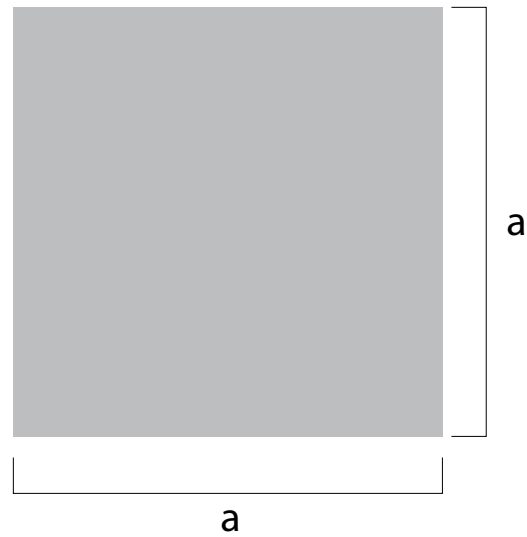
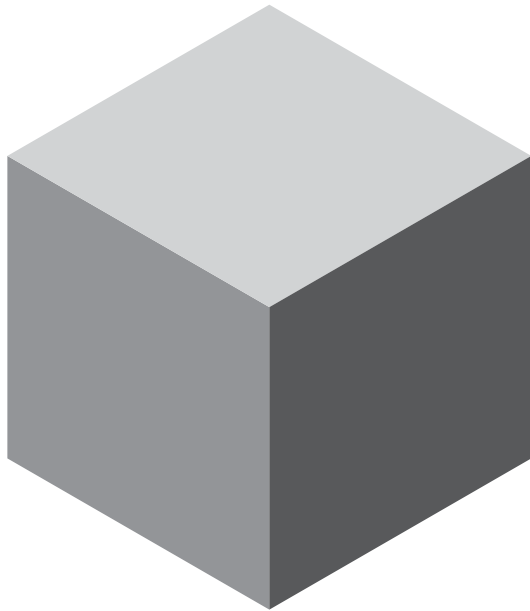


