Source: Ruwix.com
https://ruwix.com/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/

How to solve the Rubik's Cube?

There are many approaches (/the-rubiks-cube/different-rubiks-cube-solving-methods/) on how to solve the Rubik's Cube. All these methods have different levels of difficulties, for speedcubers (/the-rubiks-cube/speedcubing-speedsolving/) or beginners, even for solving the cube blindfolded (/the-rubiks-cube/how-to-solve-the-rubiks-cube-blindfolded-tutorial/). People usually get stuck solving the cube after completing the first face, after that they need some help. In the following article I'm going to show you the easiest way to solve the cube using the beginner's method.
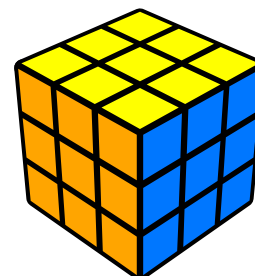
The method presented here divides the cube into layers and you can solve each layer applying a given algorithm (/the-rubiks-cube/algorithm/) not messing up the pieces already in place. You can find a separate page for each one of the seven stages if the description on this page needs further explanation and examples.

The steps   [hide]

1. White cross
2. White corners
3. Second layer
4. Yellow cross
5. Yellow edges
6. Yellow corners
7. Orient yellow corners
   Video tutorial

To get started I recommend you to read the basic cubing terminology (/the-rubiks-cube/cubing-terminology-abbreviations-commonly-used-expressions/) and you will need to know the Rubik's Cube notation (/the-rubiks-cube/notation/) ie what the letters mean in the algorithms:
F: front, **R**: right, **U**: up, **L**: left, **D**: down.

Clockwise rotations:

| **F** | **R** | **U** | **L** | **D** |

Counterclockwise rotations are marked with an apostrophe (**'**):

| **F'** | **R'** | **U'** | **L'** | **D'** |

If you get stuck or you don't understand something, the online Rubik's Cube solver program (/online-rubiks-cube-solver-program/) will help you quickly fix your puzzle. All you have to do is input your scramble and the program will calculate the steps leading to the solution.
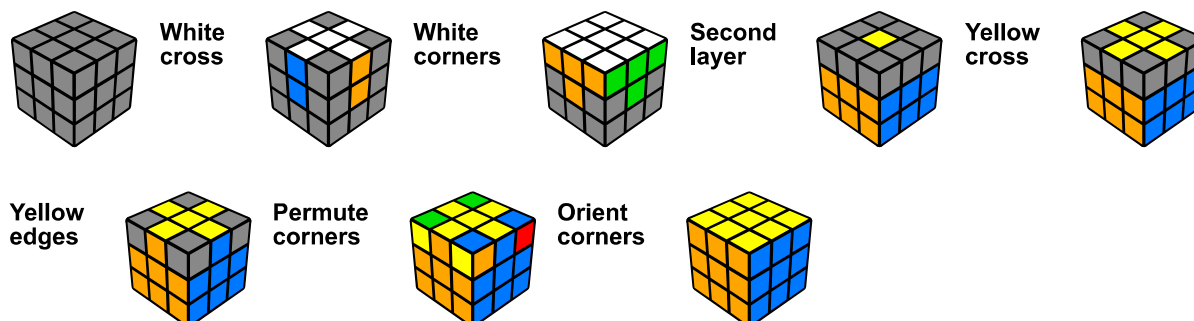
To keep a record of your solution times try the online Rubik's Cube Timer (/online-rubiks-stopwatch-timer/) with many useful features or generate random shuffles for your practice with the scramble generator (/puzzle-scramble-generator/).

Video Tutorial

The Solution Step By Step

| | White cross | | White corners | | Second layer | | Yellow cross | |
| Yellow edges | | Permute corners | | Orient corners | | |

1. White cross (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-1-first-layer-edges/)
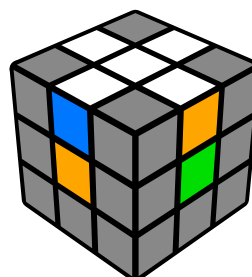
Let's begin with the white face. First we have to make a white cross paying attention to the color of the side center pieces. You can try to do this without reading the instructions (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-1-first-layer-edges/).

