Solution, block Rubik 6 cube face

6-sided rubik, 3x3 rubik or rubik 4x4 placement will be easier if you know the rules of rubik blocks. This article will tell you how to solve rubik on each floor, the most popular way to rubik. Invite you to consult!

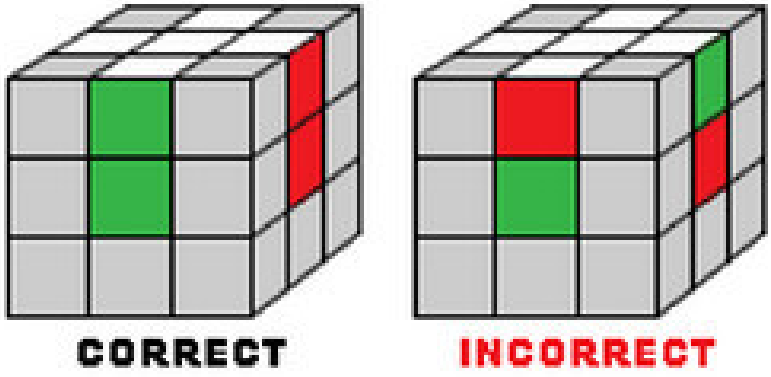
Rubik's Block Back to its original shape is quite a difficult task and may not be feasible. However, once you have some understanding of the algorithms, the Rubik block will become very easy. The method described in this article is a tiered solution: first you will solve one side of Rubik (first floor), then the middle and final layer is the last one.

6-sided rubik ranking part 1: First floor

1. Familiarize yourself with the Glossary at the bottom of the page.

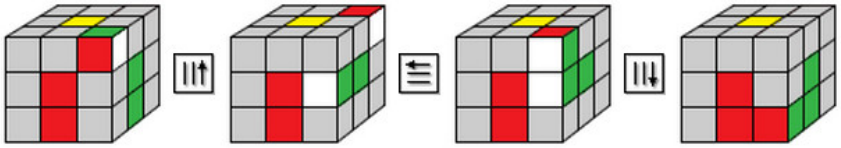
2. Select a side to start. In the example below, the color of the first floor will be white.

3. Shape the cross. Find the face containing the white center and rotate it on top. Put four white edges in place. (You can do this yourself without the algorithm). All four edges need to be placed in the correct position for at most eight steps (generally five or six steps).



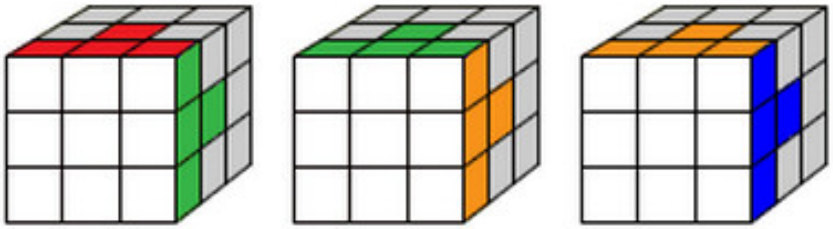
Flip the cross face down to the bottom. Rotate the Rubik block 180 ° so that the cross is at the bottom.

4. Solve four corners of the first floor, one by one. You can also position the corner in the right position without the need for an algorithm. To start, here is an example to place a corner in the right position:



After completing this step, the first layer will complete, with a single color (in this case white) at the bottom.

5. Confirm that the first floor is in the correct position. Now you have finished the first floor and it will look like the following image (looking from the bottom)



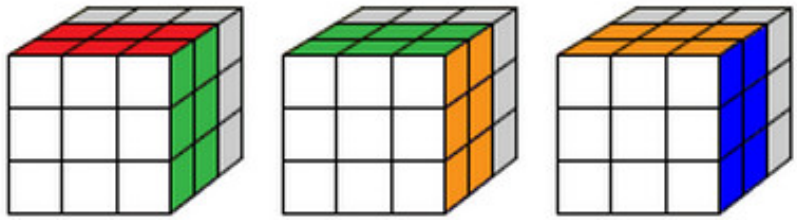
6-sided rubik ranking part 2: Middle floor

1. Arrange the four edges of the middle floor in the right position. In our example, these are edges that do not contain yellow. You need to know an algorithm to solve the middle layer. The second algorithm will be symmetrical with the first algorithm.

