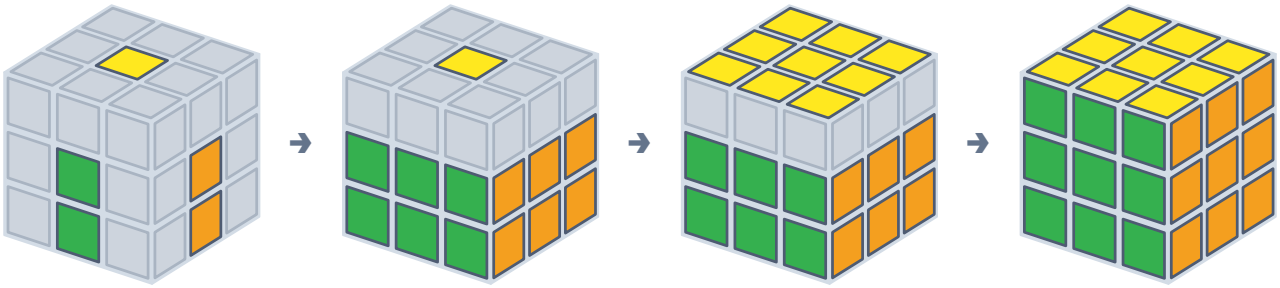
LEVEL 0
STORE

CFOP REDUCED 20 ALGORITHMS

CROSS · F2L · 2-LOOK OLL · 2-LOOK PLL · RUBIK'S CUBE 3x3



CROSS → F2L → OLL → PLL

CFOP WITH THE BARE MINIMUM TO START

The same method speedcubers use, with 20 algorithms instead of the full guides' 119 cases. The cross and F2L are solved by thinking (four short algorithms to lean on); OLL and PLL in two looks each. It is slower than full CFOP, but it already is CFOP: once you master it, every case you learn from the full guides replaces a part of this method. Each case is the same one as in its video and its guide. White cross on the bottom · green in front · orange on the right.

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THE METHOD IN 4 STEPS

C-F-O-P are the four steps. Each one leaves a bit more of the cube solved (in colour, on the right). Tap a case to go to its page; all the algorithms together are on page 3.

C · 1 · THE CROSS

0 ALGORITHMS

The four white edges on the bottom, each with its centre. Solved by thinking, no algorithms.

The cross p.4



after this step

F · 2 · F2L

4 ALGORITHMS

The first two layers, one pair (corner + edge) per slot. Intuitive: set the pair up until it is one of the 4 basic cases, then insert it.

The idea p.5 · F2L 1 p.6 · F2L 2 p.7 · F2L 3 p.8 · F2L 4 p.9



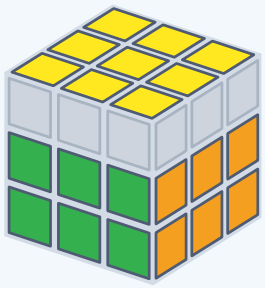
after this step

O · 3 · OLL IN 2 LOOKS

3 + 7 = 10 ALGORITHMS

The whole top face yellow: first the yellow cross (3 cases), then the corners (7 cases).

How it works p.10 · DOT p.11 · LINE p.12 · L p.13 · H p.14 · PI p.15 · HEADLIGHTS p.16 · T p.17 · BOWTIE p.18 · ANTI-SUNE p.19 · SUNE p.20



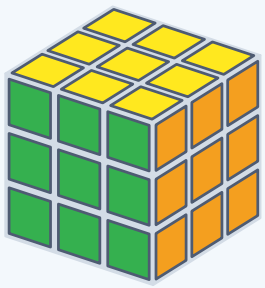
after this step

P · 4 · PLL IN 2 LOOKS

2 + 4 = 6 ALGORITHMS

Every top piece to its place: first the corners (T or Y), then the edges (Ua, Ub, H or Z).

How it works p.21 · T-PERM p.22 · Y-PERM p.23 · Ua-PERM p.24 · Ub-PERM p.25 · H-PERM p.26 · Z-PERM p.27



after this step

THE 20 ALGORITHMS

1 · CROSS: no algorithms (page 4)

2 · F2L · THE 4 BASIC CASES



F2L 1 · PAIR CONNECTED · WHITE SIDEWAYS p.6

U R U' R'



F2L 2 · PAIR CONNECTED · WHITE ON THE RIGHT p.7

U' F' U F



F2L 3 · PAIR SPLIT · WHITE IN FRONT p.8

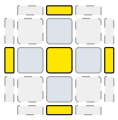
F' U' F



F2L 4 · PAIR SPLIT · WHITE ON THE RIGHT p.9

R U R'

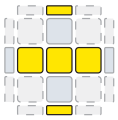
3 · OLL · STEP 1: THE YELLOW CROSS



DOT p.11

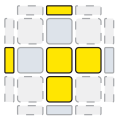
F (R U R' U') F'

f (R U R' U') f'



LINE p.12

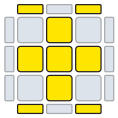
F (R U R' U') F'



L p.13

f (R U R' U') f'

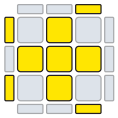
3 · OLL · STEP 2: THE CORNERS



H · OLL 21 p.14

(R U2 R') U'

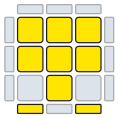
(R U R' U') (R U' R')



PI · OLL 22 p.15

R U2 R2 U' R2

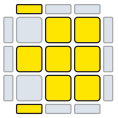
U' R2 U2 R



HEADLIGHTS · OLL 23 p.16

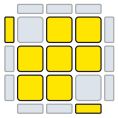
R2 D (R' U2 R)

D' R' U2 R'



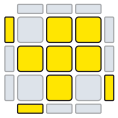
T · OLL 24 p.17

r U R' U' r' F R F'



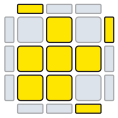
BOWTIE · OLL 25 p.18

F' r U R' U' r' F R



ANTI-SUNE · OLL 26 p.19

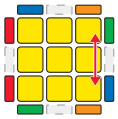
R U2 R' U' R U' R'



SUNE · OLL 27 p.20

R U R' U R U2 R'

4 · PLL · STEP 1: THE CORNERS



T-PERM p.22

(R U R' U') R' F R2

U' (R' U' R) U R' F'

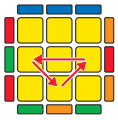


Y-PERM p.23

F (R U' R' U') (R U R') F'

(R U R' U') (R' F R F')

4 · PLL · STEP 2: THE EDGES



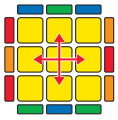
Ua-PERM p.24

M2 U M U2 M' U M2



Ub-PERM p.25

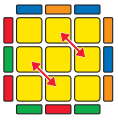
M2 U' M U2 M' U' M2



H-PERM p.26

M2 U M2 U2

M2 U M2



Z-PERM p.27

M' U M2 U M2

U M' U2 M2 U'

STEP 1 · THE CROSS

The four white edges go on the bottom, each with its other colour next to its centre (white-green under the green, white-orange under the orange...). In CFOP the cross is built straight on the bottom, without the beginner's daisy: that way the cube is ready for F2L without turning it over.

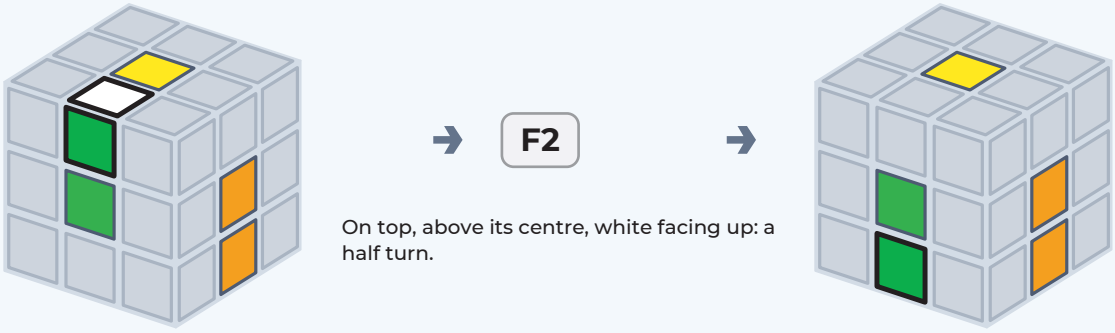
1 Look before you turn
Find the four white edges and work out where each one goes before the first turn.