Use this stage to familiarize yourself with the puzzle and see how far you can get without help. This step is relatively intuitive because there are no solved pieces to watch out for. Just practice and don't give up easily. Try move the white edges to their places not messing up the ones already fixed.

You can get a little help about forming a white cross, with animated algorithms here (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-1-first-layer-edges/).
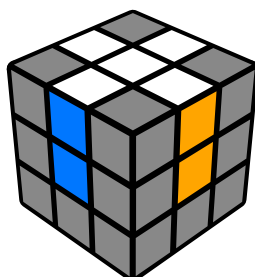
Good white cross   *Sides not matching*

2. White corners (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-2-first-layer-corners/)

In this step we have to arrange the white corner pieces to finish the first face. If you are very persistent and you managed to do the white cross without help then you can try to do this one as well. If you don't have patience I'll give you some clue.

Twist the bottom layer so that one of the white corners is directly under the spot where it's supposed to go on the top layer. Now, do one of the three algorithms according to the orientation of the piece, aka. in which direction the white sticker is facing. If the white corner piece is where it belongs but turned wrong then first you have to pop it out.

Find more details about <u>the solution of the white corners here (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-2-first-layer-corners/)</u>.
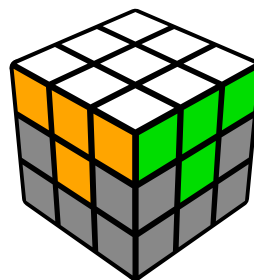
R' D' R

0/3

F D F'

0/3

F L D2 L' F'

0/5

White face solved

3. Second layer (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step3-second-layer-f2l/)

Until this point the procedure was pretty straight forward but from now on we have to use algorithms. We can forget the completed white face so let's turn the cube upside down to focus on the unsolved side.

In this step we are completing the first two layers (F2L). There are two symmetric algorithms we have to use in this step. They're called the **Right** and **Left** algorithms. These algorithms insert the Up-Front edge piece from the top layer to the middle layer while not messing up the solved white face.

If none of the pieces in the top layer are already lined up like in the images below, then turn the top layer until one of the edge pieces in the top layer matches one of the images below. Then follow the matching algorithm for that orientation.

Left:

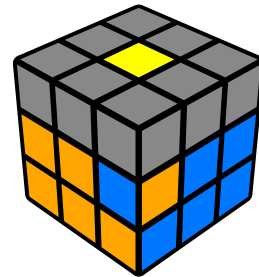## U' L' U L U F U' F'
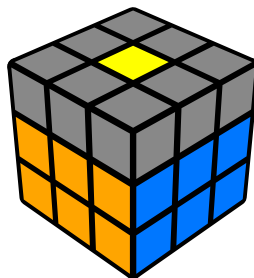
U' L' U L U F U' F'

0/8

Right:

U R U' R' U' F' U F

U R U' R' U' F' U F

0/8

Wrong orientation: Do it twice

F2L solved

If an edge piece is on its place in the second layer orienting wrong then we have to apply the algorithm twice. First we must pop it out inserting another one in its place.
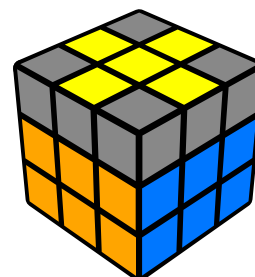
See these F2L algorithms in action following this link (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step3-second-layer-f2l/).

4. Yellow cross (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-4-yellow-cross/)

Start solving the last layer making a yellow cross on the top of the cube. It doesn't matter if the pieces are not on their final places so we don't have to pay attention to the colors of the sides.