1. If the edge is on the last floor:

1. If the edge is in the middle layer but is in the wrong position or direction, you only need to use the same algorithm to place any other edge in the right position. Your edge will be on the last floor, and you just need to use the algorithm again to arrange it in the right position in the middle tier.

2. Check to see if everything is in place. Now, the first two floors of the Rubik block have been completed and look like this (seen from the bottom):



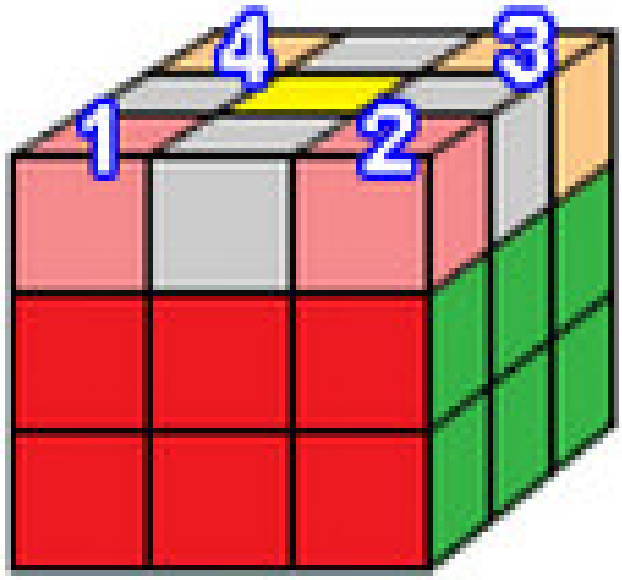
6-sided rubik ranking part 3: Last floor

1. Swap the position of the corner member

At this step, our goal is to align the corner members of the last tier into the correct position, regardless of their direction.

Locate two adjacent corner members whose color is different from the color of the top floor (in our case, another yellow color).

Rotate the top floor until these two corners are in its right color, facing you. For example, if two adjacent corners are red, you should rotate the top layer until they are at the red side of the Rubik cube. Notice that on the other side, the two corners of the top floor will be the same color as the face (in our example, orange).

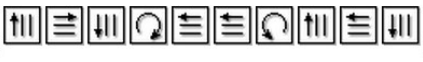


Determine whether the two corners of the front face are in the correct position, and swap them if necessary. In our example, the right side is green, and the left side is blue. Therefore, the corner corner of the right front will be green, and the left front corner tablet will be blue. If not, you need to swap these two angle members according to the following algorithm:

Đổi chỗ 1 và 2:  (2.a)

Do the same with the two corners in the back. Rotate the Rubik block to bring the other side (orange) out in front of you. Swap two front corners if needed.

Another method to replace, if you find that both the front and rear pair of pairs need to swap positions, you can do this with a single algorithm (notice its similarity). with previous algorithms):

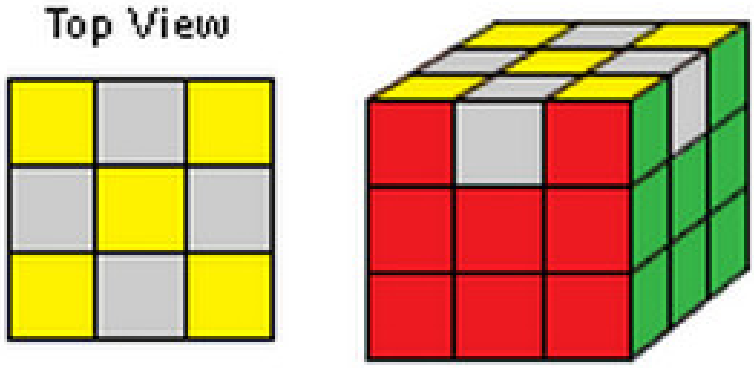
Đổi chỗ 1 với 2 và 3 với 4 :  (2.b)

