Welcome to the Rubik's Revenge Solution Guide. If you happen to have a Rubik's Revenge tucked away somewhere, pull it out, dust it off and prepare to actually solve it once and for all.

The Rubik's Revenge hit the market in 1982, following in the footsteps of the Rubik's Pocket Cube and Rubik's Cube. Its popularity was not as intense as the Standard Rubik's Cube, but that may have been the failing of a over saturated market. It seemed like everyone had a Rubik's Cube or one of the many Copy-Cat versions. I don't think anyone attempted to copy the Revenge, since I have only seen Real ones over the last 15 years, nor are they available anymore.

This site is an attempt to give you a completely graphical solution and because of that there are lots of GIF images throughout these pages. I have split this site into more individual pages than I originally planned, solely for your benefit, since the more images I have on each page, the longer it will take to display in your browser.

I have included a Terminology page so that you can familiarize yourself with all the symbols you will see on these pages. For those who are familiar with solving the Rubik's Cube or Pocket Cube, you may choose to skip the Terminology section since the terms will undoubtedly already make sense.

When you are ready, proceed to the Top Corners.
In this Terminology section you will be presented with all of the Movement Symbols and an example of exactly what they accomplish. Although this looks like a huge list, all of the moves will make sense - you should not need to refer to it again. Simply refer to the chart below:

<table>
<thead>
<tr>
<th>BEFORE</th>
<th>MOVE</th>
<th>AFTER</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Before Image" /></td>
<td><img src="image2.png" alt="Move Image" /></td>
<td><img src="image3.png" alt="After Image" /></td>
</tr>
<tr>
<td><img src="image4.png" alt="Before Image" /></td>
<td><img src="image5.png" alt="Move Image" /></td>
<td><img src="image6.png" alt="After Image" /></td>
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<tr>
<td><img src="image7.png" alt="Before Image" /></td>
<td><img src="image8.png" alt="Move Image" /></td>
<td><img src="image9.png" alt="After Image" /></td>
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<tr>
<td><img src="image10.png" alt="Before Image" /></td>
<td><img src="image11.png" alt="Move Image" /></td>
<td><img src="image12.png" alt="After Image" /></td>
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<tr>
<td><img src="image13.png" alt="Before Image" /></td>
<td><img src="image14.png" alt="Move Image" /></td>
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<tr>
<td><img src="image16.png" alt="Before Image" /></td>
<td><img src="image17.png" alt="Move Image" /></td>
<td><img src="image18.png" alt="After Image" /></td>
</tr>
</tbody>
</table>
When you are ready, proceed to the **Top Corners**.
Okay, here we go, the first step in solving the Rubik's Revenge. When you finish this step your cube will look like this:

- **NOTE:** Gray stickers simply indicate that you need not be concerned with those pieces at this time.

## STEP 1 - First Corner

Start by finding the Yellow/Orange/Blue corner and rotate the entire cube in your hands until you match the cube below. Our goal for the 4 top corners is to place each of them into this front-top-right position:

## STEP 2 - Second Corner

Before looking for the next corner, spin the entire cube in your hands one turn to the left. This will move the
*Just Finished* piece out of its corner position so that we can put the next piece in place. When we finish this step you will have these corners completed.

Since we are looking for the Blue/Orange/Green corner, rotate the bottom layer until you can position it directly below where it belongs - in the front-bottom-right corner. If you can not find the piece on the bottom layer skip to the **THIRD** corner and return to this step a little later.

If you did find a match, follow one of the three steps below to move the piece into its proper place.
STEP 3 - Third Corner

Before looking for the next corner, spin the entire cube in your hands one turn to the left. This will move the *Just Finished* piece out of its corner position so that we can put the next piece in place. When we finish this step you will have these corners completed.

Since we are looking for the Orange/Green/White corner, rotate the bottom layer until you can position it directly below where it belongs - in the front-bottom-right corner. If you can not find the piece on the bottom layer skip to the *FOURTH* corner and return to this step a little later.

