, as well as the 3 blues and 3 reds. For this there is no need for a formula.

See below an example of the result of this first step:

From now on the formulas are necessary. Explanation of formulas:

right = quarter turn of the **right** face clockwise

right = quarter turn of the **right** face counterclockwise

left = quarter turn of the **left** face clockwise

left = quarter turn of the **left** face counterclockwise

and so on

front = **front** face

back = **back** side

top = **top** side

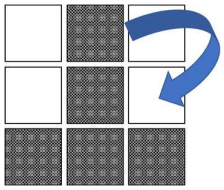
bottom = **bottom** side

Second step

Now that the white face is completely white and the 1st row is also correct, please hold the rubik's cube with the white face down. See picture below:

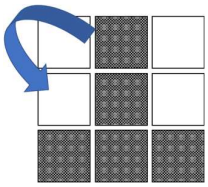
Formula to move the arete located at the top in the middle so that it comes to position on the right in the middle:

top right top right top front top front



Formula to move the arete located at the top in the middle so that it comes to position on the left in the middle:

top left top left top front top front



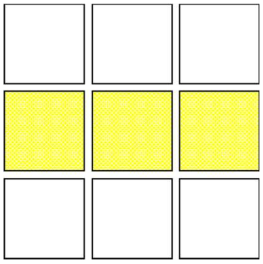
Apply these formulas until the 2nd row is complete. The rubik's cube should look like the image below, with the correct white side underneath, the first 2 rows correct, and the top not yet correct:

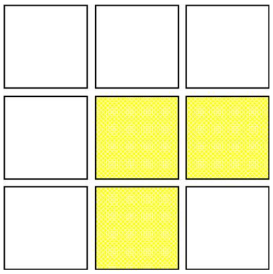
Third step

We will now make the yellow cross on top (continue to hold the cube with the white side down).

When you look at the top of the cube, you must use the formula below to obtain a yellow cross.

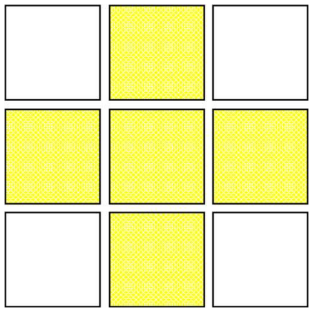
When the cross is still partial, this is how the view should look:



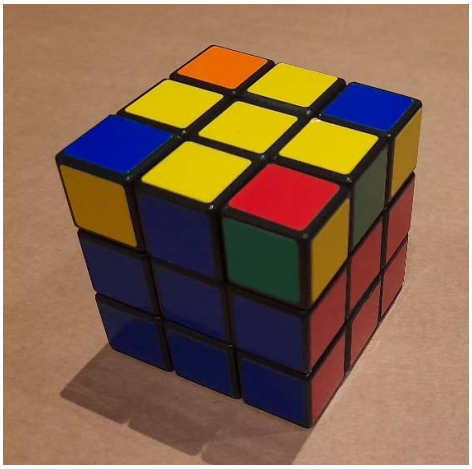


Formula to make the full cross appear on top: back top left top left back

Apply if necessary 2 or 3 times this formula until obtaining the complete yellow cross as below.



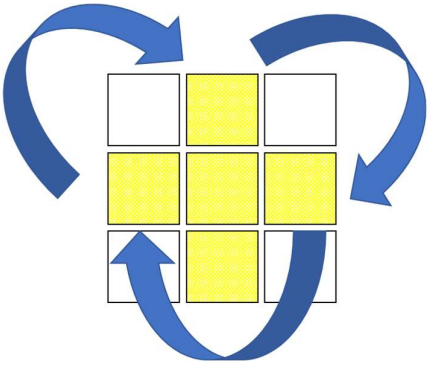
The cube now has the two bottom rows corrects and a yellow cross on top. Rotate the top so that the side of the cross against you is the same as the rows below. For example below we see that the side of the cross is blue like the bottom. The other 3 sides of the cross need a rotation to be also correct.



