

Skewb Ultimate

Solution by Jaap Scherphuis & Andrew Southern

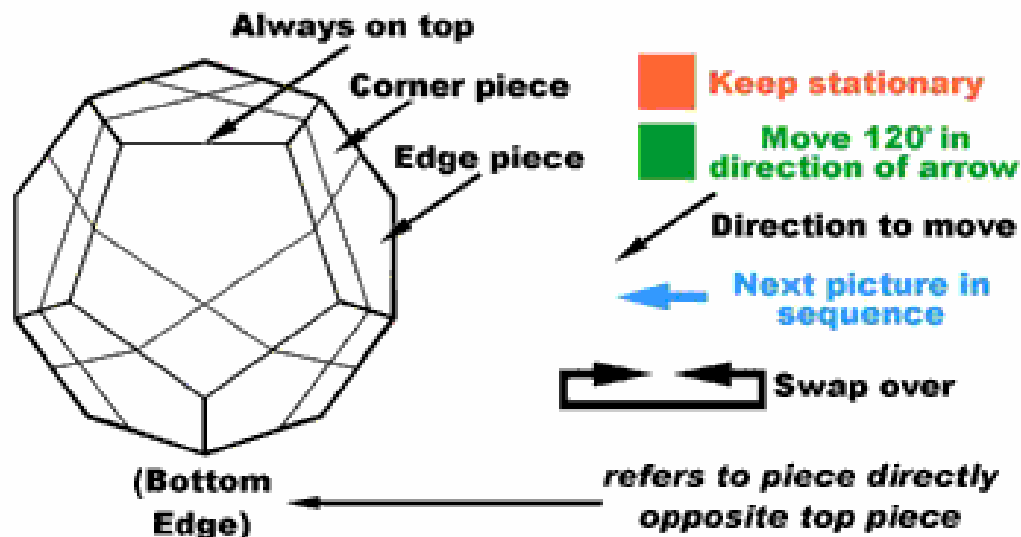
Thank you for buying the Skewb Ultimate from Meffert's Puzzles. This is the hardest form of the Skewb, so good luck with finding your own solution.

This booklet has been written to give you hints for solving the puzzle.

First, let's look at the puzzle. It is a **Dodecahedron divided into two types of piece. The first has three colours on it, we shall call this a **CORNER**. The second has four colours on it, we shall call this an **EDGE**.**

Both types of piece have a "Look-a-like" piece with the same colours on it. The two are actually mirror-images of each other. Whilst the edge pieces may be incorrectly placed where their mirror-piece should be, the mechanism* means the corners cannot.

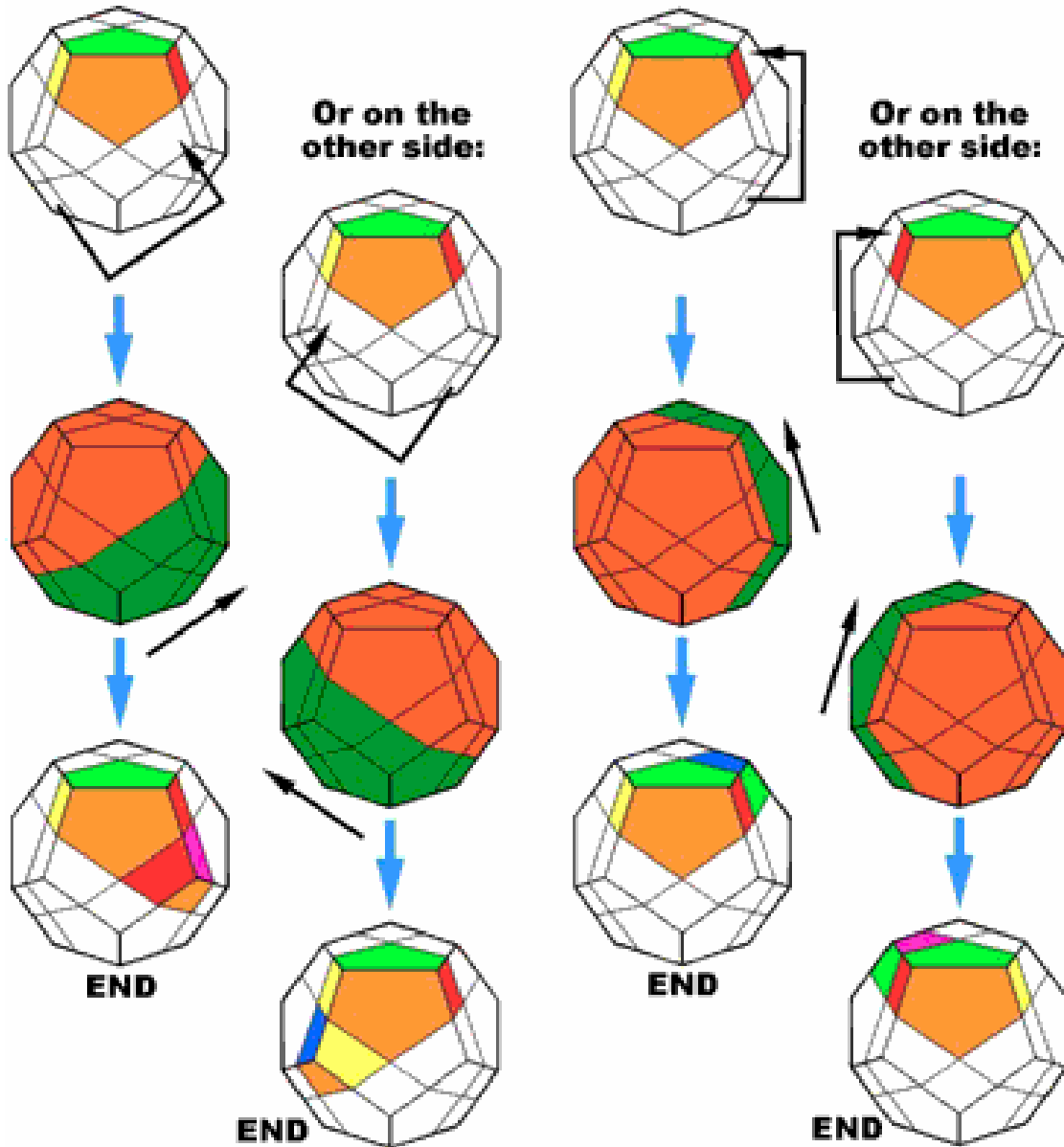
The Skewb Ultimate is moved by twisting one half of the puzzle through 120° relative to the other half. This is possible on four axis. When describing a move this book will show a picture of the skewb in red and green. Keep the red half still and move the green half in the direction of the arrow 120°. This will always keep the same square on top.