2. Orientation of angle tablets

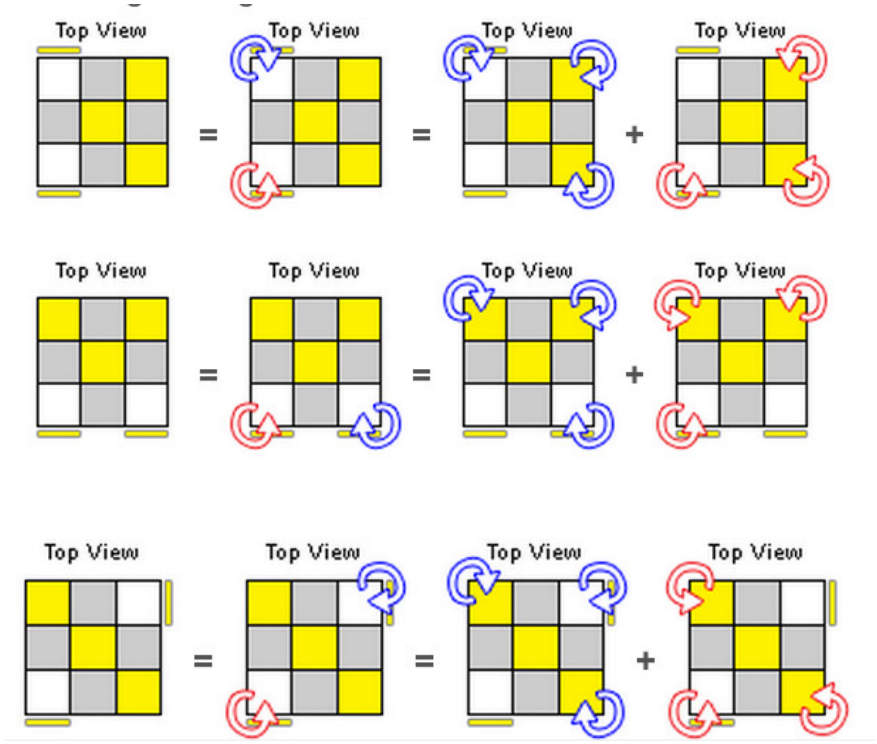
Determine the top color cell of each corner (in our case yellow). You only need to know a single algorithm to orient the corner member:

(3.a)

The algorithm will cause the three corners to rotate around them at once (from the edge position to the top position). The blue arrow will indicate which angle you are rotating, and in which direction (clockwise). If the yellow tablet is in the correct position as shown in the picture and you have performed the algorithm once, you will get four yellow tablets at the top:

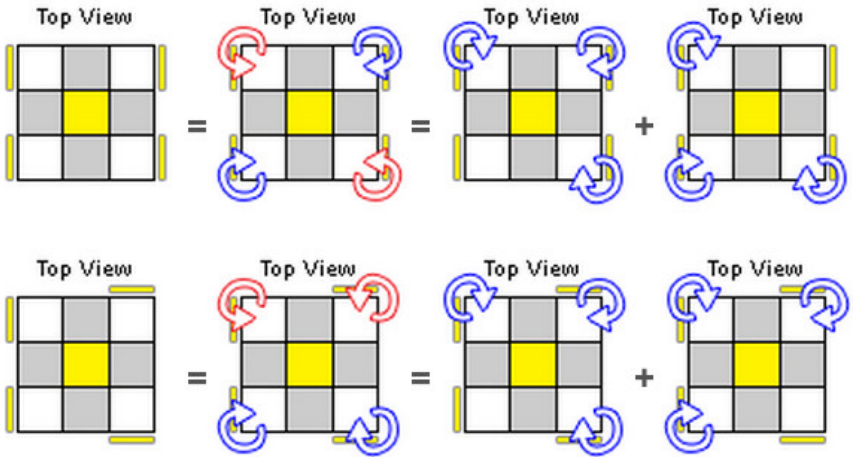


You can also use symmetric algorithms (here the red arrow shows a counterclockwise rotation):

