How to Solve the GEAR Cube 5x5 Tutorial.

Name of the pieces:

Une image contenant Casse-tête mécanique, boîte, Rubik's Cube, puzzle

Description générée automatiquement

ORANGE: “Big”/Main Pieces

BLACK: Center Pieces

BLUE: Edge Pieces

PINK: Dots

GEAR Cube 5x5:

It is mix of a classic GEAR Cube (For the First step) and a 5x5, but if you move the layer 1, 5 (Look at the next image) or 3, the layer 2 is going to move with the layer 1 and 3. Layer 4 is moving with layer 5 and 3. And Layers 1, 5 and 3 are only moving in double moves, layers 2 and 4 in one move.

FIRST STEP:

Solving the big pieces (layers 1/3/5), for now we do not need to focus on the remaining pieces from the 2nd and 4th layer.

Une image contenant boîte, Casse-tête mécanique, conteneur, intérieur

Description générée automatiquement

There is no algorithm or solution to solve this part since it is the same as solving a regular 3x3 using only double moves. (R2/L2/U2/D2/F2/B2).

First, try to solve this first step on a regular 3x3 by scrambling it only using double moves, and try to solve it.

Then solve it on the GEAR Cube 5x5 and move on to the second step.

**SECOND STEP:**

**(Test using 5x5)**

Now that the 3x3 Cube is solved, we can move on the to the layers 2 and 4.

Center pieces [ILLUSTRATION]

You can easily solve it by using this algorithm: [ALGORITHM] by facing: FRONT Layer 🡪 Piece you want to move on the UP Layer (The piece you switch will take the place of the one you just moved) [ILLUSTRATION]

[Replace w/ image later]

1

**2** 3 TOP

4

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5

6 **7** FRONT

8

The following algorithm: [ALGORITHM] will switch the center piece 7 with the center piece 2. It **will not** move other center pieces.

* [Illustration] Make a F or F’ move to MOVE the pieces in the back in order to execute the algorithm.
* [IMPORTANT: Take note of the layer you move before executing the algorithm, also take note on which color (The one you’re facing AND the one on the top) you execute the algorithm in case you made a mistake (Since you will have to fix the screws or some pieces that move in a not intended way)].

**THIRD STEP:**

Edge Pieces:

* To solve the edges pieces we are going to use a 3-Cycle algorithm, clockwise or counterclockwise, which switches 3 edges pieces

ALG 1 & 2 Will solve pieces only the the X, Y or Z axis, it will not switch other pieces (Including dots, edges and main pieces or the 1st, 3rd and 5th layer) 🡪 These ones [ILLUSTRATION]

* You might encounter a case you can’t solve.
* OR don’t have anything that works with the way this algorithm work.

In this case you have to execute (usually) one move in order to make a possible way of executing the algorithm.

EXAMPLE: In the case when the remaining pieces you want to switch are on the same side (Not in the back) You have to move the 3rd pieces to make a solvable case

* [Illustration] Make a F OR F’ move to MOVE the pieces in the back in order to execute the algorithm.

[IMPORTANT: Take note of the layer you move before executing the algorithm, also take note on which color (The one you’re facing AND the one on the top) you execute the algorithm in case you made a mistake (Since you will have to fix the screws or some pieces that move in a not intended way)].

* I suppose it can happen on any axis, but I personally had the case on only one axis: You can’t finish the cube because the 3 remaining pieces are on the same layer, you can’t move the pieces even by doing what I call a modification (Doing a F/F’ etc. move before executing the algorithm).

[Illustration]

CLOCKWISE

[ILLSUTRATION] A / B / C=

A=Top Right Edge Piece

B=Bottom Right Edge Piece

C=BACK Bottom Left Edge Piece

A 🡪 B B 🡪 C C 🡪 A

Face with A & B visible on the right

**R U R U’ R (D2) R’ U R’ U’ R’ (D2)**

[ILLUSTRATION] ALG 1 Clockwise

COUNTERCLOCKWISE

A / B / C=

A=Top Right Edge Piece

B=Bottom Right Edge Piece

C=BACK Bottom Left Edge Piece

A 🡪 C C 🡪 B B 🡪 A

Face with A & B visible on the right

**(D2) R U R U’ R (D2) R’ U R’ U’ R’**

[Illustration] ALG 2 Counterclockwise

**FINAL STEP:**

Dots pieces [Illustration]

* This is the final step to solve the GEAR Cube 5x5, we are using two algorithms switching 3 pieces: clockwise or counterclockwise.

CLOCKWISE

The algorithm is the following:

**R2 F2 R2 F2 (L’ F’ D2 F L) F2 R2 F2 R2 (L’ F’ D2 F L)**

* **Before using the algorithm, remember to take note on what side you execute the algorithm** (EX: Red FRONT, Yellow TOP).
* **Moving sides before the algorithm will not affect other pieces.**

[ILLUSTRATION 1🡪4🡪9]

UP

12

34

FRONT

56  
78

DOWN

9 10  
11 12

Switches 1 🡪 4 4 🡪 9 9 🡪 1

**R2 F2 R2 F2 (L’ F’ D2 F L)**

**F2 R2 F2 R2 (L’ F’ D2 F L)**

12  
34

56  
78

2🡪8

COUNTERCLOCKWISE

[ILLUSTRATION 9🡪4🡪1]

**(L’ F’ D2 F L) R2 F2 R2 F2**

**(L’ F’ D2 F L) F2 R2 F2 R2**

CASE EXAMPLES



In this case

(12  
34  
  
56  
78)

Switch 2 🡨🡪 Switch 8

We have to move the pieces in order to place them in a solvable position (Using the algorithm, clockwise or counterclockwise).

In this specific case: (PURPLE) FRONT (RED) TOP (May depend on your case)

* **D’ (B’ D’ B D) R** Then use the counterclockwise algorithm.

If mirrored use a reverse algorithm (or turn the cube around)