If you did find a match, follow one of the three steps below to move the piece into its proper place.
STEP 4 - Fourth Corner

Before looking for the next corner, spin the entire cube in your hands one turn to the left. This will move the \textit{Just Finished} piece out of its corner position so that we can put the next piece in place. When we finish this step you will have these corners completed.
Since we are looking for the Orange/White/Yellow corner, rotate the bottom layer until you can position it directly below where it belongs - in the front-bottom-right corner. If you can not find the piece on the bottom layer skip to FIXING PROBLEM CORNERS and return to this step a little later.

If you did find a match, follow one of the three steps below to move the piece into its proper place.
STEP 5 - Fixing Problem Corners

If the top 4 corners are now finished, you may proceed to **Solving The Top Centers**.

If not, you have possibly run into the situation where there are no more pieces to place on the bottom layer but all of the top is not yet finished. This means that either:

- A piece is in the correct position, but the colors do not quite line up correctly.
- The needed pieces are already in the top corner positions, but not in the correct locations.

In either case, you need to move the incorrectly positioned piece to the bottom layer so that you can use one of the step above to correctly put it back in place. Simply position the problem corner in the standard front-top-right corner and perform the following move.

Now the piece is on the bottom layer and you can go back to a previous steps to correctly place that piece:

- [Second Corner](#)
- [Third Corner](#)
- [Fourth Corner](#)
Now for the Top Centers. When you finish this process your cube should look like this:

- NOTE: Gray stickers simply indicate that you need not be concerned with those pieces at this time.

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**STEP 1 - Center #1**

In this step I want you to rotate the two highlighted rows until you are able to put at least one Orange Center in place as shown. If you are not able to locate an Orange Center this way, spin the entire cube to the left one turn and repeat this process. You should have at least one Orange Center now in place.

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**STEP 2 - Centers #2 - #4**

This same step will be used to solve the other 3 Center Orange pieces. Before looking for the next Center,
spin the entire cube in your hands one turn to the left. This will move the *Just Finished* piece out of its position so that we can put the next piece in place.

Rotate your cube using or until you can position an Orange Center in one of the 5 possible scenarios below. By following the moves next to the appropriate match, you will be able to correctly position that Orange Center.
You are now ready to fix the **Bottom Centers**.
Next, the Bottom Centers will be completed. This will require you to flip your cube upside down so that the semi-completed Orange side is facing down. When finished, all the Red Centers will be in place as shown. The corners are only displayed here for clarity; you will not have the corners completed at this time.

- **NOTE:** Gray stickers simply indicate that you need not be concerned with those pieces at this time.

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**Bottom Centers**

This step will work for all 4 of the Red Centers that you need to place. Simply repeat the steps below up to four times to complete the Bottom Centers. Your goals is top put a piece in the Top Back Left Corner of the cube, so you may need to spin the entire cube in your hands until you can provide an open slot in which to transfer the piece into.

Rotate your cube using \[ \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix} \] or \[ \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix} \] until you can position a Red Center in one of the 4 possible scenarios below. By following the moves next to the appropriate match, you will be able to correctly position that Red Center.
Now that you are finished with the Bottom Centers, proceed to the [Bottom Corners](http://www.helm.lu/cube/solutions/revenge/bottomcenters/bottomcenters.htm).
Next, the Bottom Corners will be completed. This will require you to flip your cube upside down so that the semi-completed Orange side is facing up right, once again.

This is a two step process.

- **First** we need to get the four corners in their proper positions
- **Second** we need to rotate them, if necessary, to get their colors all oriented

### Positioning: First Pair

First, locate the two corners on the bottom layer that have Yellow on them. If they are next to each other, simply rotate the bottom until those two yellow corners are on the front side. If they are in their proper positions, you can proceed to the back two corners. If they need to be swapped, follow the steps below:

- If, however, the two yellow pieces are diagonally across from each other you will need to perform the [Diagonal Procedure](http://www.helm.lu/cube/solutions/revenge/bottomcorners/bottomcorners.htm).