2 Each edge with its centre
White facing down is not enough: the other colour has to sit next to its centre.

3 Don't break what is done
If a turn takes out an edge already placed, put it back afterwards with the opposite turn.

4 Practise with the cross on the bottom
At first it is hard not to see it. Build it on top if you need to, but move to the bottom soon.

TWO EXAMPLES: THE WHITE-GREEN EDGE



On top, above its centre, white facing up: a half turn.

the rest in grey



In the middle layer, white facing right: one turn brings it down.

the rest in grey

STEP 2 · INTUITIVE F2L

With the cross done there are four empty slots at the bottom corners. Each slot is filled with a PAIR: its white corner and the middle-layer edge that goes above it. Always work on the front-right slot: to move on to the next, turn the whole cube (the cross stays on the bottom). For each pair, three ideas:

1 Find the pair

The corner and the edge with the slot's two colours (green and orange, in the drawings).

2 Set it up

With U turns and by taking out stuck pieces, make it one of the 4 basic cases (pages 6–9).

3 Insert it

The basic case inserts it in 3 or 4 moves, without breaking the cross or the other slots.

THREE EXAMPLES



F2L 27

The corner is in its slot but twisted: take it out.

R U' R'

set up (3 moves)

→



CASE 1

U (R U' R')

and it's in



F2L 17

White faces up: turn it to face sideways.

(R U2 R') U'

set up (4 moves)

→



CASE 4

R U R'

and it's in



F2L 14

The edge is far from its corner: bring them together.

U' (R U' R') U

set up (5 moves)

→



CASE 4

R U R'

and it's in

Of the 37 F2L cases that are not basic, 24 are solved exactly like this: a few moves to set it up and one of the 4 basic cases (checked with the series' simulator). The rest can be set up too, with a few more turns; when you want to go faster, each one has its algorithm in the full F2L guide (41 cases).

F2L CASE 1

Video on YouTube
scan the QR
levelcero.com · drawings

PAIR CONNECTED · WHITE SIDEWAYS



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right

ALG **U** (**R** **U'** **R'**)

CASE



PAIR CONNECTED · WHITE SIDEWAYS

1



U

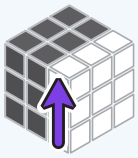


TOP LAYER · LEFT

2



R



RIGHT LAYER · UP

3



U'



TOP LAYER · RIGHT

4



R'



RIGHT LAYER · DOWN

END



SOLVED

PAIR INSERTED

F2L CASE 2

Video on YouTube
scan the QR
levelcero.com · drawings

PAIR CONNECTED · WHITE ON THE RIGHT

HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right

ALG **U' (F' U F)**

CASE



PAIR CONNECTED · WHITE ON THE RIGHT

1



U'



TOP LAYER · RIGHT

2



F'



FRONT · COUNTER-CLOCKWISE

3



U



TOP LAYER · LEFT

4



F



FRONT · CLOCKWISE

END



SOLVED

PAIR INSERTED

F2L CASE 3

Video on YouTube
scan the QR
levelcero.com · drawings

LEVEL 0

PAIR SPLIT · WHITE IN FRONT

HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right

ALG F' U' F

CASE



PAIR SPLIT · WHITE IN FRONT

1



F'



FRONT · COUNTER-CLOCKWISE

2



U'



TOP LAYER · RIGHT

3



F



FRONT · CLOCKWISE

END



SOLVED

PAIR INSERTED

F2L CASE 4

Video on YouTube
scan the QR
levelcero.com · drawings

LEVEL 0

PAIR SPLIT · WHITE ON THE RIGHT



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right

ALG **R** **U** **R'**

CASE

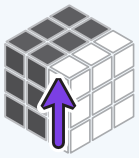


PAIR SPLIT · WHITE ON THE RIGHT

1



R



RIGHT LAYER · UP

2



U



TOP LAYER · LEFT

3



R'



RIGHT LAYER · DOWN

END



SOLVED

PAIR INSERTED

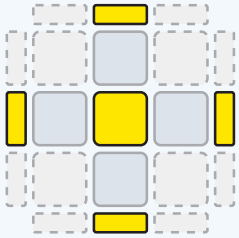
2-LOOK OLL · START HERE

10 ALGORITHMS INSTEAD OF 57

Before learning the 57 cases, solve OLL in two looks: STEP 1 orients the edges (make the yellow cross; the corners don't matter) with three algorithms, and STEP 2 orients the corners with the seven cross cases (1–7). It's slower than full OLL, but with ten algorithms you can already solve any case.

STEP 1 · EDGES · THE YELLOW CROSS

p.11



DOT

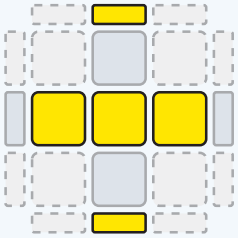
EDGES · DOT · CORNERS DON'T MATTER

F (R U R' U') F'

f (R U R' U') f'

video · rubik-oll-2look-punto

p.12



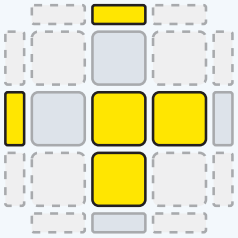
LINE

EDGES · LINE · CORNERS DON'T MATTER

F (R U R' U') F'

video · rubik-oll-2look-linea

p.13



L

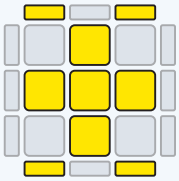
EDGES · L SHAPE · CORNERS DON'T MATTER

f (R U R' U') f'

video · rubik-oll-2look-ele

Dot = no yellow edge on top (both algorithms in a row) · Line = two opposite edges · L = two adjacent edges. Turn U until your cube matches the diagram and ignore the corners.

STEP 2 · CORNERS · THE SEVEN CROSS CASES 1–7 (OLL 21–27)

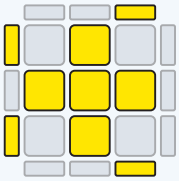


1 H

(R U2 R') U'

(R U R' U') (R U' R')

OLL 21 p.14

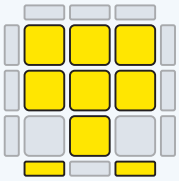


2 PI

R U2 R2 U' R2

U' R2 U2 R

OLL 22 p.15

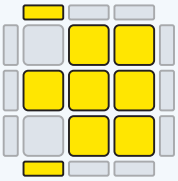


3 HEADLIGHTS

R2 D (R' U2 R)

D' R' U2 R'

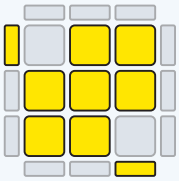
OLL 23 p.16



4 T

r U R' U' r' F R F'

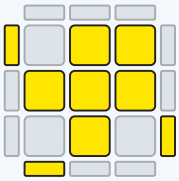
OLL 24 p.17



5 BOWTIE

F' r U R' U' r' F R

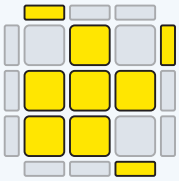
OLL 25 p.18



6 ANTI-SUNE

R U2 R' U' R U' R'

OLL 26 p.19



7 SUNE

R U R' U R U2 R'

OLL 27 p.20

With the cross done, turn U until the corners match one of these seven diagrams and do its algorithm. Sune and Anti-Sune (7, 6) have one corner done; H and Pi (1, 2) none; T, L and U (4, 5, 3) two.