4th step

The formula below rotates the 3 sides of the cross:

right top right top right top top right



When applying this formula it is important that the side of the cross towards you is correct and the other 3 are not correct. If necessary, rotate the top row to be in the correct starting position for this formula. Apply this formula 1 or 2 times to get all 4 sides of the cross correct.

Now the cube still has 2 or 3 or 4 incorrect angles. Everything else must be correct. See example below:

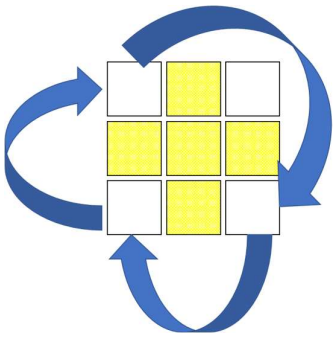
Your case may be different. There may be either 2, 3, or 4 incorrect angles. The rest must be correct at the current stage.

5th step

We will now move the angles if necessary so afterwards we only need to rotate them on themselves to complete the cube.

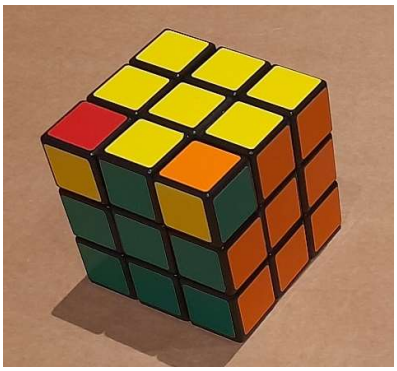
The formula below permutes 3 angles so that they each arrive in their final place (they may still need a rotation on themselves, which will be settled with the following page) :

left top right top left top right top



When you apply this formula, you should have the top-right angle already in its final place (it might still need a rotation on itself). Apply this formula one or more times until all the angles are in their final place.

Now each angle is in its final place, but 2 or 4 angles need to rotate on themselves for the cube to be finished. Here is an example of what it can be:



Finally, to rotate the angles on themselves, you must now hold the cube in your right hand, with the white side against the palm of your hand. The white side has now become the right side. The yellow side has become the left side. Position the cube in your hand so that the top left corner needs to be rotated.

6th step

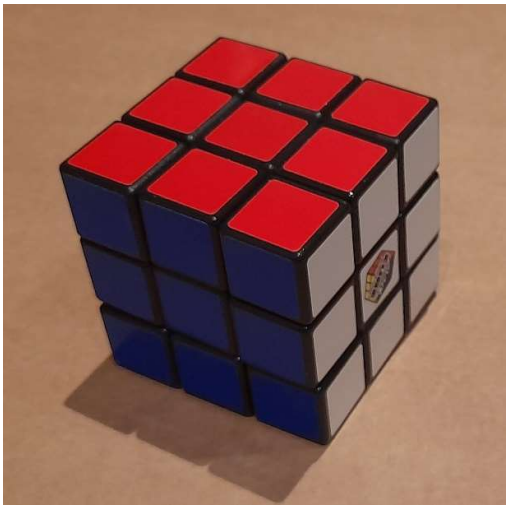
We must now apply several times the same formula below, which is used to rotate on itself the angle located at the top left:

right front right front right front right front

Apply this formula once or twice in so that the top left corner has rotated correctly. The rest has been heavily moved but that's normal.

Now rotate the left face so that another angle that needs to be rotated is located at the top left. Then apply the above formula again.

In all, this formula must be applied 3 times (if there were 2 angles to rotate) or 6 times (if there were 4 angles to rotate). This last step is tricky: you momentarily believe you have failed because the cube is temporarily undone. But you have to persevere by applying this formula 3 or 6 times so that all the faces become correct again. For this to succeed, you must apply the above formula several times, in between if necessary rotate the left side, but do not perform any other movement on the cube, which must remain stable throughout this last step.



Congratulations you did it ! It’s a success !