# 1-Look PLL recog thing:

Hello, this is StachuK1992, and this paper's purpose is to aid you in recognizing any PLL case without having to rotate the cube. By this, I mean you should be able to look at the F and the R sides, and be able to know what alg to throw down.

The first step to recognizing a PLL without rotation, at least with my method, is to narrow the cases down. I do this by looking at the corners. If you see that the FLU and FRU corners are the same, and the RFU and RBU corners are the same, then you should look in the first category.
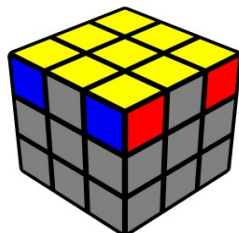
If corners are right: (11/72 of the time. ~ 15.2%)

In this category, only 4 PLLs are possible; Ua, Ub, H, and Z. These are the easiest of cases to recognize.

If you see that on both sides, the edge between the corners is the same color as the corner colors facing that side, then you have an H perm, as shown here: -->
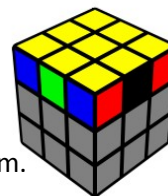
If you have either of the cases below, then you have a Z perm.

Anything else, and you've got yourself a U perm.

U perms are pretty easy to recognize. Basically, if you see an adjacent edge in between 2 corners on one side, and either an oppositte or correct color edge between the other, you've got a U perm. To distinguish between the two, erm...basically, mentally 'find' the oppositte edge, if not visible, and you should be able to determine the case from there. Just because I have the images, I'll paste all angles of Ua here:

## If both corner sets are oppositte: (1/6 of the time. ~ 16.7%)

Okay, so say your corners aren't right. Instead, they may be oppositte. By oppositte, I mean that on either face, the facelets are of opposite colors (i.e. blue/green like over to the right, or my messed up color scheme with red/black).
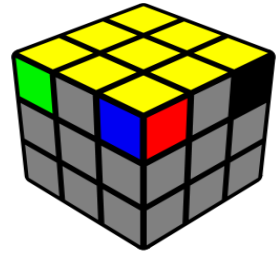
In this category, 5 PLLs are possible; V, E, Y, Na, and Nb.

N cases are pretty easy to recognize, so we'll do both of those at once.

Basically, if you see two 'blocks,' it's an N perm. That's it. Here are some pics:
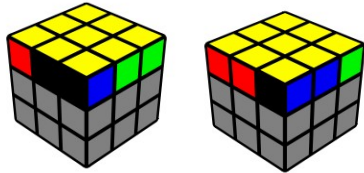
You should be able to figure out which alg to do. Don't bother rotating until after the alg.

Okay. For the rest, it's not *as* easy. Honestly, the rest of these kinda are blegh.

Here is the Y case at all angles. Basically, if you have a block and it's not an N, it's a V or a Y.
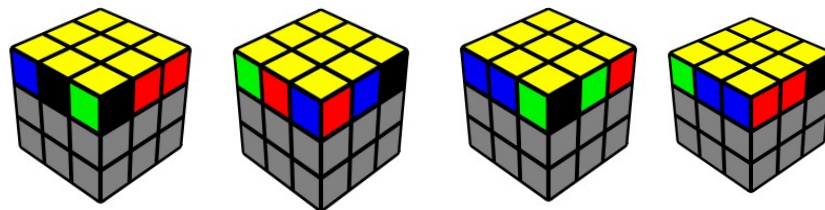To distinguish between the two, just do a bit of practicing and guesswork for a day, and you'll be fine. That's really all the advice I can give you on the subject.
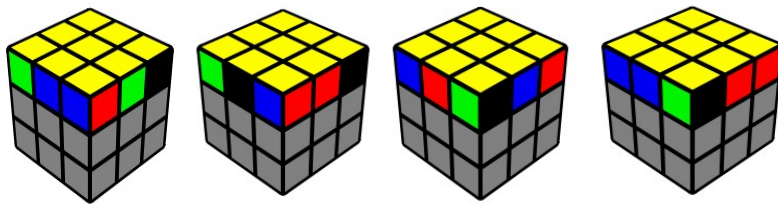
Here are the E cases below:

Just because, here is the V case at all angles:

Okay cool. If you don't see a block anywhere, things suck. Memorize a few facts.

- In the third Y pic. FLU and RU are the same, as is FU and RBU.
- In the fourth Y pic...just know it's a Y. <_< Should be easy enough.
- In the V pics, notice how if there's only one bar, (1st and 3rd) the bar is on the outside (the corner part is in the leftmost or rightmost position
  - in the Y pics, they're on the inside
- In the fourth V pic...just know it's a V. <_< Should be easy enough.

If one is adjacent, and one is the same: (49/72 of the time. ~ 68.0%)

Okay, so you'll probaby get one of these. Basically, you see one side that has the same color corner stickers, and another side that has adjacent color corner stickers. Meh. 12 possible cases. The Js, the Rs, the As, the dreaded Gs, F, and T. I'll try not to overcomplicate distinguishing these, but I'll just say this from the beginning: these suck.