OLL 2-LOOK

STEP 1 · EDGES

Video on YouTube
scan the QR
levelcero.com · drawings

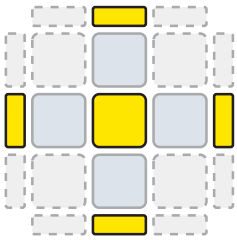
LEVEL 0

DOT

EDGES · DOT · CORNERS DON'T MATTER



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



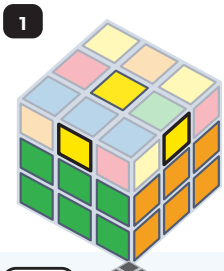
ALG F (R U R' U') F' f (R U R' U') f'

CASE



EDGES · DOT · CORNERS DON'T MATTER

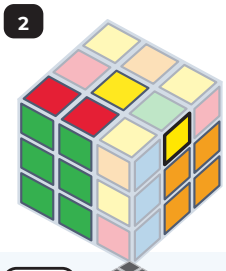
1



F

FRONT · CLOCKWISE

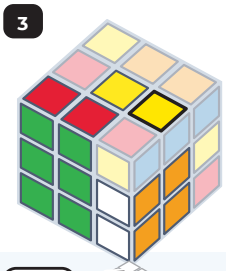
2



R

RIGHT LAYER · UP

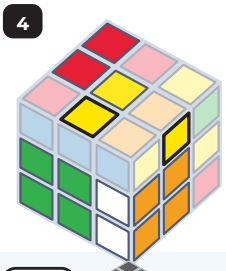
3



U

TOP LAYER · LEFT

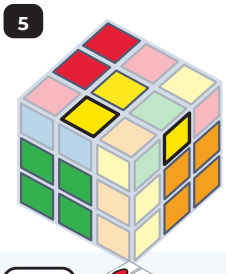
4



R'

RIGHT LAYER · DOWN

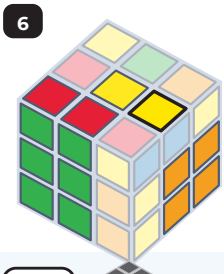
5



U'

TOP LAYER · RIGHT

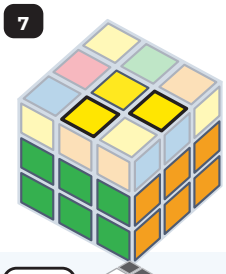
6



F'

FRONT · COUNTER-CLOCKWISE

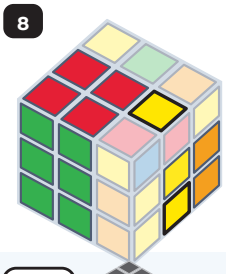
7



f

FRONT TWO LAYERS · CLOCKWISE

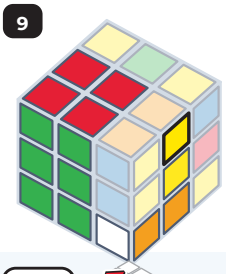
8



R

RIGHT LAYER · UP

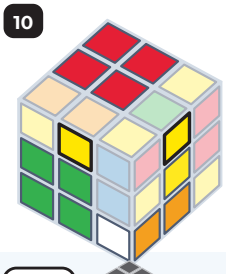
9



U

TOP LAYER · LEFT

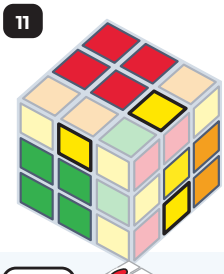
10



R'

RIGHT LAYER · DOWN

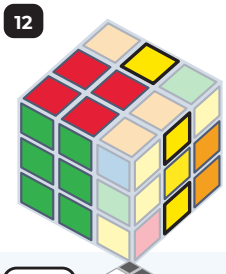
11



U'

TOP LAYER · RIGHT

12



f'

FRONT TWO LAYERS · COUNTER-CLOCKWISE

END



CROSS DONE

YELLOW CROSS · NOW STEP 2 (#7)

OLL 2-LOOK

STEP 1 · EDGES

Video on YouTube
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levelcero.com · drawings

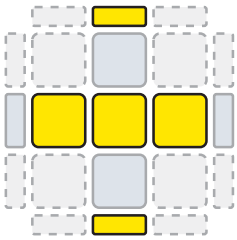
LEVEL 0

LINE

EDGES · LINE · CORNERS DON'T MATTER



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



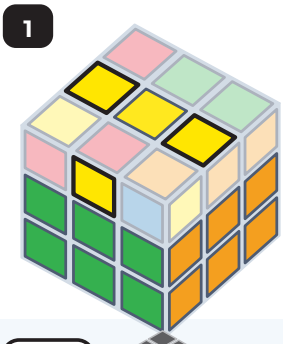
ALG F (R U R' U') F'

CASE



EDGES · LINE · CORNERS DON'T MATTER

1

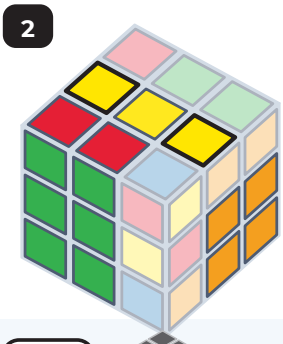


F



FRONT · CLOCKWISE

2

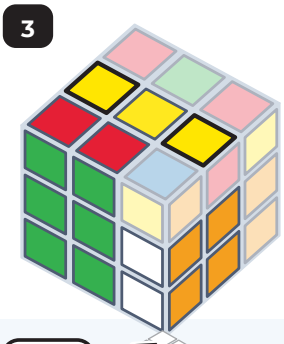


R



RIGHT LAYER · UP

3

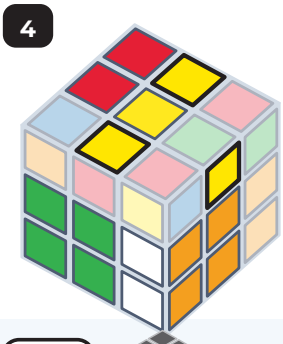


U



TOP LAYER · LEFT

4

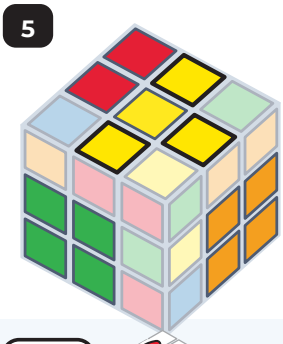


R'



RIGHT LAYER · DOWN

5

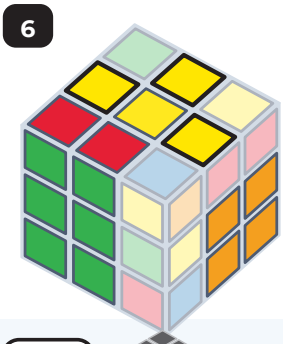


U'



TOP LAYER · RIGHT

6



F'



FRONT · COUNTER-CLOCKWISE

END



CROSS DONE

YELLOW CROSS · NOW STEP 2 (#6)

OLL 2-LOOK

STEP 1 · EDGES

Video on YouTube
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levelcero.com · drawings

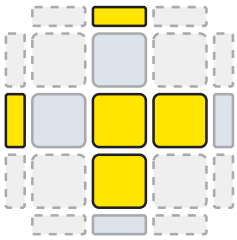
LEVEL 0

L

EDGES · L SHAPE · CORNERS DON'T MATTER



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



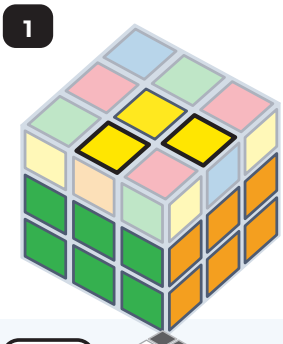
ALG f (R U R' U') f'