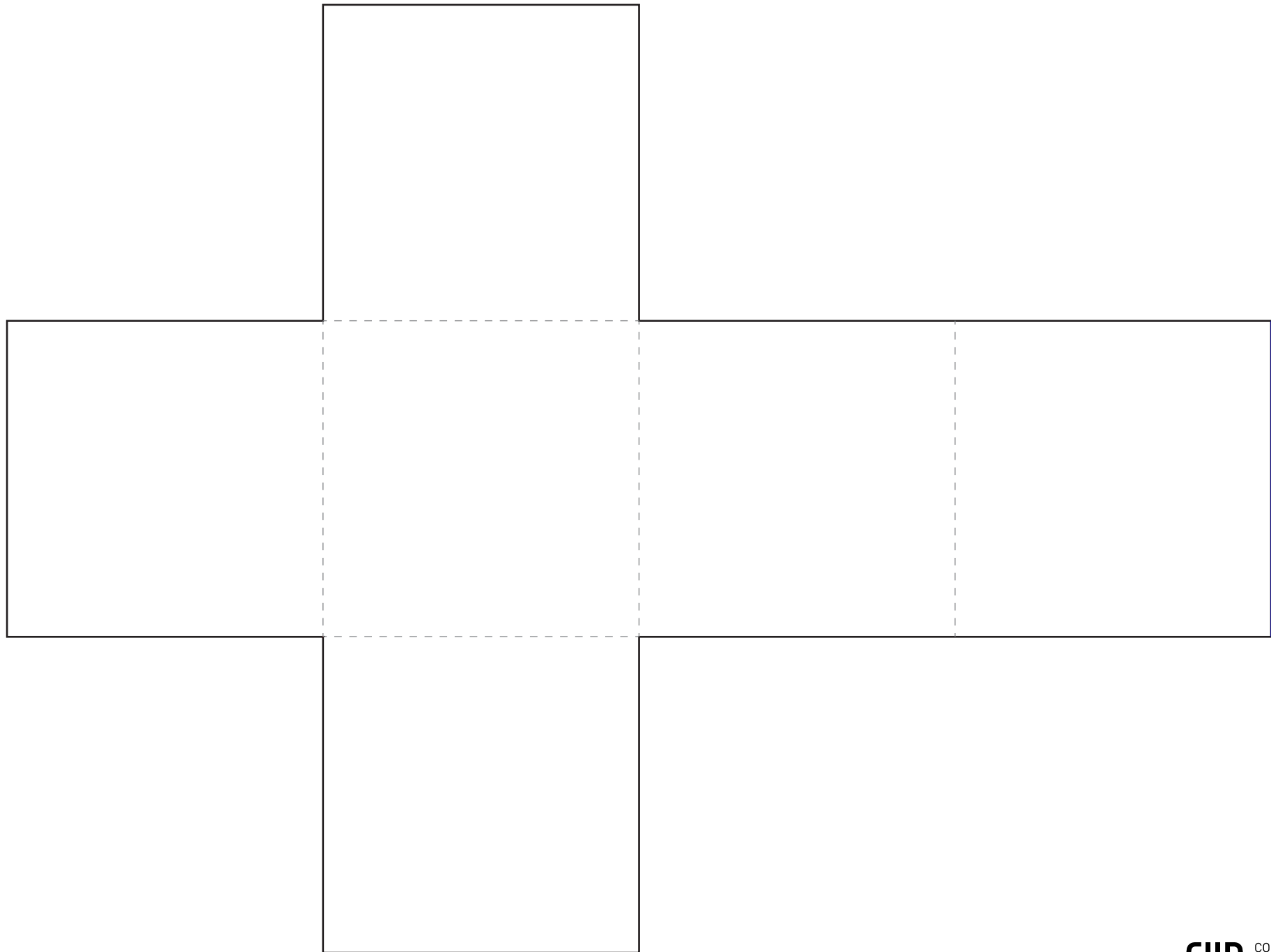
CUBE

The cube is one of the most recognizable and fundamental 3D shapes. It consists of **six square faces, eight vertices, and twelve equal edges**, forming a perfectly balanced structure. While it may seem basic, the cube serves as a powerful building block for more complex volumes. By dividing, rotating, or combining cubes, we can generate intricate forms, making it a key element in spatial design and 3D thinking.

FIG. 001

Here we explore the simple cube as it is, without modifications.