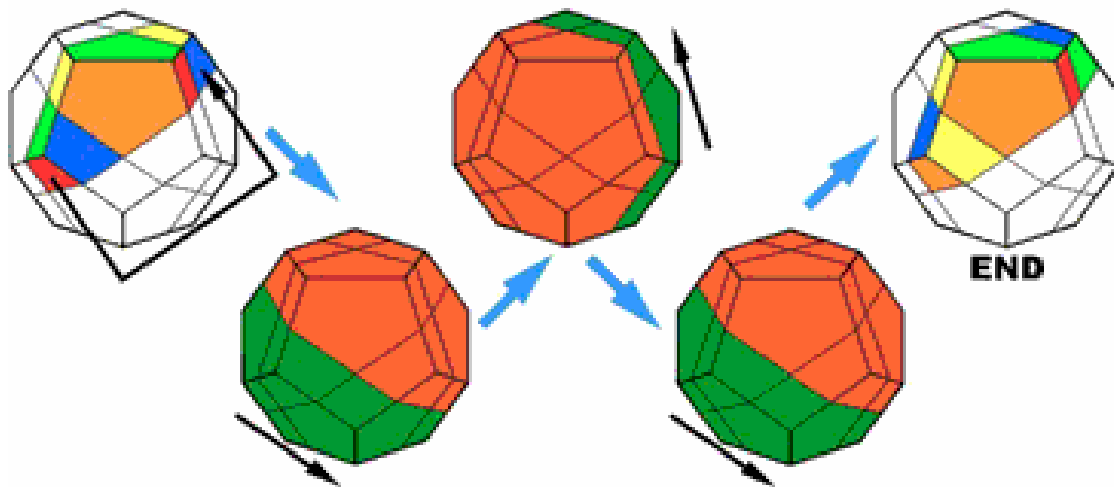
Good Luck and Happy Puzzling!