CASE



EDGES · L SHAPE · CORNERS DON'T MATTER

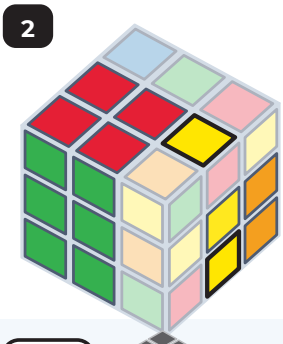
1



f 

FRONT TWO LAYERS · CLOCKWISE

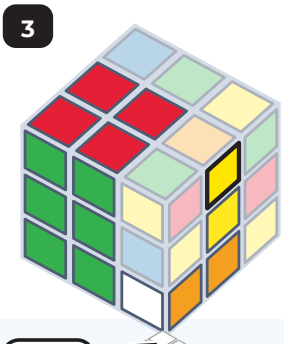
2



R 

RIGHT LAYER · UP

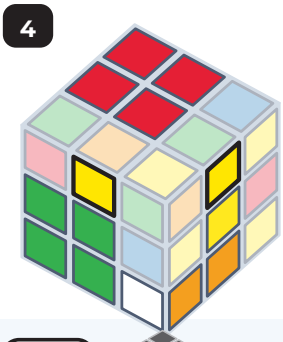
3



U 

TOP LAYER · LEFT

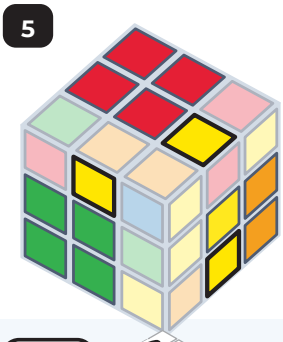
4



R' 

RIGHT LAYER · DOWN

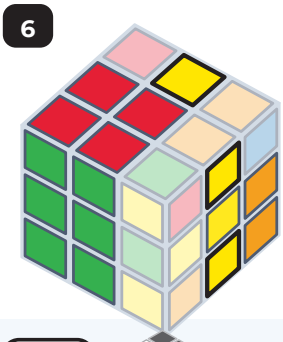
5



U' 

TOP LAYER · RIGHT

6



f' 

FRONT TWO LAYERS · COUNTER-CLOCKWISE

END



CROSS DONE

YELLOW CROSS · NOW STEP 2 (#1)

OLL #1 OFFICIAL: OLL 21

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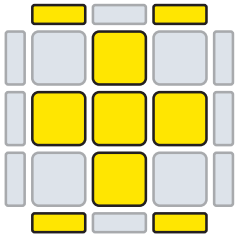
H

CROSS · 4 CORNERS TWISTED · H



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



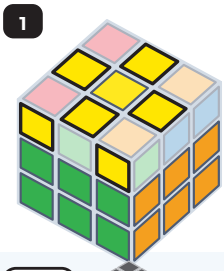
ALG (R U2 R') U' (R U R' U') (R U' R')

CASE



CROSS · 4 CORNERS TWISTED · H

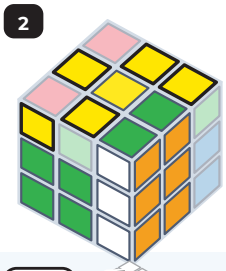
1



R

RIGHT LAYER · UP

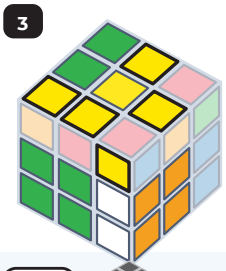
2



U2

TOP LAYER · HALF TURN

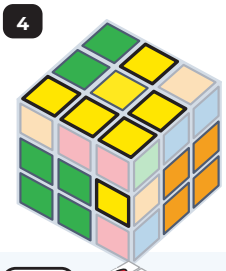
3



R'

RIGHT LAYER · DOWN

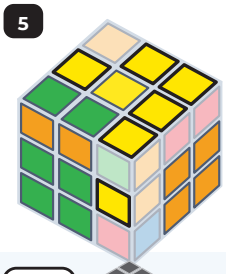
4



U'

TOP LAYER · RIGHT

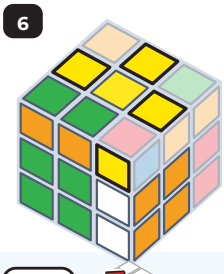
5



R

RIGHT LAYER · UP

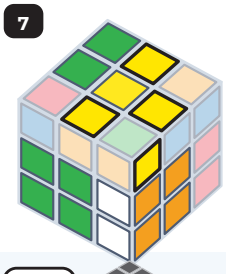
6



U

TOP LAYER · LEFT

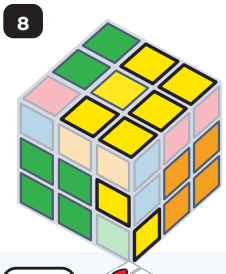
7



R'

RIGHT LAYER · DOWN

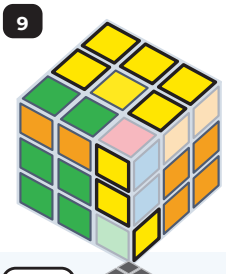
8



U'

TOP LAYER · RIGHT

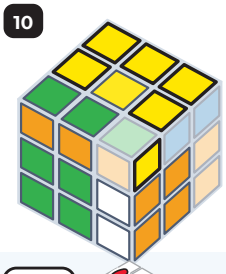
9



R

RIGHT LAYER · UP

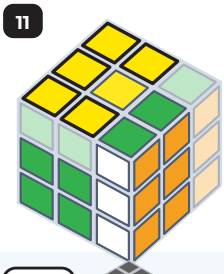
10



U'

TOP LAYER · RIGHT

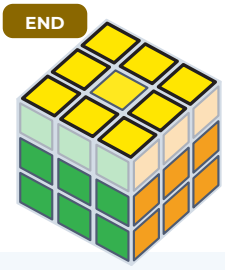
11



R'

RIGHT LAYER · DOWN

END



DONE

YELLOW FACE DONE

OLL #2 OFFICIAL: OLL 22

CROSSES · 2 OF 7

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levelcero.com · drawings

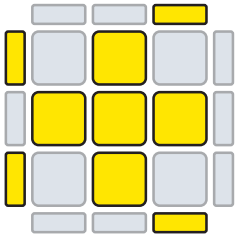
LEVEL 0

PI

CROSS · 4 CORNERS TWISTED · PI



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



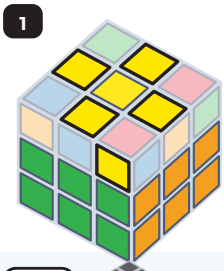
ALG R U2 R2 U' R2 U' R2 U2 R

CASE



CROSS · 4 CORNERS TWISTED · PI

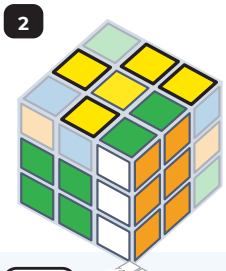
1



R

RIGHT LAYER · UP

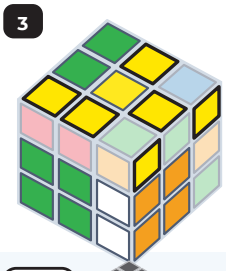
2



U2

TOP LAYER · HALF TURN

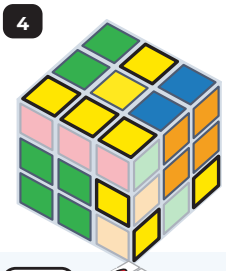
3



R2

RIGHT LAYER · HALF TURN

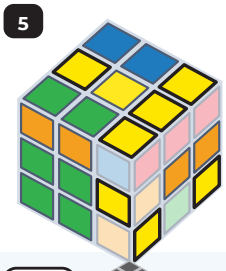
4



U'

