How to solve a Rubik's Cube:

Before you start:
It's helpful to spend a few days with the cube trying by yourself without any guides. This will familiarize you with the cube and make solving it a lot easier!
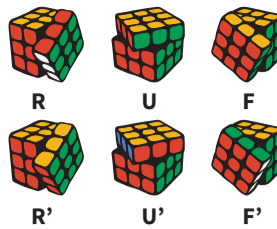
Basics:
The Rubik's Cube has 54 stickers but is made from 26 pieces.
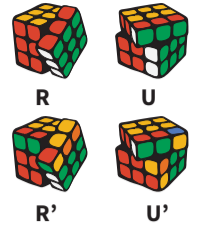There are 3 types of unique pieces on the cube:
(corner, edge and center)

Notation:
A letter means turn that face of the cube clockwise, with an apostrophe turn counter-clockwise.

R U F
R' U' F'

4 moves:
You can practice these 4 moves together, they are used often: R U R' U' (right clockwise, up clockwise, right counter-clockwise, up counter-clockwise)

R U
R' U'

Step 1: White Cross

This step can be done intuitively, just make sure all the pieces are in the correct spot relative to the center pieces of the cube. But if you're having trouble, refer to the instructions below:

First, find the white center piece and turn the entire cube so it's at the bottom.

Then, find a white edge piece and check which case you have to see how to bring it to the top layer and insert it into the cross before you move on to the next edge.

Piece in bottom layer:
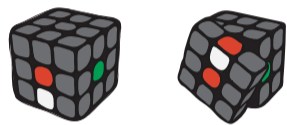
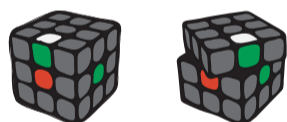Turn the side the piece is on 180 degrees.

Piece in middle layer:

Hold the cube so the piece is at the front right and do the 4 moves from the basics:
R U R' U'

Now that the piece is in the top layer, check which way the white sticker faces to see how to insert it into the cross.
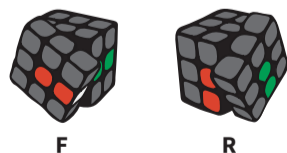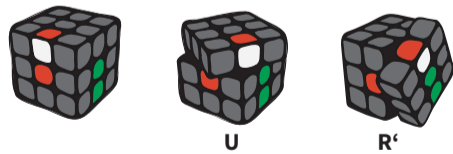
Piece in top layer:

White sticker faces up:

Turn the top layer of the cube until the side sticker on that edge matches a center piece, then turn the side the piece is on 180 degrees.

White sticker faces side:

U R'

F R

Turn the top layer of the cube until the top sticker of the piece matches the color of the center piece under it, then do these moves to insert the edge into the cross: U' R' F R

Repeat step 1 until all 4 white cross edges are solved.

Step 2: Completing first 2 layers

White Corners:

Find a white corner piece, if you find one at the bottom layer, hold it at the front right and do R U R' U' to bring it to the top layer. Turn the top layer until the corner is above its correct slot.

Then, holding the cube so the corner is at the front right, repeat R U R' U' until the corner is solved (in the slot and oriented correctly).

misoriented corner   corner above correct slot   solved corner

+   =   +   =
R U R' U'   R U R' U'

Edges:
The algorithms in this step may seem hard to remember but its just alternating R and U turns with a change in direction after the 5th turn.

Find an edge in the top layer without yellow on it (if there are none skip to "Edge stuck in middle layer" at the end of this step) and turn the top layer until the side color of the edge matches the color of the center piece below it then hold the cube so the edge is at the right side.

Top color of edge matches the front center's color:

The Algorithm: R' U' R' U' R' U R U R

Top color of edge matches the back center's color:

The Algorithm: R U R U R U' R' U' R'

Edge stuck in middle layer:

Hold the edge at the front right and do the first algorithm in this step: "Top color of edge matches the front center's color" to get the edge to the top layer without breaking the bottom layer.

Step 3: Orienting the last layer

Edge orientation:

If all 4 edge pieces show yellow on top, skip to "Corner orientation".

2 edges in a line:

Turn the top layer so the line is horizontal and do
F (R U R' U') F', just an F move before the 4 moves from step 0 and a F' after.

2 edges in a "L" shape :

Turn the top layer so one yellow edge is at the left and one is at the back, then do:
F (R U R' U') (R U R' U') F'

0 edges show yellow on top:

Do F (R U R' U') F' and you will get the "L" shape case.

Corner orientation:
The algorithm for this step is:
R U R' U R U2 R'
You may have to repeat this step multiple times, while also checking what case you have after doing the algorithm and adjusting the top layer before repeating it.

No corners show yellow on top:

Turn the top layer until the corner on the front left has a yellow sticker facing left, then do the algorithm above and repeat "Corner orientation" until all corners show yellow on top.

One corner shows yellow on top:

Turn the top layer until the corner on the front left has a yellow sticker facing up, then do the algorithm above and repeat "Corner orientation" until all corners show yellow on top.

Two corners show yellow on top:

or

Turn the top layer until the corner on the front left has a yellow sticker facing front, then do the algorithm above and repeat "Corner orientation" until all corners show yellow on top.

Step 4: Permuting the last layer

Corner permutation:

First look for "headlights" a side that has 2 matching corner stickers on it:

Headlights can also appear with a solved edge in between them.
If you have headlights on every side, skip to "Edges".
If you have headlights on one side, keep them on the left and do the algorithm below.
If you do not have headlights, do the algorithm below then repeat this step.

The algorithm:
(R U R') F' (R U R' U') R' F R2 U' R

Edge permutation:

solved orange edge :

If you have a solved edge keep it at the back and repeat the algorithm below until the cube is solved.
If you do not have a solved edge, do the algorithm below and look for one.

The algorithm: R2 U (R U R' U') R' U' R' U R'

The cube should now be solved!

If you couldnt solve the cube:

Make sure to follow the instructions carefully and check you did the previous steps correctly (eg: cross edges lined up correctly with the center pieces). Sometimes algorithms have to be repeated multiple times to complete a step.

3 Yellow edge/corner pieces oriented in step 3:

The only way this can happen is if a previous step was done incorrectly. Check the first two layers to see if all the pieces are solved.

If a corner piece has been twisted, this can be fixed by twisting the corner so there are 2/4 corners oriented.

If the cube has been assembled wrong or the stickers have been moved, you will need to reassemble the cube in a solved state.

Extra:

Get faster:
Check out J perm on youtube, a great channel for learning how to solve and getting faster.

Try learning another method:
Search for Kian Mansour's beginner roux tutorial on youtube.