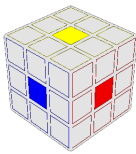
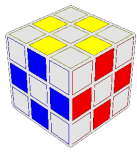
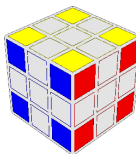


















speedcubes

Step 0. Things you must know before you can start

The cube is composed of centre pieces, edge pieces and corner pieces. The centres are fixed relative to each other. The centre piece defines the colour of the whole face

Centre Pieces	Edge Pieces	Corner Pieces
		


The following notation is used. The symbols are applied to the face facing you, with the **YELLOW FACE ON THE TOP**.

Move	Symbol	Name (call it out when you do it!)	Move	Symbol	Name (call it out when you do it!)
		UP			TWIST
		DOWN			UN-TWIST
		THUMB (do it with your right thumb)			BOTTOM
		ACROSS			





Read the notation left-to-right, then next line

Step 1. Get a white cross on the bottom layer

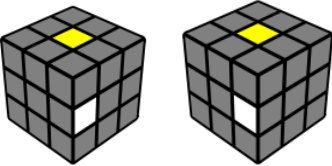
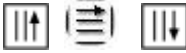
Your goal (note how the edges match their centres):

	<p>First, turn the cube so that the white centre is at the bottom, or the yellow centre at the top (they amount to the same thing). Then continue with step 1a until the white cross is complete on the bottom layer.</p>
---	---



1a. If there is an edge piece with white in the **TOP** layer then ... **Align the edge piece over its centre**, and ...

<p>EASY PEASY</p>  <p></p>	<p>S (watch how the white sticker moves...)</p>  <p></p>
--	--

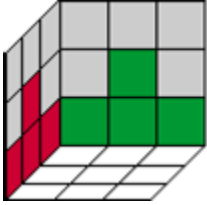
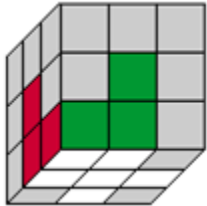
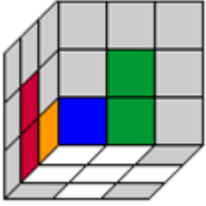
1b. If there are **no whites in the top layer** AND there is a white in the **MIDDLE** row, then ...


<p>MIDDLE</p>  <p> and the white will be in the top layer. Go to step 1a</p>	
--	--















1c. If there are **no whites in the top layer** AND there is a white in the **BOTTOM** row then ...

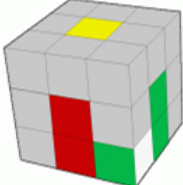
<p>NASTY OR WRONG COLOUR</p>  <p> and the white will be in the top layer. Go to step 1a.</p>	
--	--

Step 2. Complete the bottom white layer

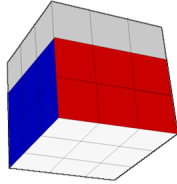

<p>The goal</p>	<p>Ensure that you move the right corner to the right position. In the examples below, the white-red-green-corner must go to corner position between the white, red, and green faces.</p>	
	<p>CORRECT</p> 	<p>WRONG</p> 

The algorithms below move a corner from top right to bottom right without disrupting the cross. You may have to turn the top face  to achieve this.


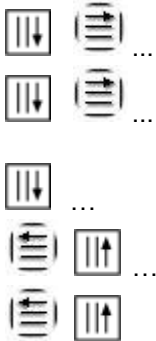


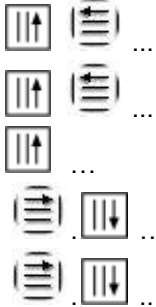

 <p>  </p>	 <p>  </p>	 <p>   (and then   + 1st algorithm in this table)</p>
---	---	--

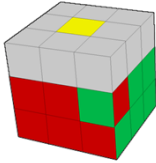
<p>Note: you might see this:</p> 	<p>It's NASTY! Here the corner is in its correct place, but is not oriented correctly. In this case, use the first algorithm above to move any other corner from the top face into the corner-position in question (the correct corner piece will land up in the top layer), and then re-insert the correct corner correctly.</p>
--	---

Step 3. Complete the middle layer

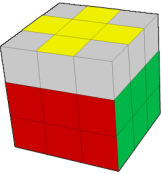
<p>The goal:</p> 	<ol style="list-style-type: none"> 1. Find an edge piece on the top layer without any yellow, 2. align the edge piece so that the colour on the side is over a centre of the same colour. You may have to turn the top face  to achieve this. 3. turn the whole cube so that the edge piece in question is on the right (yellow face up)
--	--

Now do one of the following algorithms, depending on where the edge piece must go