TOP LAYER · RIGHT

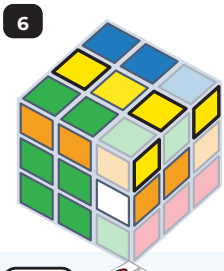
5



R2

RIGHT LAYER · HALF TURN

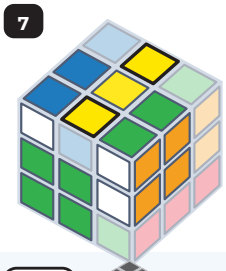
6



U'

TOP LAYER · RIGHT

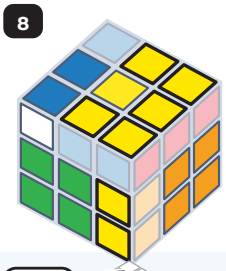
7



R2

RIGHT LAYER · HALF TURN

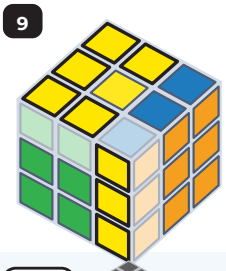
8



U2

TOP LAYER · HALF TURN

9



R

RIGHT LAYER · UP

END



DONE

YELLOW FACE DONE

OLL #3 OFFICIAL: OLL 23

CROSSES · 3 OF 7

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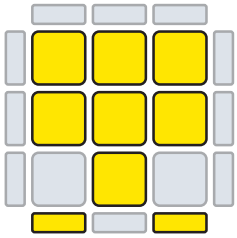
LEVEL 0

HEADLIGHTS

CROSS · 2 CORNERS · HEADLIGHTS



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



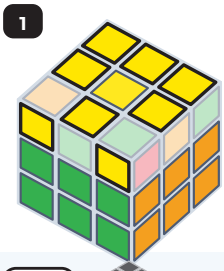
ALG R2 D (R' U2 R) D' R' U2 R'

CASE



CROSS · 2 CORNERS · HEADLIGHTS

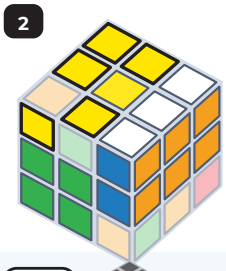
1



R2

RIGHT LAYER · HALF TURN

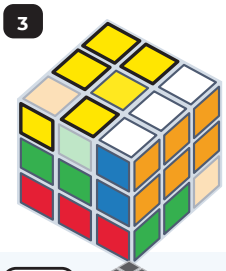
2



D

BOTTOM LAYER · RIGHT

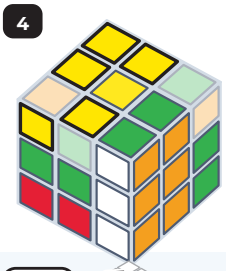
3



R'

RIGHT LAYER · DOWN

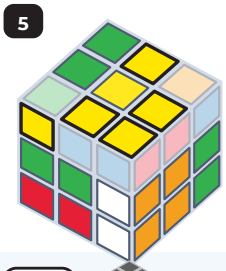
4



U2

TOP LAYER · HALF TURN

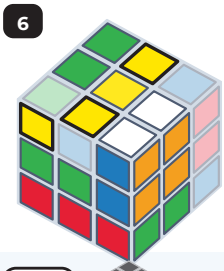
5



R

RIGHT LAYER · UP

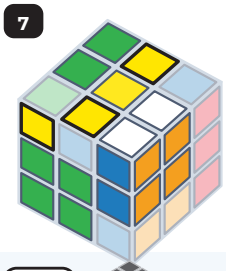
6



D'

BOTTOM LAYER · LEFT

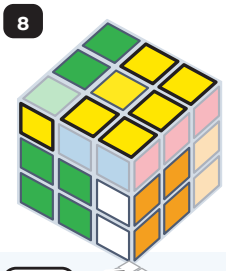
7



R'

RIGHT LAYER · DOWN

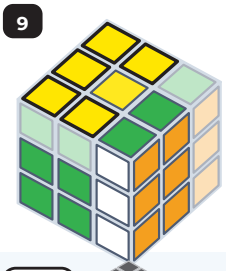
8



U2

TOP LAYER · HALF TURN

9



R'

RIGHT LAYER · DOWN

END



DONE

YELLOW FACE DONE

OLL #4 OFFICIAL: OLL 24

CROSSES · 4 OF 7

Video on YouTube
scan the QR
levelcero.com · drawings

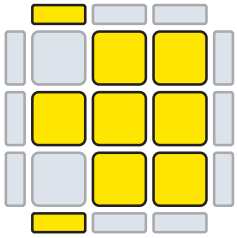
LEVEL 0

T

CROSS · 2 CORNERS · T



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right

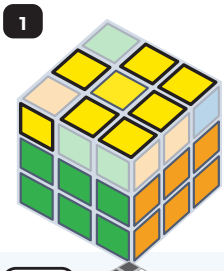


ALG r U R' U' r' F R F'



CASE

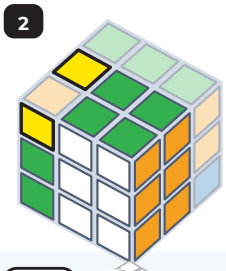
CROSS · 2 CORNERS · T



1

r 

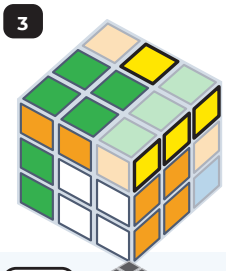
RIGHT TWO LAYERS · UP



2

U 

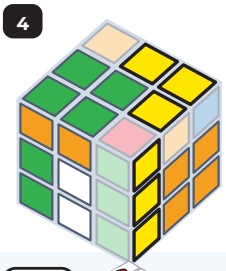
TOP LAYER · LEFT



3

R' 

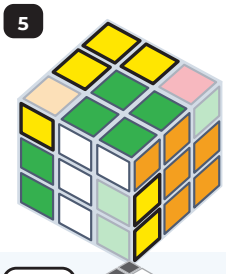
RIGHT LAYER · DOWN



4

U' 

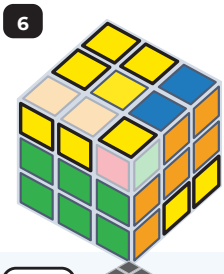
TOP LAYER · RIGHT



5

r' 

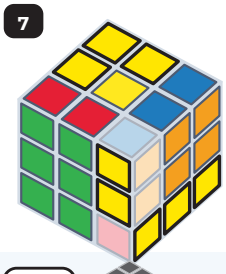
RIGHT TWO LAYERS · DOWN



6

F 

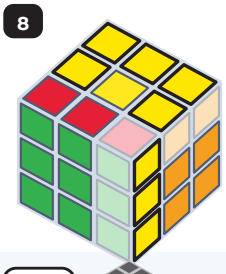
FRONT · CLOCKWISE



7

R 

RIGHT LAYER · UP



8

F' 