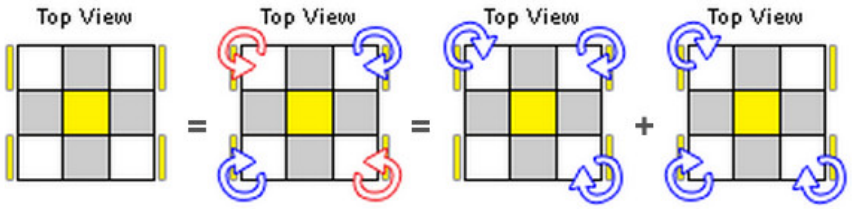


Note: implementing one of these algorithms twice is equivalent to solving the remaining algorithm. In many cases, you need to conduct more than one algorithm:

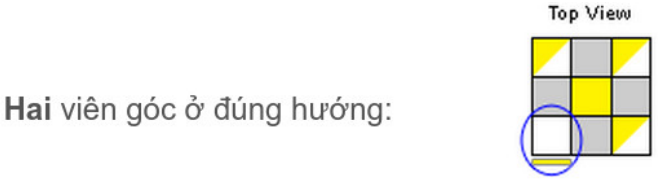
The two corners are in the right direction:

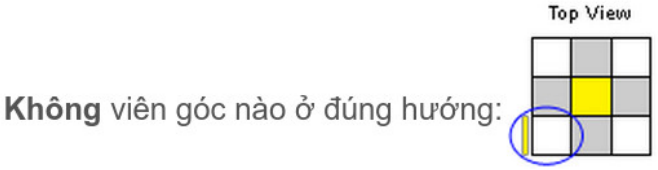


There are no corners in the right direction:



In general, apply (3.a) in the following cases:



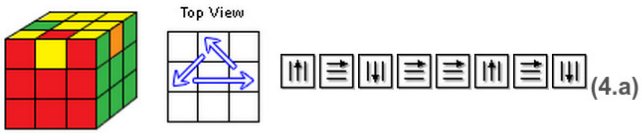


3. Reverse the edge members

You only need to know an algorithm for this step. You should check whether one or more edges are in place (at this point, their direction is not important).

If every edge is in the correct position, you have completed this step.

If only one edge is in the correct position, use the following algorithm:



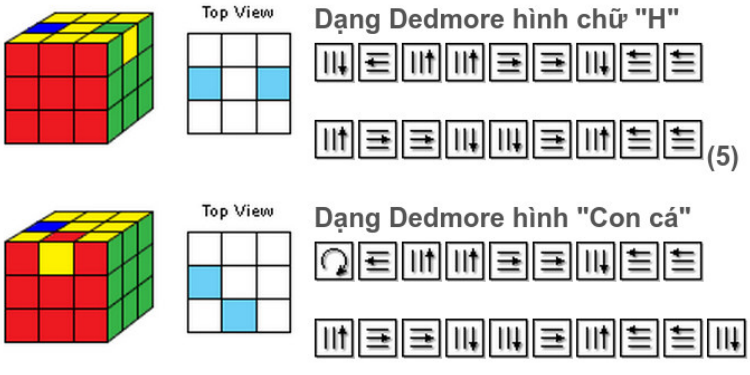
- Hoặc là thuật toán đối xứng của nó:

Note: implementing one of these algorithms twice is equivalent to solving the remaining algorithm.

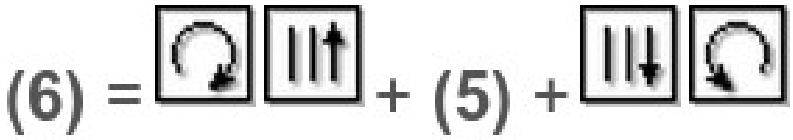
If all four edges are in place, you can proceed to solving one of the two algorithms once from any side. You will have a single edge in the right position.