*Please see <http://www.mefferts.com>

**1. First position four corners around one edge.
We will not bother with orientation for now.**

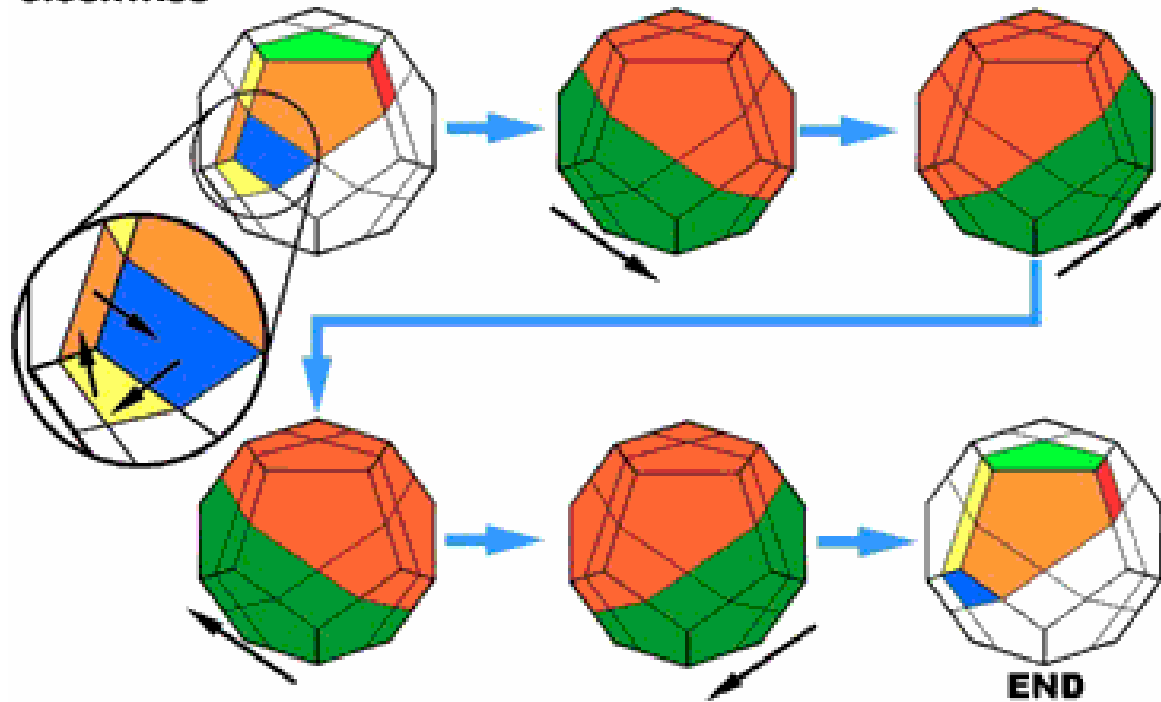


**If two corners in the top half need swapping over,
use this set of moves:**

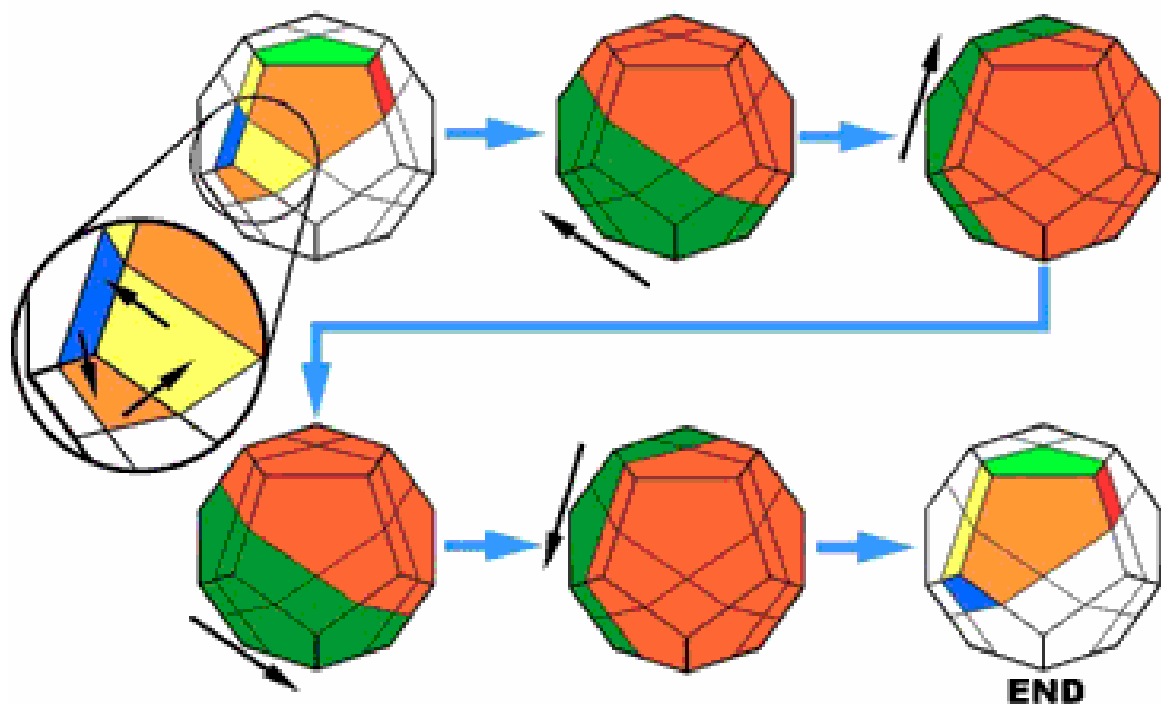


2. Now the four corners are in position around the first edge, the other four should also be correctly positioned. We must now rotate the corners into alignment with the first edge.