### The Diagonal Match

In the event that your yellow pieces were diagonally across from each other, position the Yellow/Red/White corner in the front lower left corner. This way we can move the other corner into its correct position.
The Other Two Corners

Once the two Yellow corners have been placed, we need to work on the two Green Corners. Start by spinning your cube until the two Yellow corners that you have just completed are on the back side of the cube.

The two Green Corners will either be properly positioned or they will be in each other's position. If they are indeed backwards, perform the following step. If they are already in place, proceed to the next step.

Finishing the Bottom Corners

At this point, all 4 corners are in place but they probably are not properly rotated yet. This next step will require you to flip your cube over again, so that the Orange Side is on the bottom.

Fortunately there is only one procedure to remember when orienting the Bottom Corners. Unfortunately you will have to remember 7 different configurations if you intend to commit this entire process to memory.
Match your cube to one of the 7 patterns below and then follow the accompanying procedure. After finishing the procedure you will either have completed the Bottom Corners or you will have produced one of the other 7 patterns. You may need to perform this step up to a maximum of 3 times to solve the Bottom Corners.

- The only layer you need to be concerned with at this point is just the Red Layer. The colors on the other layers, indicated in the images below, are only for clarity and will not necessarily match your cube.

The next step is to put the Bottom and Top Edges in place.
TOP/BOTTOM EDGES: RED FACE

Let's start by completing the Red Edges. The premise for this step is to find and move all appropriate edges, from the two center rows, up onto the Red Side of the cube.

Use the 5 images below to assist you in solving the entire Red Face of the cube. If you run out of pieces on the two center rows:

1. You will most likely find more on the bottom layer. If so, the fifth step below will move bottom pieces up into the two center rows so that you can use steps 1 through 4 to properly place the pieces.
2. It is also possible that all the Red Edges are actually on the top but in the wrong positions. If so, use one of the steps (1-4) to put a bogus piece in it's place, thus forcing it out of the top position.

<table>
<thead>
<tr>
<th>STEP 1</th>
</tr>
</thead>
</table>

| STEP 2 |

STEP 3

STEP 4

STEP 5
ORANGE FACE:

Now that the Red Face of the cube is finished, lets flip the cube over and finish the Orange Side.

Unfortunately fixing the Orange Side will actually temporarily mess up two of your completed Red Edges that you just finished placing. That's okay though, because we will soon put them back.

When you used steps 1 - 4 above the process successfully moved your piece into place, but it had another, probably unnoticed effect. It actually messed up the pieces in the Dark Gray positions (see images below). We didn't really care before, since we were not concerned with the Orange Edges yet.

We need to sacrifice a pair of finished Red Edges. This will allow us to finish the entire Orange side of the cube at which time we will put the Red Pair back in place.

Use the 5 images below to assist you in solving the entire Orange Face of the cube. If you run out of pieces on the two center rows:

1. You may find that one of the pieces in the Gray Positions need to be placed on the Orange Side. If so, the fifth step below will move bottom Gray pieces up into the two center rows so that you can use steps 1 through 4 to properly place the pieces.
2. It is also possible that all the Orange Edges are actually on the Orange Face but in the wrong positions. If so, use one of the steps (1-4) to put a bogus piece in it's place, thus forcing the Orange piece out of the top position.

- Each time you perform a move, ensure the sacrificed pair are in the Front Bottom position.

STEP 1
STEP 2

STEP 3

STEP 4
THOSE TWO GRAY PIECES

Finally, the Orange side is now complete, and the Red Side is missing two Edges. One more step and we can put those two Red Pieces in place.

If you find that the two remaining Red Edges are in BOTH the Second and Third Layer, match your cube to the samples in Step 1 and Step 2 and follow the appropriate step to finish the Red Side. Again, the colors shown are not relevant, just the move itself is important.