FRONT · COUNTER-CLOCKWISE



END

DONE

YELLOW FACE DONE

OLL #5 OFFICIAL: OLL 25

CROSSES · 5 OF 7

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levelcero.com · drawings

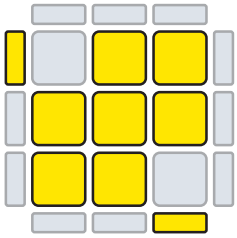
LEVEL 0

BOWTIE

CROSS · 2 DIAGONAL CORNERS · BOWTIE



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



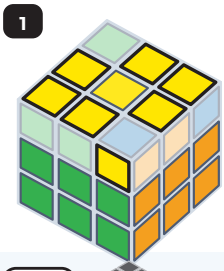
ALG F' r U R' U' r' F R

CASE



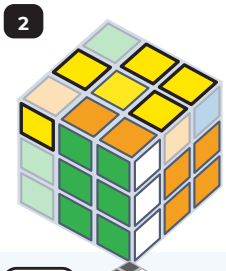
CROSS · 2 DIAGONAL CORNERS · BOWTIE

1



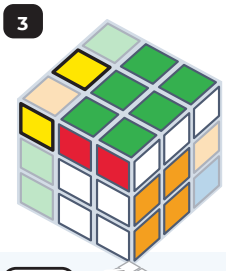
F' FRONT · COUNTER-CLOCKWISE

2



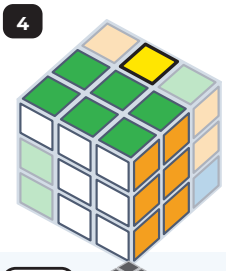
r RIGHT TWO LAYERS · UP

3



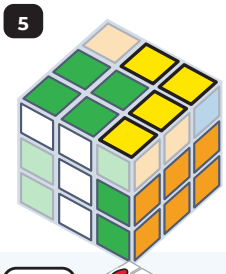
U TOP LAYER · LEFT

4



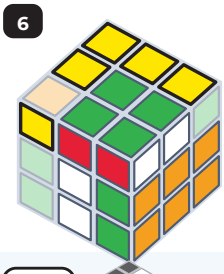
R' RIGHT LAYER · DOWN

5



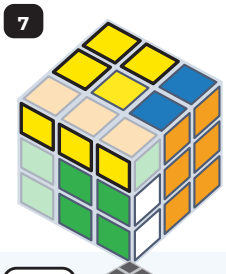
U' TOP LAYER · RIGHT

6



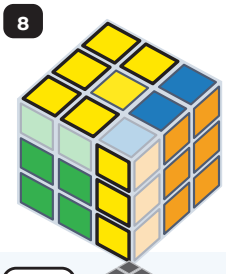
r' RIGHT TWO LAYERS · DOWN

7



F FRONT · CLOCKWISE

8



R RIGHT LAYER · UP

END



DONE

YELLOW FACE DONE

OLL #6 OFFICIAL: OLL 26

CROSSES · 6 OF 7

Video on YouTube
scan the QR
levelcero.com · drawings

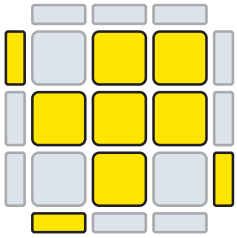
LEVEL 0

ANTI-SUNE

3 CORNERS TWISTED · MIRROR OF SUNE



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



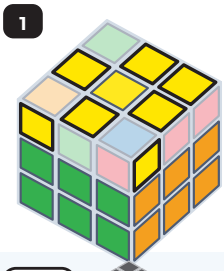
ALG R U2 R' U' R U' R'

CASE



3 CORNERS TWISTED · MIRROR OF SUNE

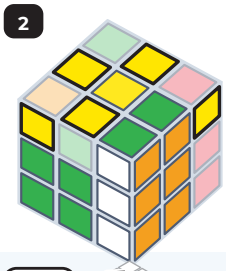
1



R

RIGHT LAYER · UP

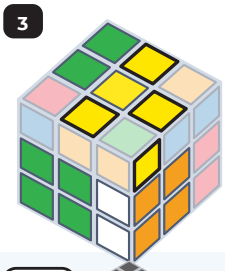
2



U2

TOP LAYER · HALF TURN

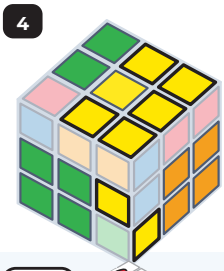
3



R'

RIGHT LAYER · DOWN

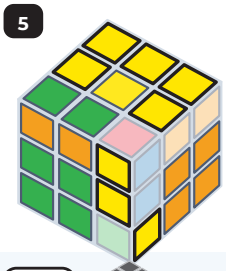
4



U'

TOP LAYER · RIGHT

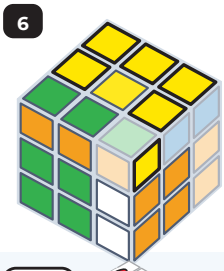
5



R

RIGHT LAYER · UP

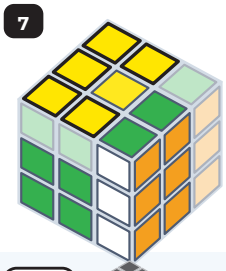
6



U'

TOP LAYER · RIGHT

7



R'

RIGHT LAYER · DOWN

END



DONE

YELLOW FACE DONE

OLL #7

OFFICIAL: OLL 27

CROSSES · 7 OF 7

Video on YouTube
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levelcero.com · drawings

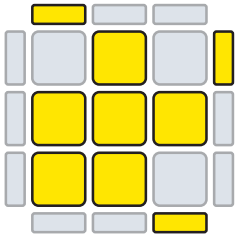
LEVEL 0

SUNE

3 CORNERS TWISTED



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



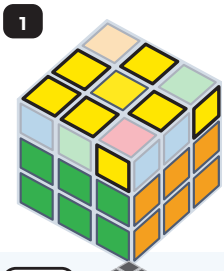
ALG R U R' U R U2 R'

CASE



3 CORNERS TWISTED

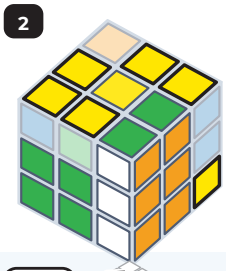
1



R

RIGHT LAYER · UP

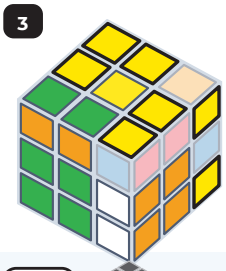
2



U

TOP LAYER · LEFT

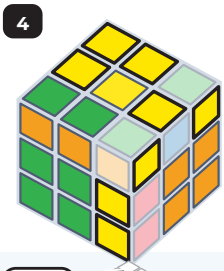
3



R'

RIGHT LAYER · DOWN

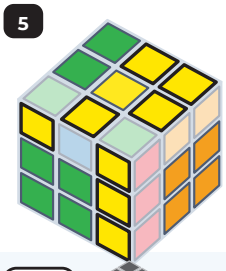
4



U

TOP LAYER · LEFT

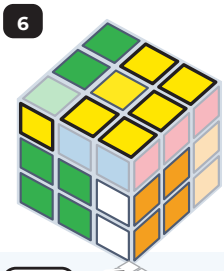
5



R

RIGHT LAYER · UP

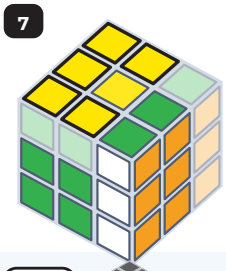
6



U2

TOP LAYER · HALF TURN

7



R'

RIGHT LAYER · DOWN

END



DONE

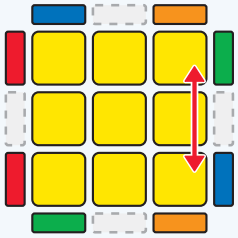
YELLOW FACE DONE

2-LOOK PLL · START HERE

6 ALGORITHMS INSTEAD OF 21

Before learning the 21 cases, solve PLL in two looks: STEP 1 puts the corners in place (the edges don't matter) with two algorithms, and STEP 2 places the edges with the four edges-only cases. That's six algorithms, and all of them are also cases of the full series.

STEP 1 CORNERS EDGES DON'T MATTER



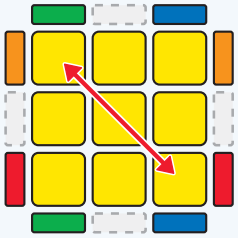
HEADLIGHTS ON ONE SIDE

R U R' U' R' F R2

U' R' U' R U R' F'

Put the headlights on the LEFT and do the T-perm.