Clockwise

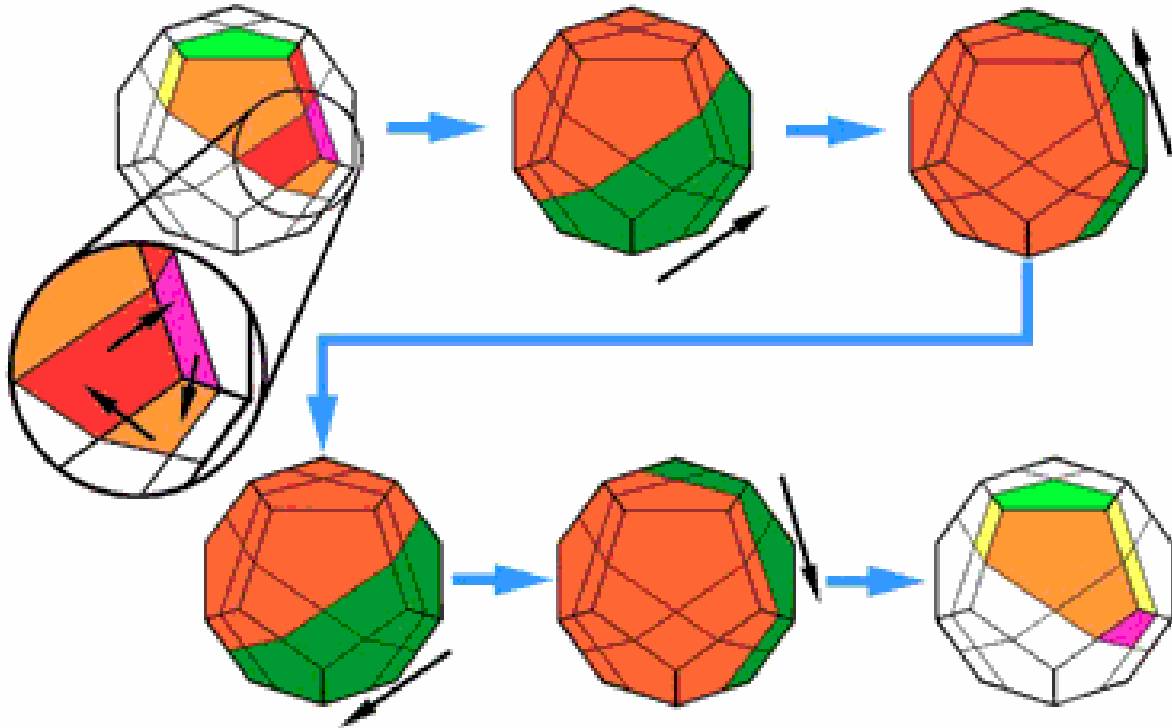


Anti-clockwise

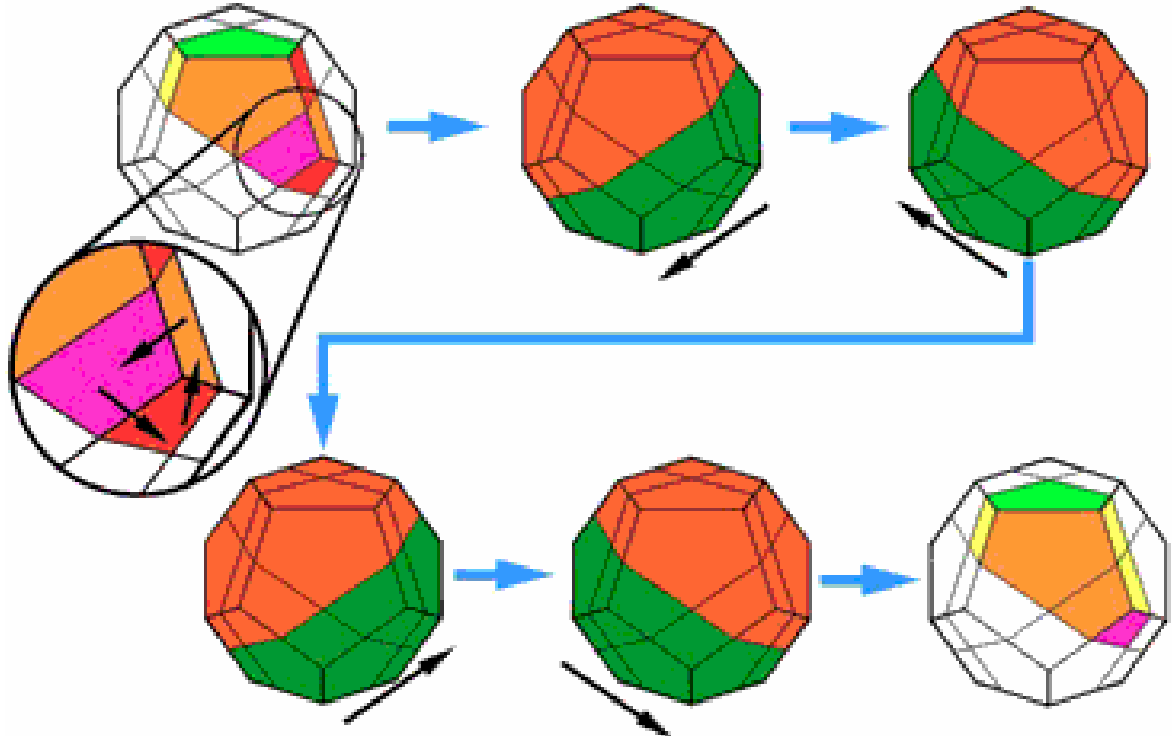


Alternatively, this page shows the moves in mirror image for use on the other corners.