4. Orient the edge members

You need to use two algorithms for this final step:



It should be noted that DOWN, LEFT, UP, RIGHT, are the order of most Dedmore type algorithms "H" and "Fish". You only need to remember a single algorithm:



If all four edges are overturned, you should perform an "H" shape algorithm from any side, and you will need to perform this algorithm again to solve the Rubik block.

Congratulations! You have finished the Rubik block.

Part 4: Annotation

1. This is the key for every annotation used in the article.

Pieces for rubik blocks are called Vien, and the color on Rubik tablets is called a colored box.

Rubik has three types of tablets:

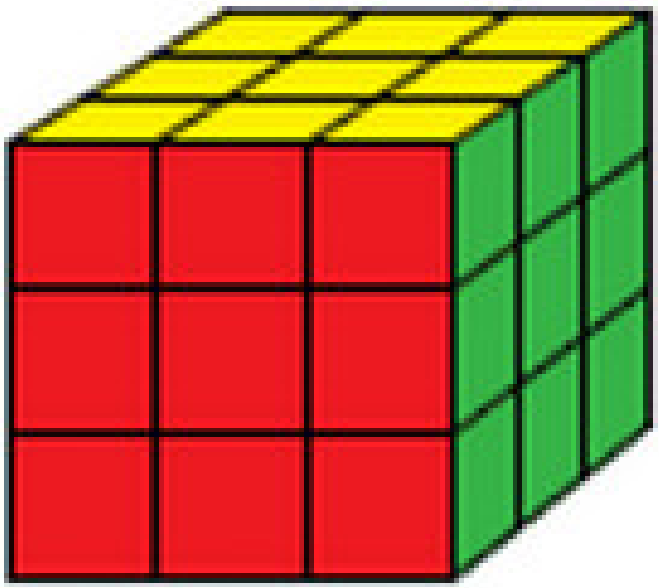
1. The middle tablet (or central tablet), located between each side of the Rubik cube. There are six tablets, each with a color box.
2. Corner corner (or tablet located at the corner), located at the corner of the Rubik block. There are eight tablets, each with three color cells.
3. The next tablet (or tablet next to it), lies between each pair of adjacent corners. There are a total of 12 tablets and each has two color boxes.

Not every Rubik block has the same color. The color used to illustrate the article is called BOY (because the Blue - Blue, Orange - Orange, and Yellow faces are in a clockwise order).

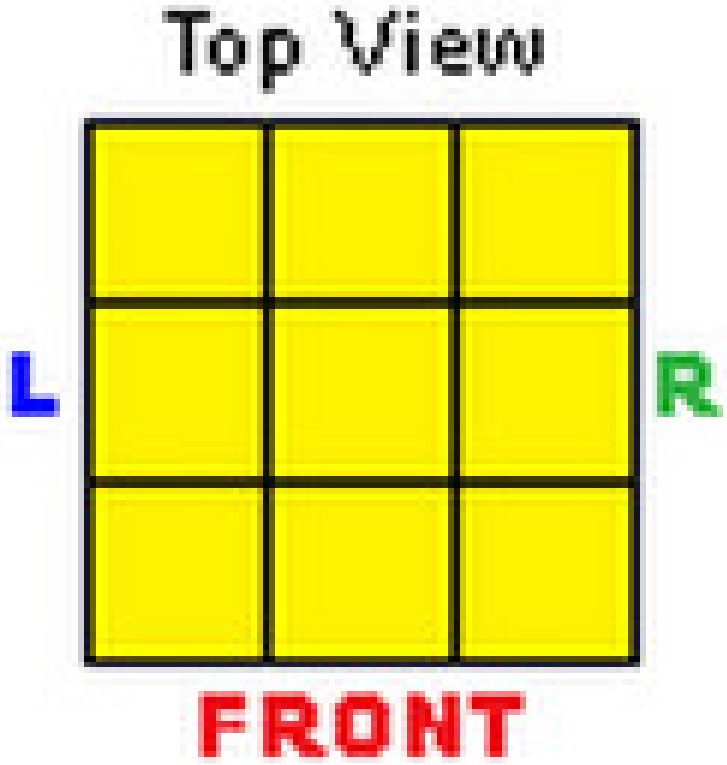
1. White opposite to gold;
2. Blue opposite the green;
3. Orange opposite red;