T-PERM p.22



NO HEADLIGHTS

F R U' R' U' R U R' F'

R U R' U' R' F R F'

No side has headlights: do the Y-perm from any side.

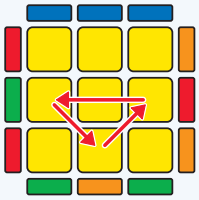
Y-PERM p.23

HEADLIGHTS ON ALL 4 SIDES

The corners are already in place: go straight to STEP 2.

How to look: check each side for two corners of the same colour (headlights). Headlights on one side only = adjacent swap (T). On none = diagonal swap (Y).

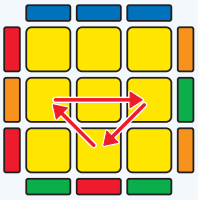
STEP 2 EDGES · THE FOUR CASES EDGES ONLY



Ua Ua-PERM p.24

M2 U M U2 M' U M2

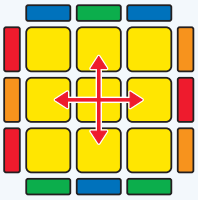
Full bar at the back; the other three edges cycle to the left.



Ub Ub-PERM p.25

M2 U' M U2 M' U' M2

Full bar at the back; the other three edges cycle to the right.

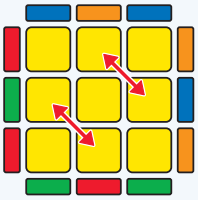


H H-PERM p.26

M2 U M2 U2

M2 U M2

No bar: each edge swaps with the opposite one.



Z Z-PERM p.27

M' U M2 U M2

U M' U2 M2 U'

No bar: each edge swaps with its neighbour.

If all four edges are already in place, just turn U until the cube is solved (AUF). Once you've mastered these six, learn the 21: one algorithm per case, no second look.

PLL CASE T

ADJACENT SWAP · 1 OF 6

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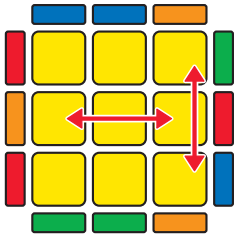
LEVEL 0

T-PERM

SWAPS 2 CORNERS + 2 EDGES



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



ALG

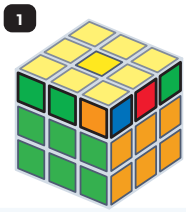
R U R' U' R' F R2
U' R' U' R U R' F'

CASE



SWAPS 2 CORNERS + 2 EDGES

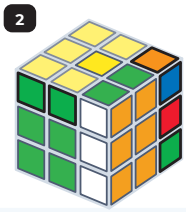
1



R 

RIGHT LAYER · UP

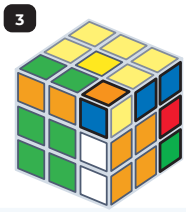
2



U 

TOP LAYER · LEFT

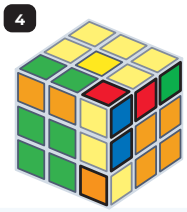
3



R' 

RIGHT LAYER · DOWN

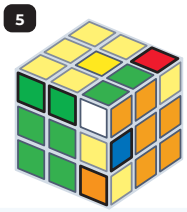
4



U' 

TOP LAYER · RIGHT

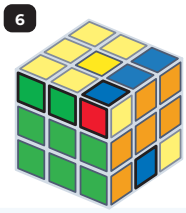
5



R' 

RIGHT LAYER · DOWN

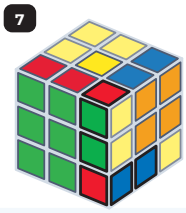
6



F 

FRONT · CLOCKWISE

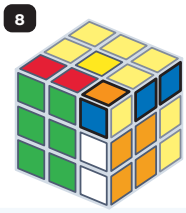
7



R2 

RIGHT LAYER · HALF TURN

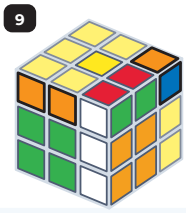
8



U' 

TOP LAYER · RIGHT

9



R' 

RIGHT LAYER · DOWN

10



U' 

TOP LAYER · RIGHT

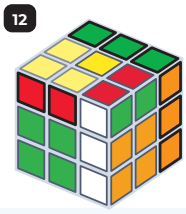
11



R 

RIGHT LAYER · UP

12



U 

TOP LAYER · LEFT

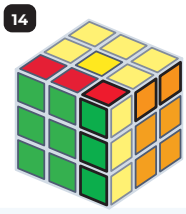
13



R' 

RIGHT LAYER · DOWN

14



F' 

FRONT · COUNTER-CLOCKWISE

END



SOLVED

CUBE SOLVED

PLL CASE Y

DIAGONAL SWAP · 2 OF 4

Video on YouTube
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levelcero.com · drawings

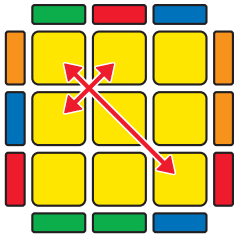
LEVEL 0

Y-PERM

DIAGONAL + 2 ADJACENT EDGES



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



ALG

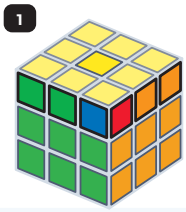
F (R U' R') U' (R U R') F'
(R U R' U') (R' F R F')

CASE



DIAGONAL + 2 ADJACENT EDGES

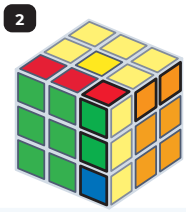
1



F 

FRONT · CLOCKWISE

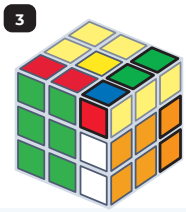
2



R 

RIGHT LAYER · UP

3



U' 

TOP LAYER · RIGHT

4



R' 

RIGHT LAYER · DOWN

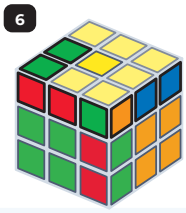
5



U' 

TOP LAYER · RIGHT

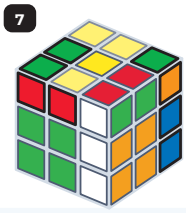
6



R 

RIGHT LAYER · UP

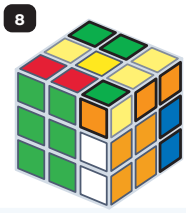
7



U 

TOP LAYER · LEFT

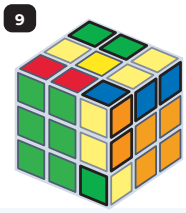
8



R' 

RIGHT LAYER · DOWN

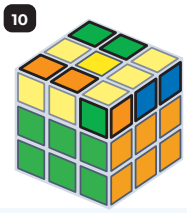
9



F' 

FRONT · COUNTER-CLOCKWISE

10



R 

RIGHT LAYER · UP

11



U 

TOP LAYER · LEFT

12



R' 

RIGHT LAYER · DOWN

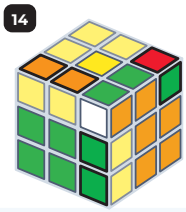
13



U' 

TOP LAYER · RIGHT

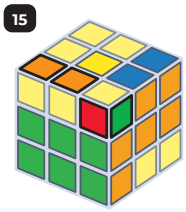
14



R' 

RIGHT LAYER · DOWN

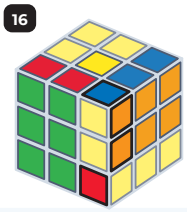
15



F 

FRONT · CLOCKWISE

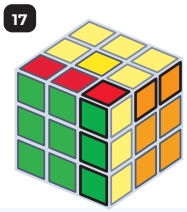
16



R 

RIGHT LAYER · UP

17



F' 