Clockwise



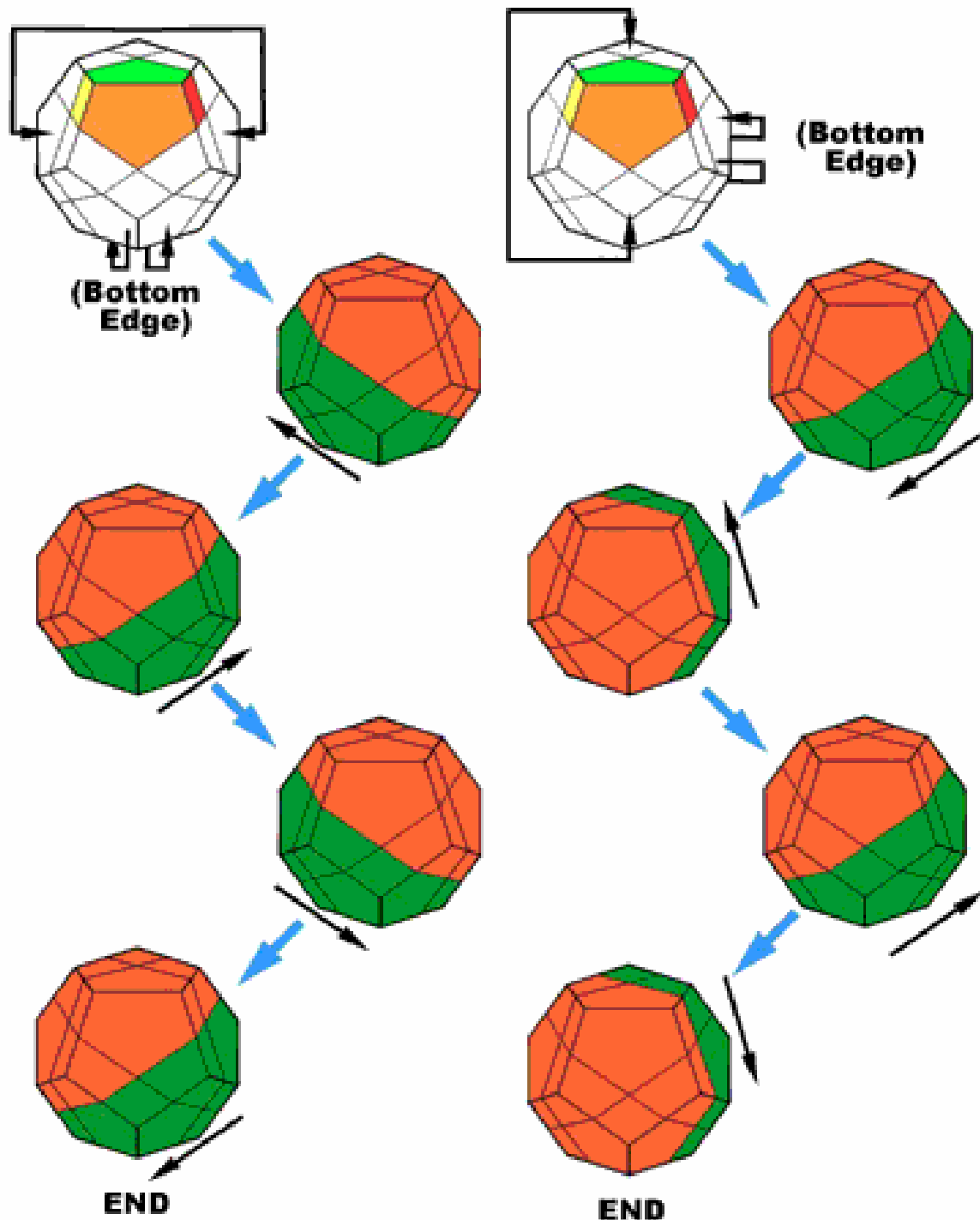
Anti-clockwise



3. Now the top corners are positioned and orientated. The bottom corners must also be positioned correctly. The five remaining edges will probably be incorrectly positioned. The aim of the next step is to position them. We will rotate them correctly later.

The basic move for swapping edges without altering the top corners is as follows. All moves from this point on are derived from this.

Both of the following will swap two pairs of edges.



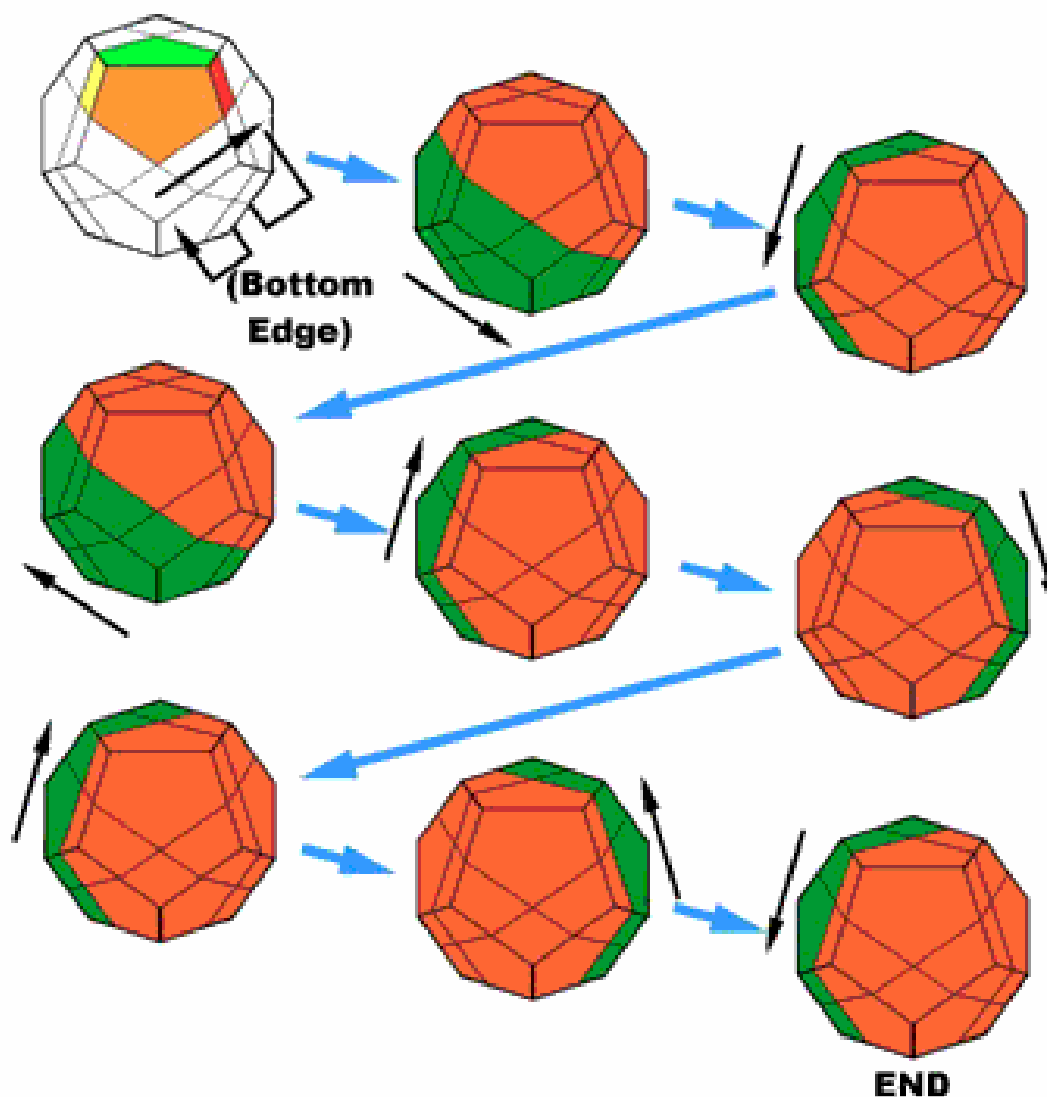
Performing either of these moves **ONCE** will swap the two pairs of edges, and rotate the corners through 120° .

Performing either of these moves **TWICE** will not move the two pairs of edges, but rotate them through 180° and rotate the corners through 240° .