2. This article uses two different viewpoints for Rubik's blocks:

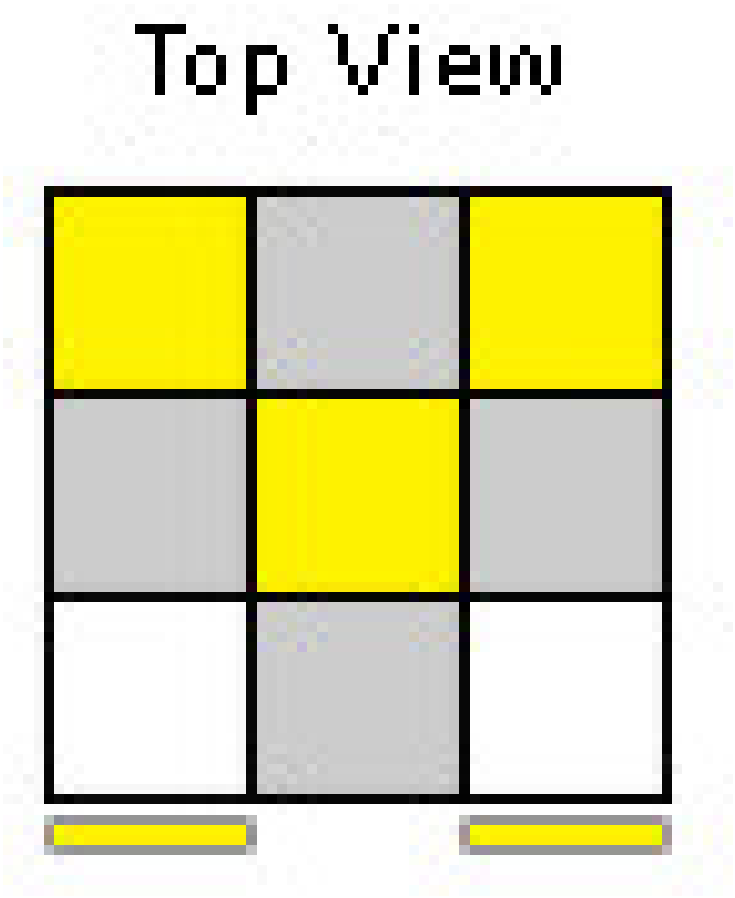
The 3D view, shows the three sides of the Rubik block: the front (red), the top (yellow), and the right side (green). In Step 4, the algorithm (1.b) is illustrated by a picture showing the left side of the Rubik (blue), front (red), and top (yellow) face.



Top view, only shows the top side of the Rubik block (yellow). The front is at the bottom (red).