If you see two blocks, it's a J. Fantastic. You should be able to determine the case/angle. Really.   10 to go.
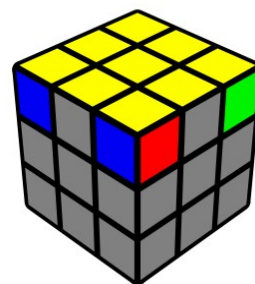
Hrm, G time. Ga:
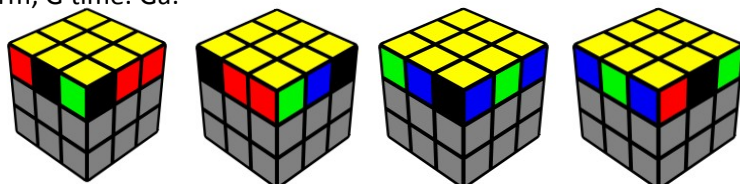
I really have to go through these one by one. This is going to take forever
- first pic
    - block on right right, same color as FLU
    - FU same as RFU, which is oppositte of the block
- second pic
    - block on left-right, opp of FLU and RBU
    - RFU opp of RU
- third pic...actually, I'll stop typing here. Basically, go memorize these from random angles. Good luck; it's not fun.
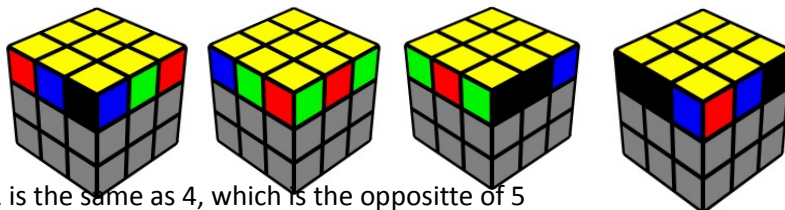
That's enough of the Gs   6 to go.

For the rest of these, I'm going to "name" some stickers.

FLU	FU	FRU	RFU	RU	RBU
1	2	3	4	5	6

Cool. Now onto...

The Rs. Fairly easy. Here are some pictures:

- Angle #1: 1=6, 2=4!5.
    - By this, I mean 1 is the same as 6, 2 is the same as 4, which is the oppositte of 5
- Angle #2: 2=4=6, 3=5
- Angle #3: for this one, just notice the block, that 1=3, and that the 2 edge is adjacent to 1 and 3
- Angle #4: block 1&2 = 6~3 (1=2=6, all of which are adjacent to 3)
    - I differentiate between this one and a G by seeing that the 3 is adjacent to the rest, rather than opp)

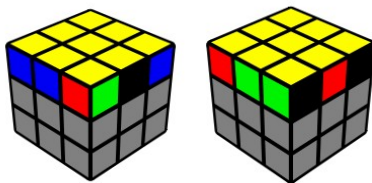Okay, that above, but flipped for Rb.   4 to go.

Cool cool. F, T, Aa, and Ab to go. Almost there.
Let's just get the ugly F perm out of the way, shall we?
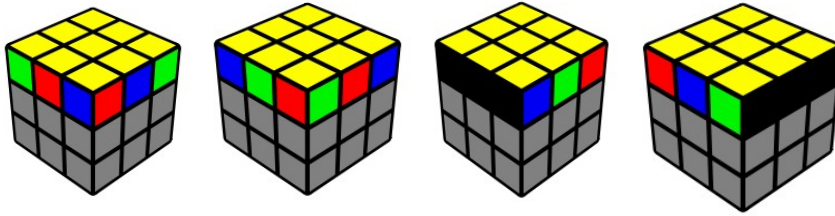
Angle #1: (1=6) opp of (3=5), adj to (2=4)
Angle #2: look at #1, but flip stuff in your mind and stuff.
Angle #3 and 4 should be easy enough for you. You have a 3-facelet bar; go do the alg.

Okay. T(ea) time.

Alright, so for the case on the left, (1&2block=6), 3!5, 4!6
And for the case on the right, you see
(2&3bar = 6), (1=5)!(4=6), (1~2)
I know. My terminology is a little lulzy, but it works for me.

Lastly, the As. Here goes:
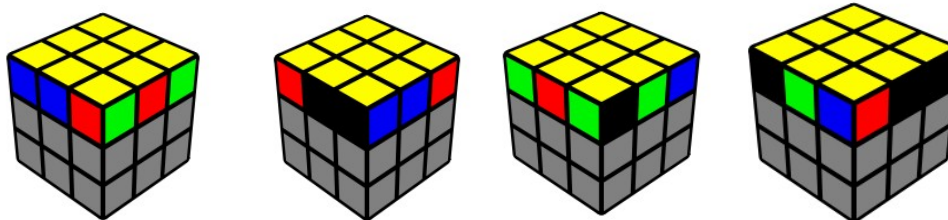
Okay, so, erm
Angle #2: is the easiest. Basically "ooh lookie. Double blocks. Ooh. The oppositte is on the left side (as opposed to right, for the other A perm)
Angle #1: 3~(1=2)!(4=6), (3=5) yeah my notation is wack
Angle #3: tbh, this is kinda eww, and is one of the worse cases to recognize quickly. Basically, 6!(1=3=5), (2!4)
Angle #4: (1=5=6)!4 adj to 2!3

Apply the above to Ab, too

AND WE'RE DONE!!!

Just a quick note: If you see a 2-facelet block with an opp sticker (like red red black) one one face, it's a G, A, or J. Not a T, F, or R. That's all.
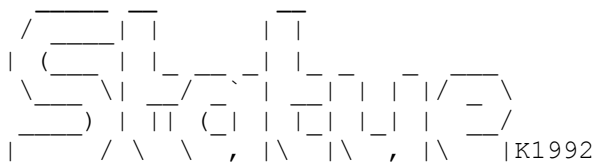
This paper isn't really intended for printing, but go for it if you want.

You can distribute however you like, but including my name somewhere would be cool.

Images were gotted with visualcube, which can be found at http://cube.crider.co.uk/visualcube.php

Thanks, Cride5. Am appreciate.

(http://cube.crider.co.uk/visualcube.php?size=200&fmt=png&stage=ll&sch=yrbwng&alg=R%27%20F%20R%27%20B2%20R%20F%27%20R%27%20B2%20R2y%27) is an example of what I put in to get a pic

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I know this wasn't very good. It has a lot of kinks to be worked out, and this method of recog seems to be working decently for me. Good luck, Statue.