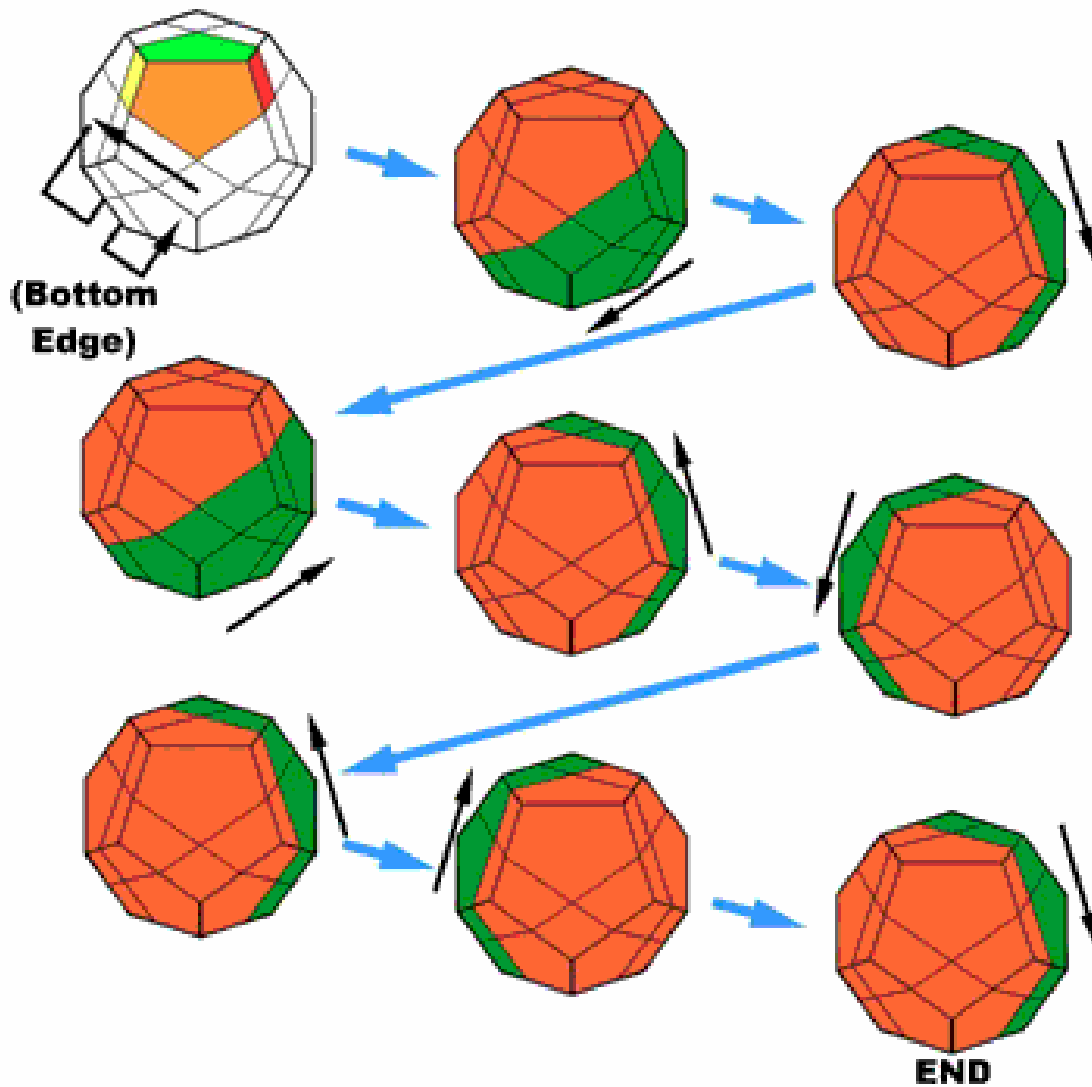
Performing either of these moves **THREE TIMES** will swap the two pairs of edges, but will not rotate the corners.

Performing either of these moves **FOUR TIMES** will leave the two pairs of edges undisturbed, but rotate the corners through 120° .

We will use these as the basis of our future moves.
For example this useful edge 3-swap:

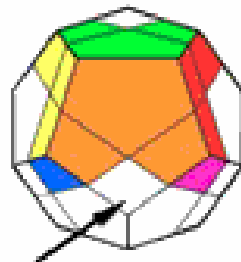


Similarly, to swap the same three pieces back, follow this set of moves.



Using the four sets of moves given in Section 3 it is possible to position all the edges.

There are 3 possibilities for the incorrect positioning of the final five edges: either all, 4 or 3 are wrong.

