

# The Four-Look Last Layer

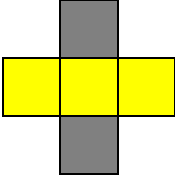
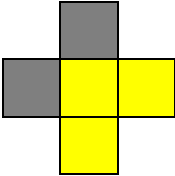
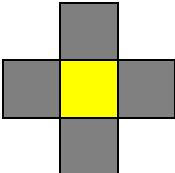
A four-look last layer requires 16 algorithms (3 for edge orientation, 7 for corner orientation, 2 for corner position, 4 for edge position).

As this section addresses only the last layer, it assumes the first two layers have been solved.

Where multiple algorithms are given, I prefer the first, but the others work just as well.

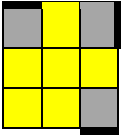
## Orient Edges

This step makes a yellow cross.

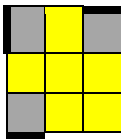
Two opposite yellow edges		$F (RUR'U') F'$ $(RUR'U') M' (URU'r')$ (retains corner orientation)
Two adjacent yellow edges		$f (RUR'U') f'$ $y^2 F (URU'R') F'$ $y^2 (rUR'U') M (URU'R')$ (retains corner orientation)
Zero correct edges		$MU (RUR'U') M^2U RU'r'$ $F (RUR'U') F' f (RUR'U') f'$

## Orient Corners

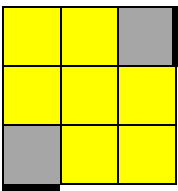
There are 7 cases for orienting the corners. The first 2 cases use the familiar Sune.



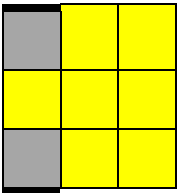
**Right Sune**  
(RUR'U) (RU2R')



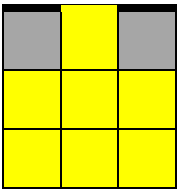
**Left Sune**  
(L'U'LU') (L'U2L)



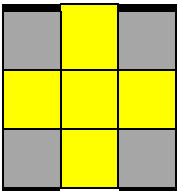
**Bowtie**  
(FR'F'r) (URU'r')  
Alt: y F' (rUR'U') (r'FR)



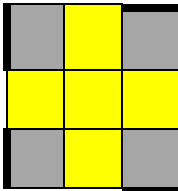
**Blinkers**  
(rUR'U') (r'FRF')



**Headlights**  
(R2D') (RU2R') D (RU2R)



**Double Headlights**  
(RU2R'U') (RUR'U') (RU'R')  
Alt: F (RUR'U')\*3 F'



**Pi**  
f (RUR'U') f' F (RUR'U') F'  
Alt: (RU2) (R2'U'R2U') (R2'U2R)

## Position Corners

There are only 2 cases for positioning corners: there are matching corners, or there aren't. Matching corners have the same color sticker on one side.



In this diagram, the right side has matching red corners in the top layer.

If there is a side with two matching corners, turn the cube so that side is on the bottom, face the white side, and execute the following algorithm:



→  
(rotate cube)



$(R'UR') D2 (RU'R') D2 R2$

This algorithm can also be written  $(l'UR'-D2-RU'R'-D2R2)$  and used when cube is rotated normally and the matching corners are on the back.

If there is not a side with two matching corners, execute the following algorithm with the cube oriented normally (yellow on top):

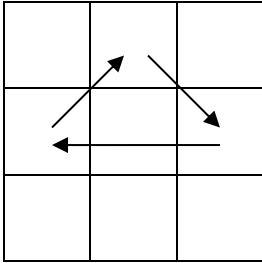
$F (RU'R'U') (RUR'F') (RUR'U') (R'FRF')$

Once all sides have matching corners, turn the last layer so that the corners line up with the correct sides of the cube.

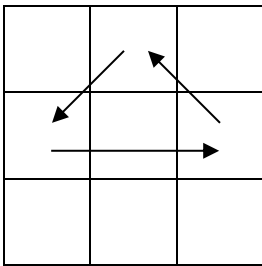


## Position Edges

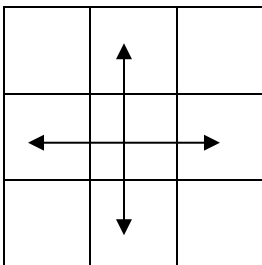
There are 4 cases for positioning edges. The first 2 cases are mirrors of each other.



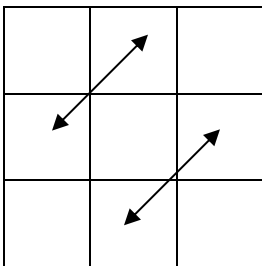
$(M2U') (M'U2M) (U'M2)$



$(M2U) (M'U2M) (UM2)$



$(M2U) (M2U2) (M2U) M2$



$(M2U)*2 (M'U2) (M2U2) (M'U2)$   
Alt:  $(M2u) (M2D') (MS2M')$