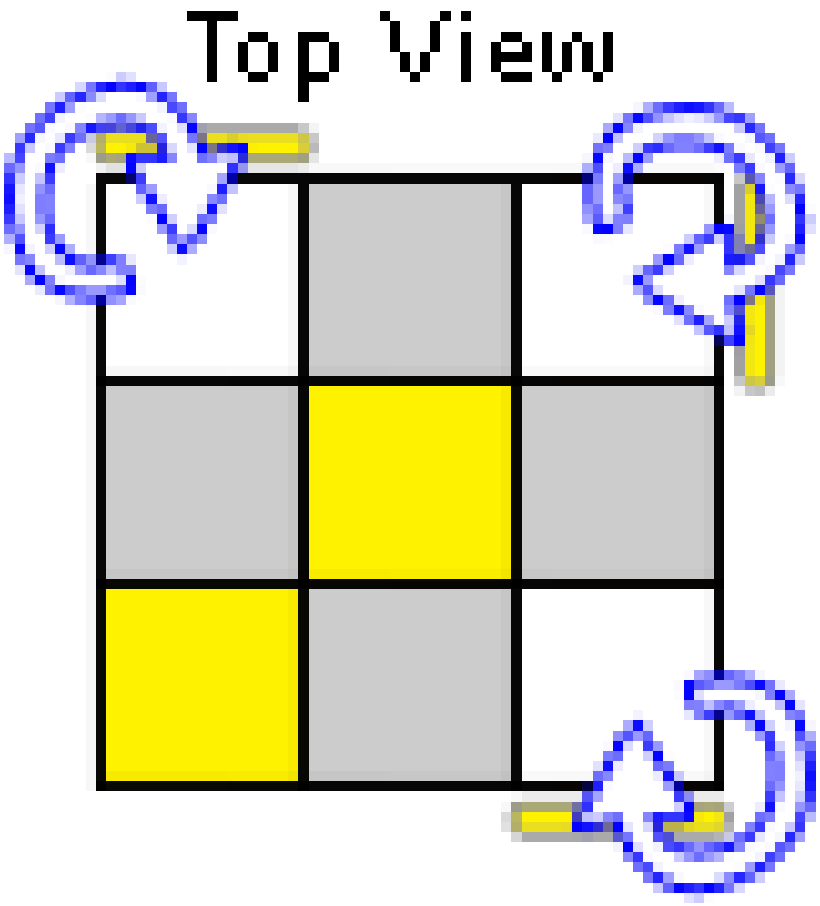


3. For a top-down view, each small bar indicates the location of the important color cell. In the picture, the yellow box of the top corner corner is located at the top (yellow), while the yellow box of the upper-right corner is located on the front of the Rubik cube.



4. If the color box is gray, it means that the color is not important at that time.

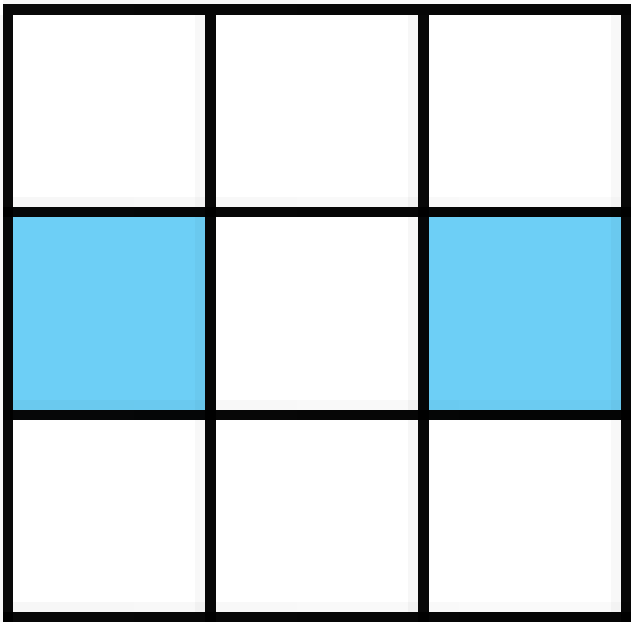
5. Arrow (blue or red) shows the effect of the algorithm. For example, for the algorithm (3.a), it will help the three angle corners revolve around itself as shown in the figure. If the yellow box is in the same position as on the drawing, when the algorithm ends, they will lie on the top.



1. The axis of the rotation is a large diagonal of the Rubik cube (from corner to corner on the other side of the Rubik cube).
2. A blue arrow is used to represent a clockwise direction of rotation (algorithm (3.a)).
3. A red arrow is used to represent a counterclockwise rotation (algorithm (3.b), symmetrical with (3.a)).

6. Top view, a light blue box indicates that an edge is incorrectly oriented. In the picture, the left and right sides are not correctly oriented. This means that if the top pane is yellow, the yellow boxes of the two sides will not lie on the top, but on the side.

