# Simply Rubik A solution for beginners and much more

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# 5x5x5 Edges

**REMEMBER:** Before starting any algorithm, make sure that the front (dark grey) face is facing you and the top layer is on the top.

The aim of this section is to take you from this

to this to this completing the edges.

Once again, as with solving the centres, solving the edges is more about seeing what is happening, than it is about learning algorithms.

# **Merging the Edge Sets**

You can safely rotate any face to create a starting configuration.



For the purpose of this exercise we will use the red and green edges. You need to place a matching colour pair on different layers but on the same face of the cube in one of the configurations displayed here on the right. Which face of the cube is not important because all we are doing in this section is matching up the same coloured edges.

If they are displaying the same colour on the front face as displayed on the left you can use either of the two algorithms below to place them in the correct configuration displayed on the right. If you have the two outer edges on different layers they can only be oriented correctly to be merged.

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و 📖			t.	

Up face Back face Right face Anti-clock Clockwise Anti-clock

Right face Up face Back face Anti-clock Clockwise Anti-clock

Up or Down Face

 $_{ce}$  You can place either two or all three matching edge elements on the side edges ready to merge.

U

R

Right face

Clockwise

Must make sure that you have an unmatched set (blue) on the up or down face before you merge the elements you are solving, so that you will be able to realign the split centres and solved sets that are on the side faces once you have merged the edge elements.

Merge the two or three matching edges to one edge (red or green) this will be on your front face. Rotate your up or down face so you have an unmatched set is on the back face.

L'U'L RUR'	Green E	dge			Red Edg	je		
		L' Right face	U'	L Back face		R R Right face	U Up face	R'



Continue matching up your edges until you only have two sets of edges left to be matched up.

# The last two sets of edges will more than likely need to be solved

When you come to the last two sets of edges you do not have a third set to reset the centres with and it is more than likely that they will not be solved. There is an algorithm for each configuration and at this point I am only considering a page of containing them on this site. The following algorithms will enable you to solve the final two edges by swapping outer edge elements and flipping middle elements.

We start by placing the two outer edge elements on the same edge layer as the matching middle element, it may be necessary to use

either of the first two algorithms on this page to place different coloured edges in position to be swapped. Once all six elements are matched on their edge layer it may be necessary to orient one or both middle elements

The first algorithm swaps the outer edge elements. It is used to place the same coloured outer edge elements on the same edge layer, once the outer edge elements are on the same edge layer they can only be correctly oriented to each other.

The next two algorithms solve the problem when one or both middle edge elements are disoriented.

The following algorithms have been placed on the page 5x5x5 Disparity Algorithms for quick reference in the future.

#### Two edge cross over

The swapping edges are both on the top and to the right, indicated in red on the graphic. make sure they are different coloured edges.



## Flip one edge element

The edge element that will be flipped is the element on the front face, indicated in red on the graphic.



# Flip two edge elements

The edge elements that will be flipped are the elements on the front face, indicated in red on the graphic. This basically does the same thing as the algorithm above, I just think this one is easier to learn.



## Flip two edge elements

The edges that will be flipped are on the middle layer of the up face, indicated in red on the graphic.



You now have a 3x3x3 cube simply solve it and you are done. Happy cubing.

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