We can get three possible patterns on the top. Use this algorithm to go from one state to the other:

Yellow cross on the top

F   R   U   R'   U'   F'

1. When you see a **dot** you have to apply the algorithm three times. If you have a yellow **"L" shape** then onlye twice, holding the cube in your hands as seen on the image below.
2. In case of a **horizontal line** you just have to execute the permutation once.

 solve the yellow cross
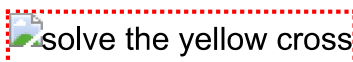
For further explanation about forming a yellow cross on the Rubik's Cube click here (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-4-yellow-cross/).
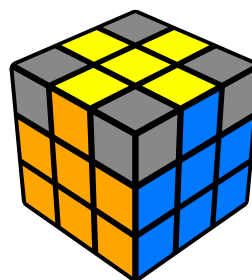
5. Yellow edges (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-5-swap-yellow-edges/)

After making the yellow cross on the top of the cube you have to put the yellow edge pieces on their final places to match the colors of the side center pieces. Switch the front and left yellow edges with the following algorithm:

R   U   R'   U   R   U2   R'   U

Switch the edges   *Yellow edges done*

You might face a situation when you have to apply this algorithm more than once.

6. Yellow corners on their places (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-6-position-yellow-corners/)

Only the last layer corners are left unsolved. First we have to get them to the right spot, so don't worry about the orientation in this step.

Find a piece which is already on the right place, move it to the right-front-top corner then apply the following algorithm to switch (cycle) the three wrong pieces marked on the image.

Switch three corner pieces

**U   R   U'   L'   U   R'   U'   L**

Do this twice to do an inverse rotation of the pieces. If none of the yellow corners is on the right place then execute the algorithm once to get a good piece.

Read more about the permutation of last layer yellow corners here (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-6-position-yellow-corners/).

7. Orient Yellow Corners
(/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/orient-yellow-corners-how-to-solve-last-layer-corner/)

All pieces are on their right places you just have to orient the yellow corners to finish the puzzle. This proved to be the most confusing step so read the instructions and follow the steps carefully.
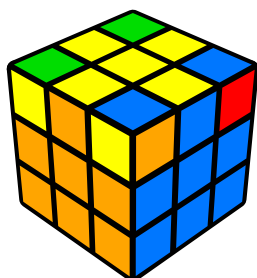
The corners are on their final position but they need to be oriented
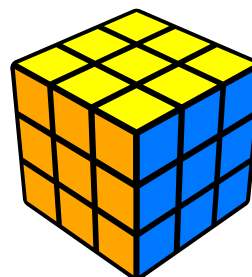
The cube is solved

Hold the cube in your hand with an unsolved corner on the front-right-top corner, then do the algorithm below twice or four times until that specific piece is oriented well:

R'   D'   R   D

It will look like you've messed up the whole cube but don't worry, it will be all right when all the corner pieces are oriented.

Turn the top layer only to move another unsolved yellow piece to the front-right-top corner of the cube and do the same **R' D' R D** again until this specific piece is ok. Be careful not to move the two bottom layers between the algorithms and never rotate the whole cube!

You are so close to the end so be careful because this is the step in this tutorial where most people get lost. If this description doesn't make sense, <u>check out a few examples clicking here (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/orient-yellow-corners-how-to-solve-last-layer-corner/)</u>.

Repeat this until *your Cube is solved :)*

solve rubix cube
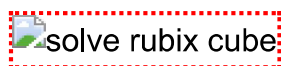
Is this tutorial too complicated for you? Here's what you can do:

Read another guide at <u>Rubik's Cube Tutorial (https://rubikscu.be/#tutorial)</u> or at <u>CubeSolve.com (https://cubesolve.com/)</u>.
Use the <u>Online Rubik's Cube Solver (/online-rubiks-cube-solver-program/)</u>, insert your scramble and the program will calculate the solution for you.

Steps of the <u>Beginner's Rubik's Cube Solution: (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/)</u>

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   1. White Edges (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-1-first-layer-edges/)

   2. White Corners (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-2-first-layer-corners/)

   3. Second Layer (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step3-second-layer-f2l/)

   4. Yellow Cross (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-4-yellow-cross/)

   5. Swap Yellow Edges (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-5-swap-yellow-edges/)

   6. Position Yellow Corners (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/step-6-position-yellow-corners/)

   7. Orient Yellow Corners (/the-rubiks-cube/how-to-solve-the-rubiks-cube-beginners-method/orient-yellow-corners-how-to-solve-last-layer-corner/)

Comments