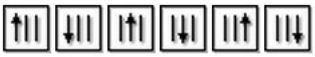
Top View



7. For the commentary, it is important to always look at the Rubik's block from the front.

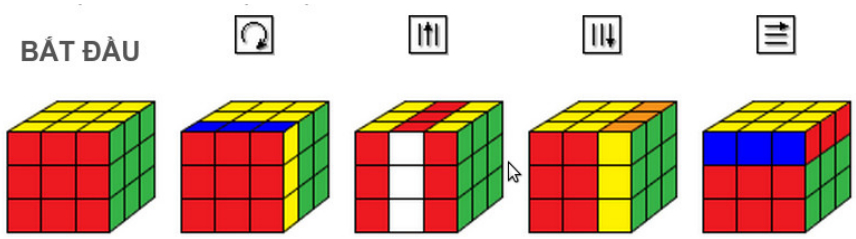
- Hướng xoay của mặt trước.

- Hướng xoay của một trong ba cột dọc:



- Hướng xoay của một trong ba cột ngang:

Some examples of steps to take:



Advice

Practice. You should spend time with your Rubik cube to learn how to rotate Rubik tablets in many directions. This is especially important when you are learning how to solve the first floor.

Know the color of your Rubik blocks. You need to know which color is opposite to which color, and the order of all colors around them. For example, if the white top and red color are on the front, you need to know that the blue color is on the right, the orange is behind, the green is on the left, and the gold is on the bottom.

For those who like to rotate Rubik quickly, or who don't like the feeling of having a hard time having to rotate Rubik tablets, you can find the Rubik's DIY (DIY) kit. Rubik's cubes with more rounded corners and DIY kits will allow you to adjust the tightness, making it easier to move the Rubik tablet. You should consider lubricating your Rubik's block with a silicon-based lubricant.

You can start with the same color as the article to help you better understand the location of each color, or try to choose colors that make it easier to position the cross face.

Locate the four edges and try to think first about how to move them into place without actually doing this. Along with practice and experience, this method will show you how to solve them in just a few steps. And in the competition, participants have 15 seconds to review their Rubik's blocks before starting to count the time.

Understand how the algorithm works. When working on algorithmic algorithms, you should try to follow the key elements of the Rubik block to see where they move. Try to find the framework in the algorithm. For example:

1. In the algorithm (2.a) and (2.b) used to permutate the corner of the top floor, you take four steps (after finishing, every bottom and middle layer of the Rubik block will return to middle floor), then, flip the top face down, and do the opposite with the first four steps. Therefore, this algorithm does not affect the first layer / the bottom layer and the middle layer.
2. For the algorithm (4.a) and (4.b), you should remember that you are rotating the top layer in the same direction as the direction you need to rotate the three edges.
3. For the algorithm (5), the Dedmore form looks like an "H", one way to remember this algorithm is to follow the path of the overturned edge on the top right side and the pair of corners around it in half. the beginning of the algorithm solving process. Then, in the second half of the process, you should keep track of which side has been overturned and the other pair of corners. You will notice that you have carried out five steps (seven steps if you include the half-step action as two steps), then, rotate the top half, and reverse the first five, final steps. is to rotate the top half again.

Further. Once you know all the algorithms, you can search for a faster way to decompose Rubik:

1. Solve the angle of the first floor with the middle edge in one step.

2. Understanding the algorithm to orient the corner member of the last floor in five cases requires two algorithms (3.a / b).
3. Learn the algorithm to permutate the angle of the last floor in two cases when no edge is in place.
4. Learn the algorithm for the case where all the edges of the last floor are reversed.

Rubik's method of cascading mass is only one of the numerous methods available in the world. For example, the Petrus method, which helps solve Rubik's cube with fewer steps, involves completing a 2 × 2 × 2 Rubik's cube, then expanding it into a 2 × 2 × 3 Rubik cube, adjusting the direction of the edge, Stack it into 2 × 3 × 3 blocks (the two floors have been solved), place the remaining corners in the right position, orient them, and finally arrange the remaining edges in the proper position.

Further. For the last floor, if you want to solve the Rubik mass quickly, you need to divide the last four steps into two steps one by one to proceed. For example, permutation and orientation of angle tablets in one step, then, permutate and orient the edges in one step. Or you can choose to navigate every corner and edge in one step, and permute every corner and edge in one step.

1. Let's test your eyes with 18 photos below!
2. Quick and accurate mental math tips that surprise you