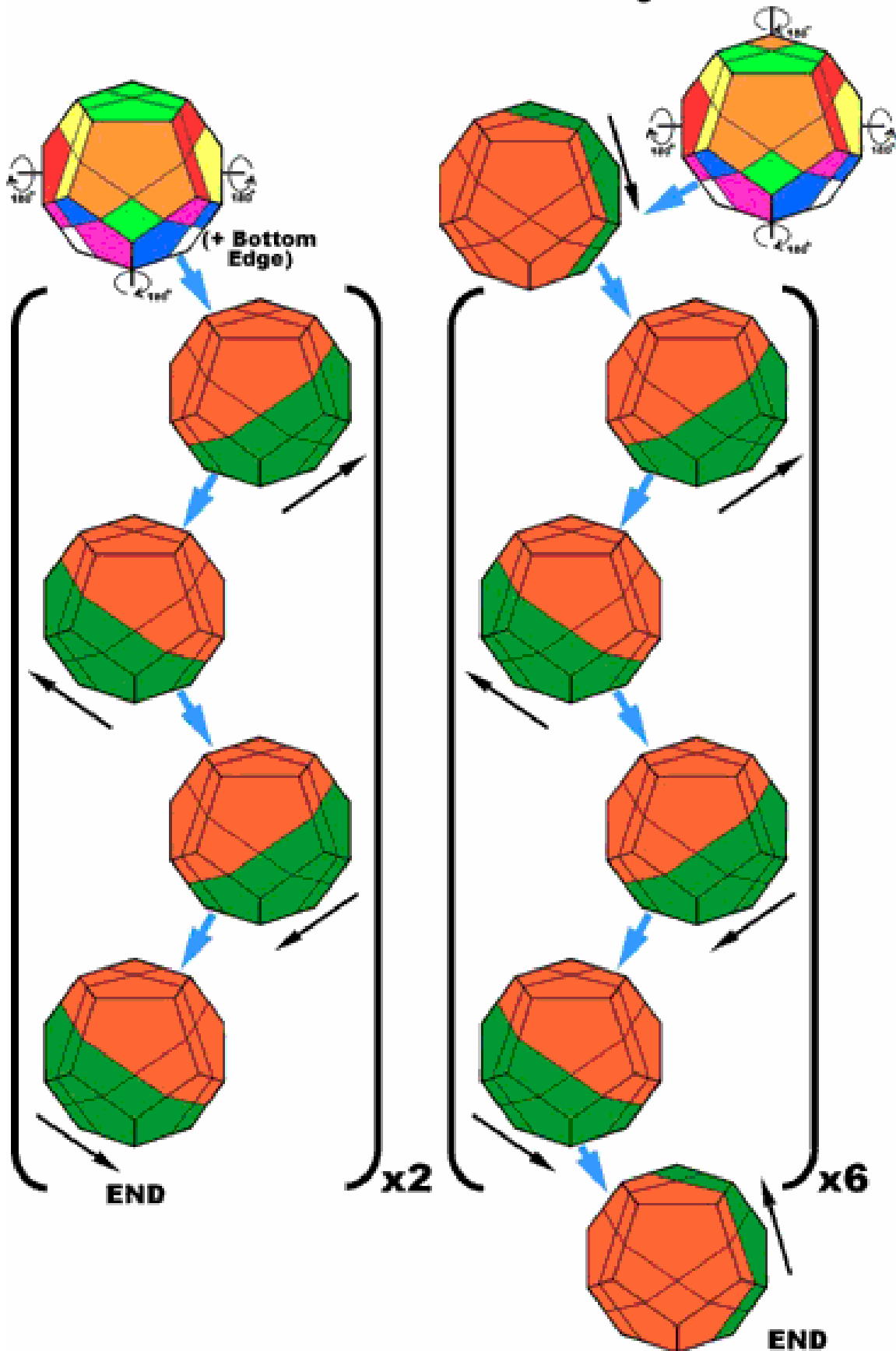


If all five are incorrect use one of the first two moves (swap two pairs) to position this edge.

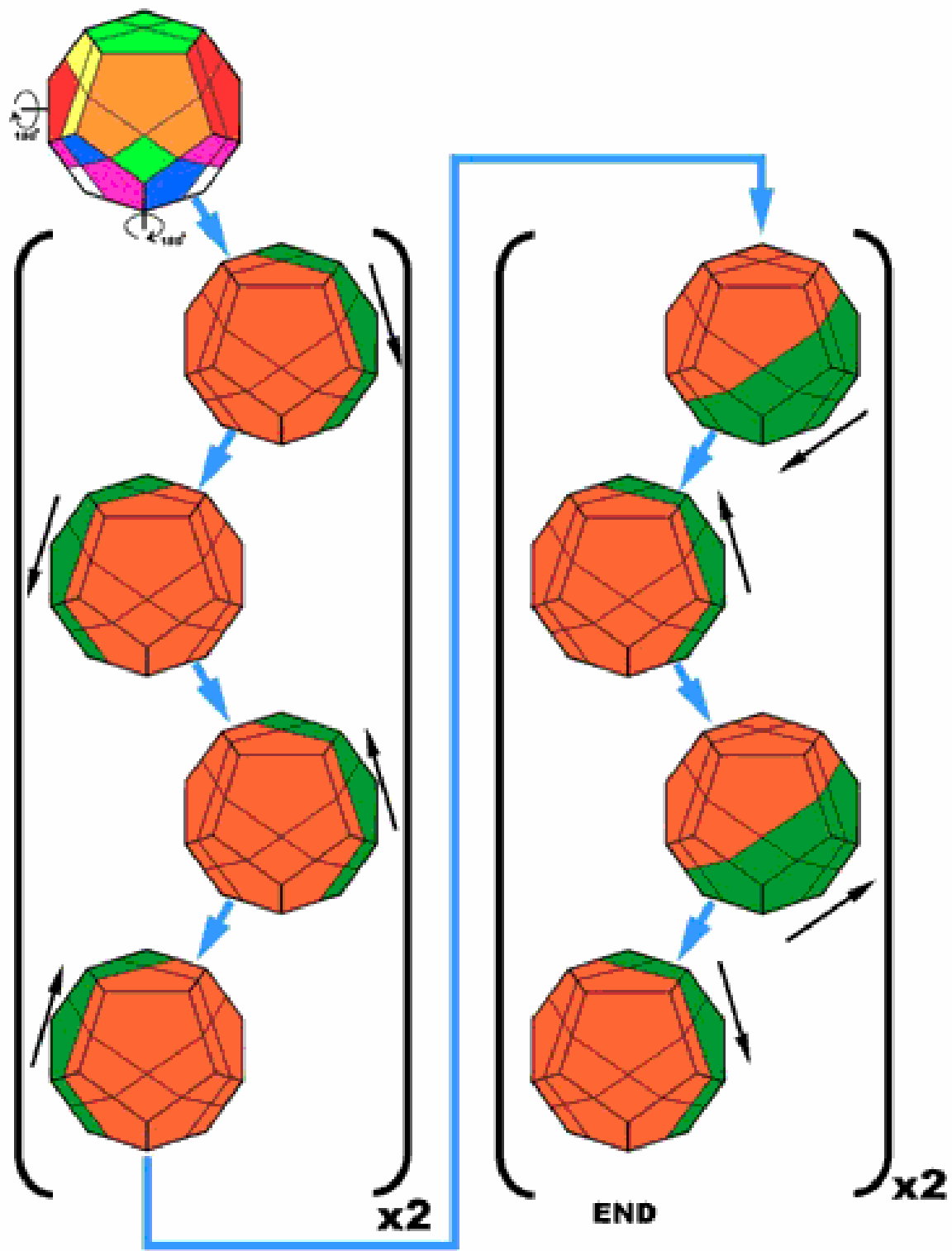
THEN ROTATE THE WHOLE PUZZLE AND REPEAT SECTION 3