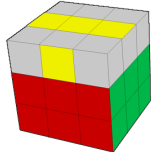

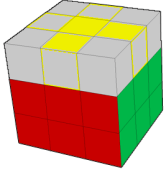
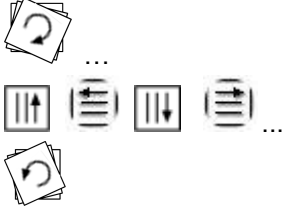
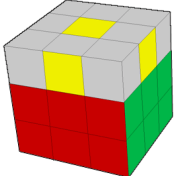
		<p>Repeat the first two twice ...</p>  ... then repeat these two twice
		<p>Same structure as the one above</p> <p>Repeat the first two twice ...</p>  ... then repeat these two twice

<p>Note: you might see this:</p> 	<p>IT'S NASTY</p> <p>Here the edge is in the right position, but oriented incorrectly. Use the first algorithm above to insert any other edge piece into the edge-slot, thereby knocking the correct piece back into the top row. Then re-insert it correctly</p>
--	--

Step 4. Get a yellow cross on the top layer

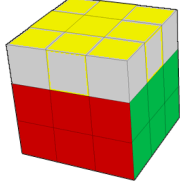
<p>The goal:</p> 	<p>Don't worry if the yellow edge pieces don't align nicely with the centres in the middle row. All you are concerned about is the yellow stickers pointing up to form a cross. (Remember when solving the white cross in step 1, you had to worry about getting the cross to match the centre pieces. Not so here)</p>
--	---

When doing the algorithms, ensure the yellow face is on the top

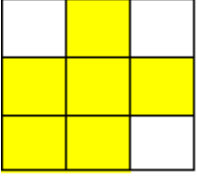
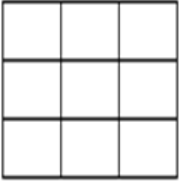
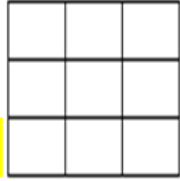
		<p>up across ... down across the other way</p>
		<p>Exactly the same as the one above, but the first and last moves turn the front face AND the middle layer behind it</p>
	<p>the first algorithm, then the second</p>	

Step 5. Rotate the corners so that you end up with a completed yellow face on top

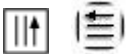
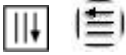
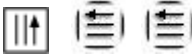

The goal:



There is only one algorithm to learn, but it needs to be applied with the cube orientated correctly, as per the table below.

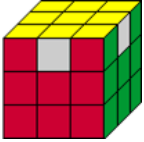
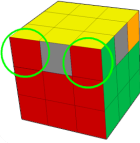
<p>If ONE corner yellow: move it to the bottom left</p>	<p>if TWO corners are yellow: rotate top layer until a yellow sticker is on the bottom left, facing front.</p>	<p>if ZERO corners are yellow: rotate top layer until a yellow sticker is on the bottom left, facing left.</p>
 <p>view from top</p>	 <p>view from top</p>	 <p>view from top</p>

Ensure you have orientated the cube as per the table above, and then do this algorithm, with the **YELLOW FACE ON TOP**

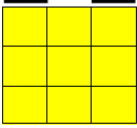

	<p>up across</p>
	<p>down across</p>
	<p>up across across</p>
	<p>down</p>

You might (almost certainly) have to apply the algorithm a few times (each time using the orientation explained above) before you see a completed yellow top face. Keep going until you get it.

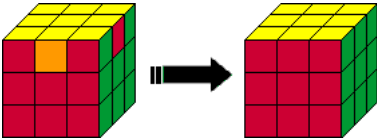
Step 6. Put the yellow corners in their correct positions

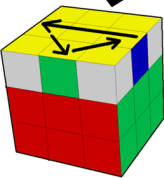
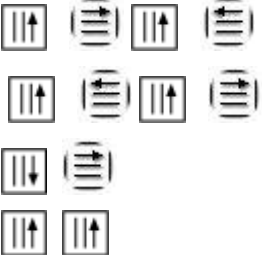
<p>The goal:</p> 	<p>First, look for one set of "headlights"</p> 
--	--

If you see headlights on all sides, or on three sides, move on to the next step.
 If you don't have headlights at all, apply the algorithm below to get them.
 Place the headlights at the back, facing away from you. Keep the yellow face on the top.

 <p>View from top</p>	<p>TURN THE CUBE SO YELLOW FACES BACK, then</p> 
--	--

Step 7. Get the last layer edge pieces into their correct places

<p>The goal:</p> 	<p>Rotate top layer until the solved edge is in the back (i.e. one of the sides red, green, blue, orange is complete - move it to the back).</p> <p>If none of the edges is solved, just do the algorithm, and one of the sides will become solved</p>
--	--

<p>Completed side</p> 		<p>You may have to repeat this algorithm a few times to complete the cube.</p> <h1>Well Done!</h1>
---	---	--