- If the two remaining Red Edges are on the **Same Layer** you will need to use another procedure first.
- If one or two of the Red Edges are actually on the **Bottom Layer** (in the gray positions) then you will need to perform another step first.
If your Red Side is complete, you can proceed to the Side Edges.

LAST TWO RED EDGES ARE ON THE SAME LAYER

Our goal here is to move the last two Red Edges onto two separate layers. Position one of the Red/Yellow Edges on the Left Side of the Face of the cube so that the other Red/Yellow Edge is in one of the two light-red positions as shown. Match your cube up to the following two scenarios and perform whichever process needs completing.

STEP 1
STEP 2

Now the Red Edges are on two separate rows. Go back the start of The Last Pair to finish.

A RED EDGE IS ALREADY ON THE BOTTOM

- If both pieces are already on the bottom but the colors are flipped, perform the step below.
- If one is on the Second or Third layer but the other is on the Bottom, spin the Second or Third layer until the piece is on the Back side of the cube, and then perform this step below.

Now the Red Edges are out of the Bottom Row.
Go back the start of The Last Pair to finish.
SIDE EDGES

We will start with Row Two and then complete Row Three.

Before we start, rotate your cube sideways so that it matches the image below. You will probably need to spin the second row (now seen as column two) so that you can position the first edge piece - the Green/Blue Edge.

- All pieces with dimmed colors are shown for reference only. The normal dark colors represent the pieces we will be immediately concerned with.

ONE DOWN, THREE TO GO...

Spin the third column until you can position the next piece (Green/White) next to the Green/Blue piece as shown. This piece actually belongs below the Green/Blue piece (also shown) and this following procedure will move it there.
PROBLEMS? - If you can not find the second piece on Row Three, perform this move, and look again.

TWO DOWN, TWO TO GO...

Spin the third column until you can position the next piece (White/Yellow) next to the White/Green piece as shown. This piece actually belongs below the White/Green piece (also shown) and this following procedure will move it there.

PROBLEMS? - If you can not find the third piece on Row Three, perform this move, and look again.

THREE DOWN, ONE TO GO...

Spin the third column until you can position the last piece (Yellow/Blue) next to the Yellow/White piece as shown. This piece actually belongs below the Yellow/Blue piece (also shown) and this following procedure will move it there.
That's it, the Edges on the Second Row are complete!

THIRD ROW EDGES

To start the Third Row, position your cube as shown and line up the White/Yellow edge so it is in place.

Now rotate the entire cube backwards until the Blue Side is up.

If you examine the three remaining edges you will find that:

- Everything is in place - Great, you can proceed to the Centers.
- Two are still out of place.
- All three are out of place.

IF TWO ARE OUT OF PLACE

Match your situation to the two samples below. The procedure following each will complete all of the edges for you.
You should now be done and can proceed to the Centers.

IF THREE ARE OUT OF PLACE

Match your situation to the sample below. The following procedure will complete all of the edges for you.

- Note: You may need to perform this step twice in some cases.

You should now be done and can proceed to the Centers.
SIDE CENTERS

Ahhhh, the last step. In these final moves, we will be constructing the rest of the cube piece by piece. There is a common theme to all of these possible moves below. They all share the same core move, but all are preceded and finished with a few Preparation/Finishing Moves.

Simply find a piece that is out of place, and if it belongs on an adjacent (not opposite) face, you will be able to use one of the images below to put that piece in place.

- The only pieces that are of any importance in the illustrations below are the pieces you are moving. Any other color or piece shown is for reference only.

<table>
<thead>
<tr>
<th>GROUP 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Diagram 1" /></td>
</tr>
<tr>
<td><img src="image2.png" alt="Diagram 2" /></td>
</tr>
</tbody>
</table>

GROUP 2

GROUP 3
GROUP 4

You should now be done with the entire Rubik's Revenge, Congratulations!!!