4. There are two possibilities: either two or four edges need rotating through 180° .

Position the Skewb Ultimate with the four edges as shown below and do one of the following moves.

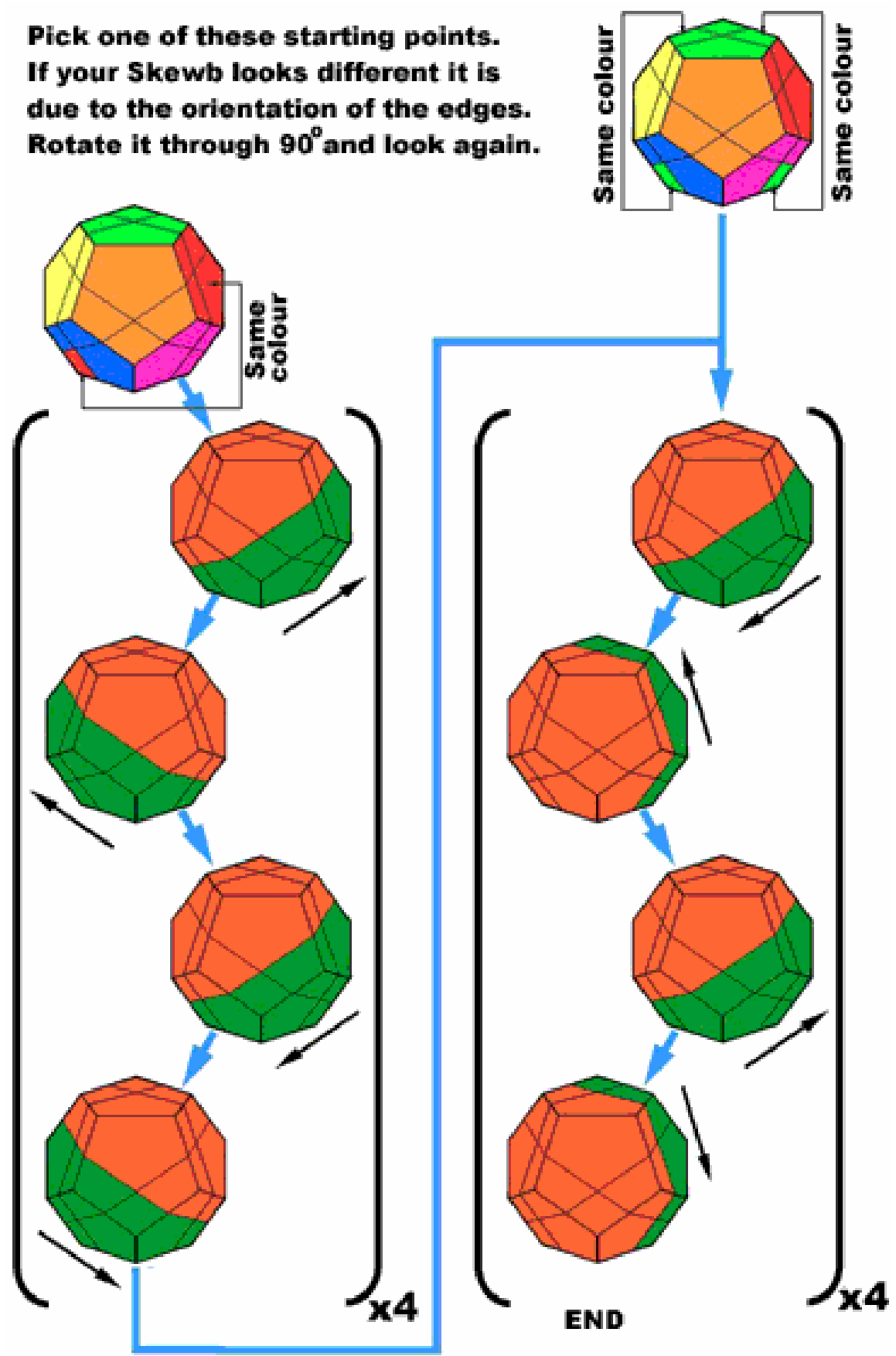


This move shows how to turn two edges through 180°.



Now, finally for the bottom corners.

Pick one of these starting points.
If your Skewb looks different it is
due to the orientation of the edges.
Rotate it through 90° and look again.



Congratulations! your Skewb Ultimate is now complete.
Perfect your method, show your friends and compete
online at <http://www.mefferts.com> for real prizes!