FRONT · COUNTER-CLOCKWISE

END



SOLVED

CUBE SOLVED

PLL CASE Ua

EDGES ONLY · 1 OF 4

Video on YouTube
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levelcero.com · drawings

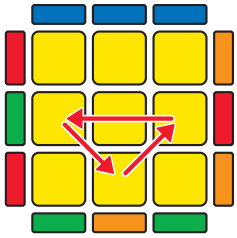
LEVEL 0

Ua-PERM

3 EDGES · COUNTER-CLOCKWISE



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



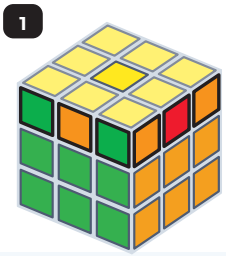
ALG M2 U M U2 M' U M2

CASE



3 EDGES · COUNTER-CLOCKWISE

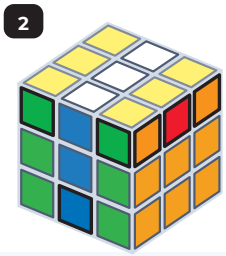
1



M2 

MIDDLE SLICE · HALF TURN

2



U 

TOP LAYER · LEFT

3



M 

MIDDLE SLICE · DOWN

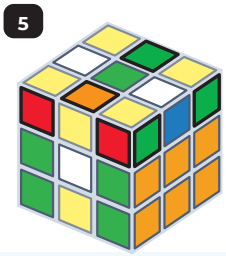
4



U2 

TOP LAYER · HALF TURN

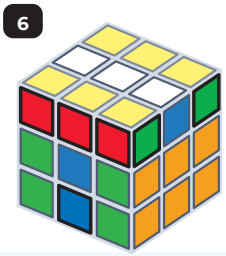
5



M' 

MIDDLE SLICE · UP

6



U 

TOP LAYER · LEFT

7



M2 

MIDDLE SLICE · HALF TURN

END



SOLVED

CUBE SOLVED

PLL CASE Ub

EDGES ONLY · 2 OF 4

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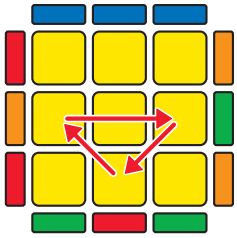
Ub-PERM

3 EDGES · CLOCKWISE



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



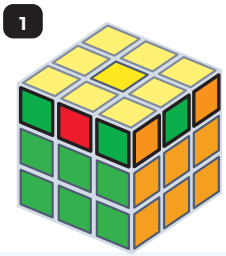
ALG M2 U' M U2 M' U' M2

CASE



3 EDGES · CLOCKWISE

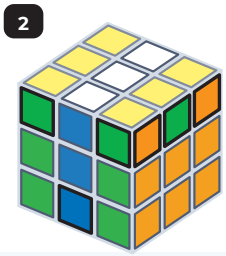
1



M2 

MIDDLE SLICE · HALF TURN

2



U' 

TOP LAYER · RIGHT

3



M 

MIDDLE SLICE · DOWN

4



U2 

TOP LAYER · HALF TURN

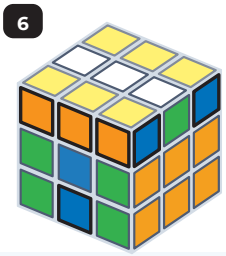
5



M' 

MIDDLE SLICE · UP

6



U' 

TOP LAYER · RIGHT

7



M2 

MIDDLE SLICE · HALF TURN

END



SOLVED

CUBE SOLVED

PLL CASE H

EDGES ONLY · 3 OF 4

Video on YouTube
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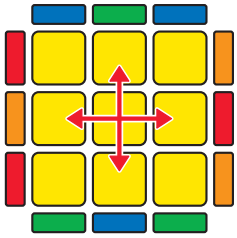
LEVEL 0

H-PERM

SWAPS OPPOSITE EDGES



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



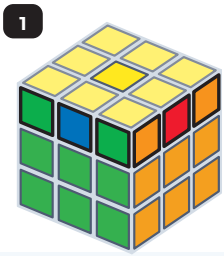
ALG M2 U M2 U2 M2 U M2

CASE



SWAPS OPPOSITE EDGES

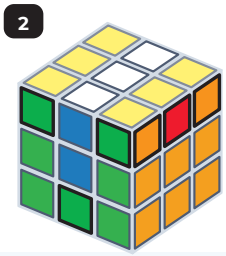
1



M2 

MIDDLE SLICE · HALF TURN

2



U 

TOP LAYER · LEFT

3



M2 

MIDDLE SLICE · HALF TURN

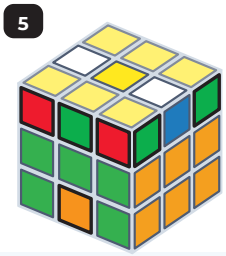
4



U2 

TOP LAYER · HALF TURN

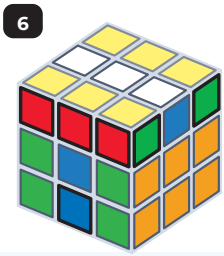
5



M2 

MIDDLE SLICE · HALF TURN

6



U 

TOP LAYER · LEFT

7



M2 

MIDDLE SLICE · HALF TURN

END



SOLVED

CUBE SOLVED

PLL CASE Z

EDGES ONLY · 4 OF 4

Video on YouTube
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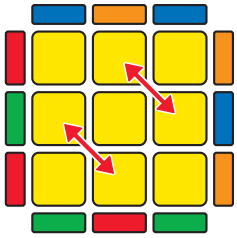
LEVEL 0

Z-PERM

SWAPS ADJACENT EDGES



HOLD IT (example colours)
- yellow on top
- green: facing you
- orange on the right



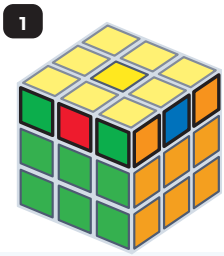
ALG M' U M2 U M2 U M' U2 M2 U'

CASE



SWAPS ADJACENT EDGES

1

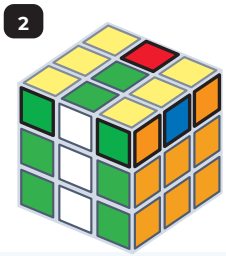


M'



MIDDLE SLICE · UP

2



U



TOP LAYER · LEFT

3



M2



MIDDLE SLICE · HALF TURN

4



U



TOP LAYER · LEFT

5

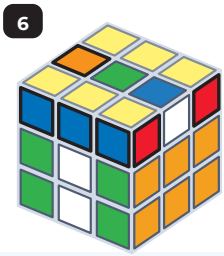


M2



MIDDLE SLICE · HALF TURN

6



U



TOP LAYER · LEFT

7

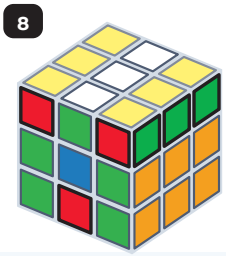


M'



MIDDLE SLICE · UP

8



U2



TOP LAYER · HALF TURN

9

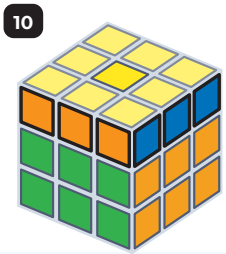


M2



MIDDLE SLICE · HALF TURN

10

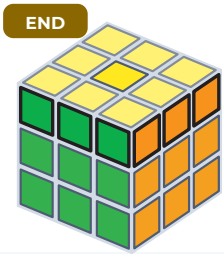


U'



TOP LAYER · RIGHT

END



SOLVED

CUBE SOLVED