Laser cut / One color

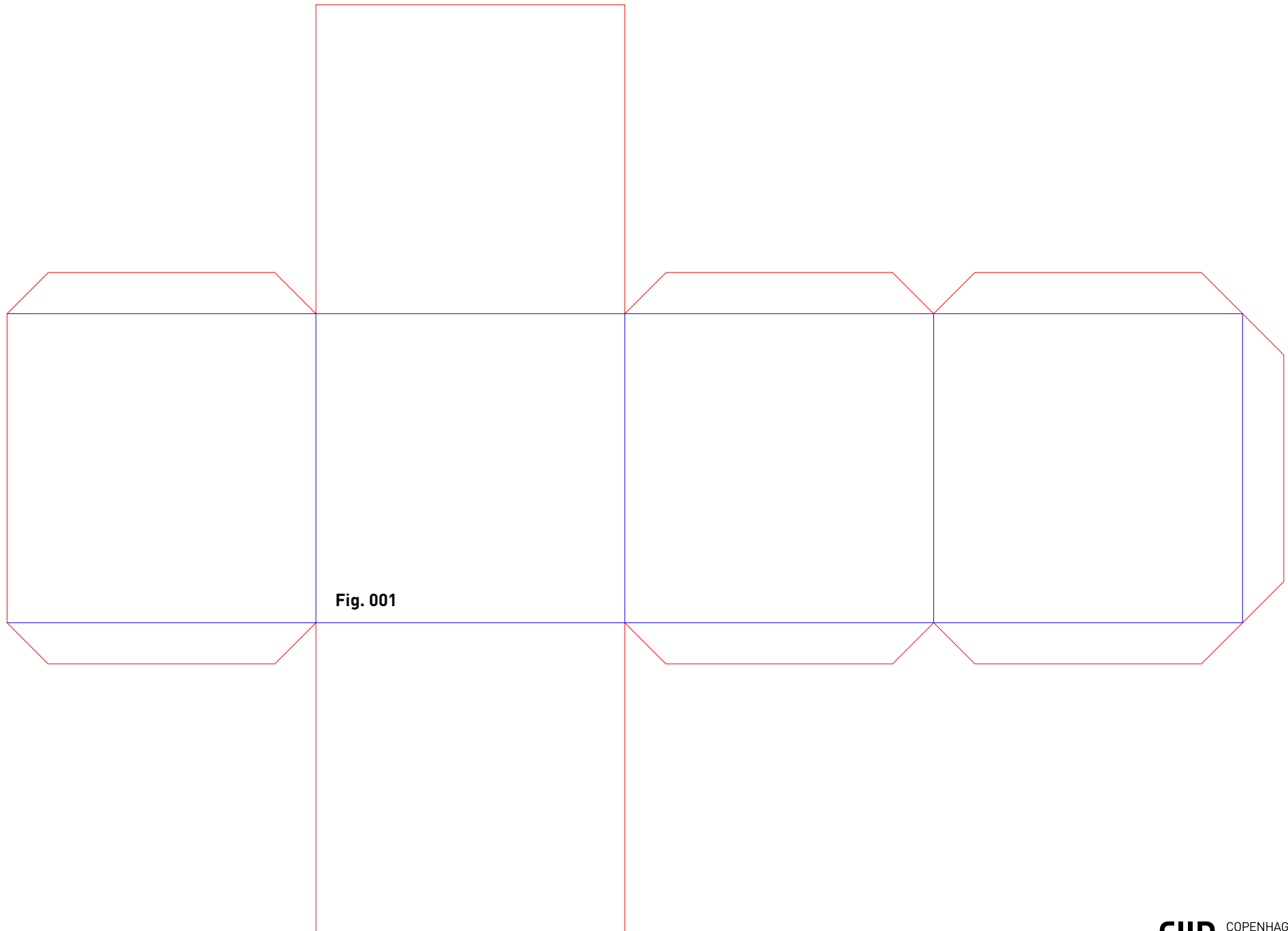
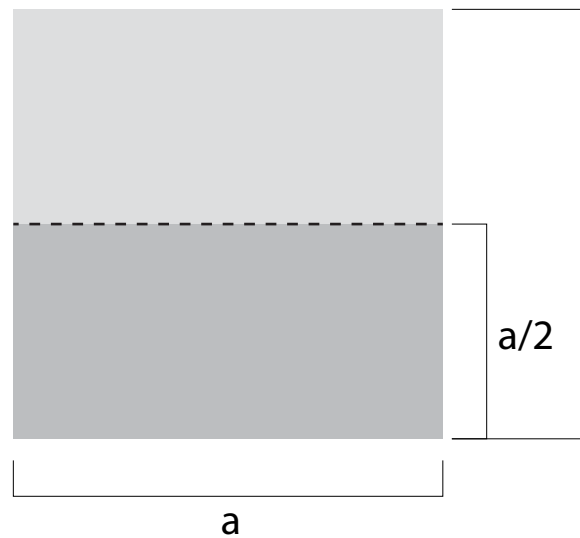
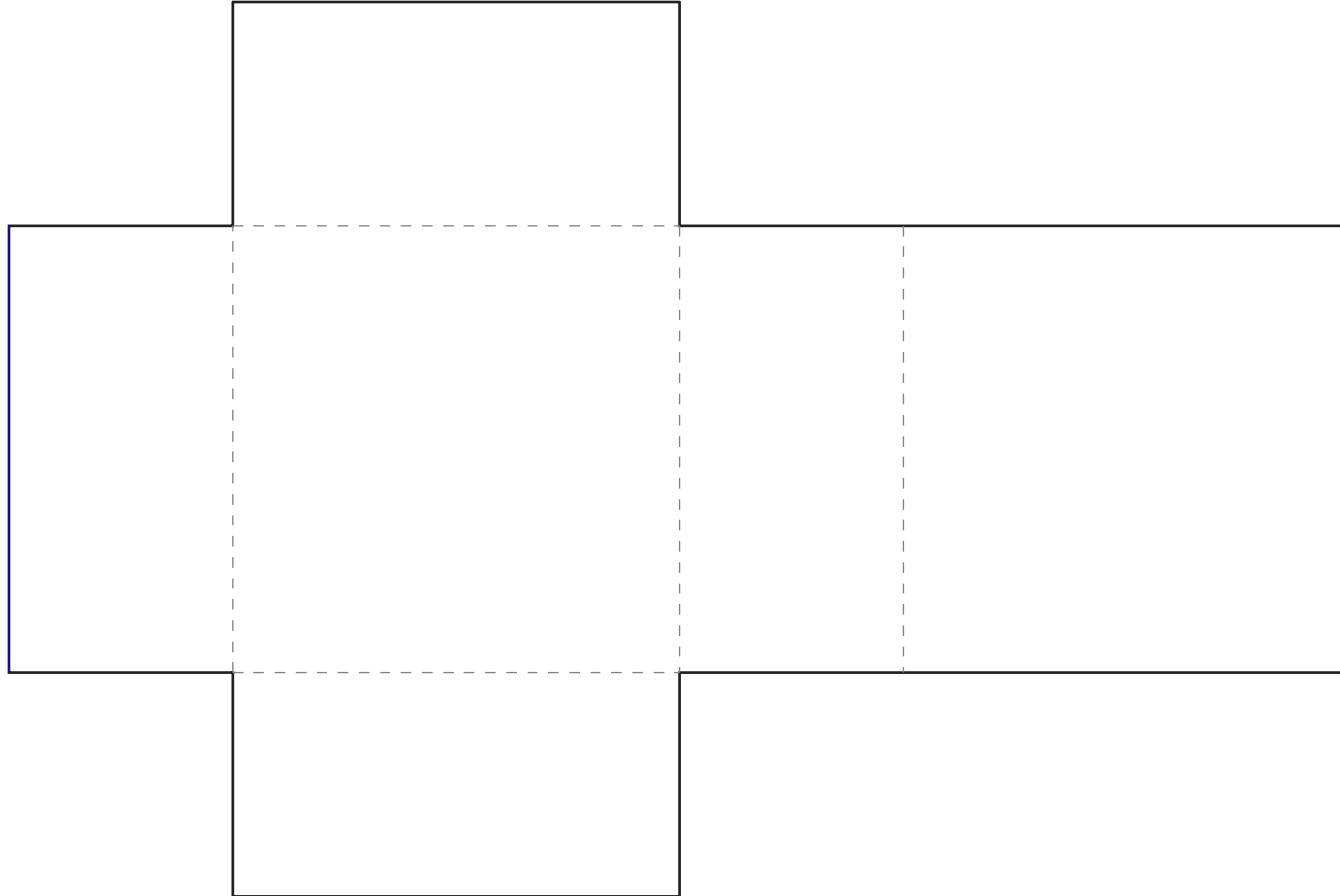


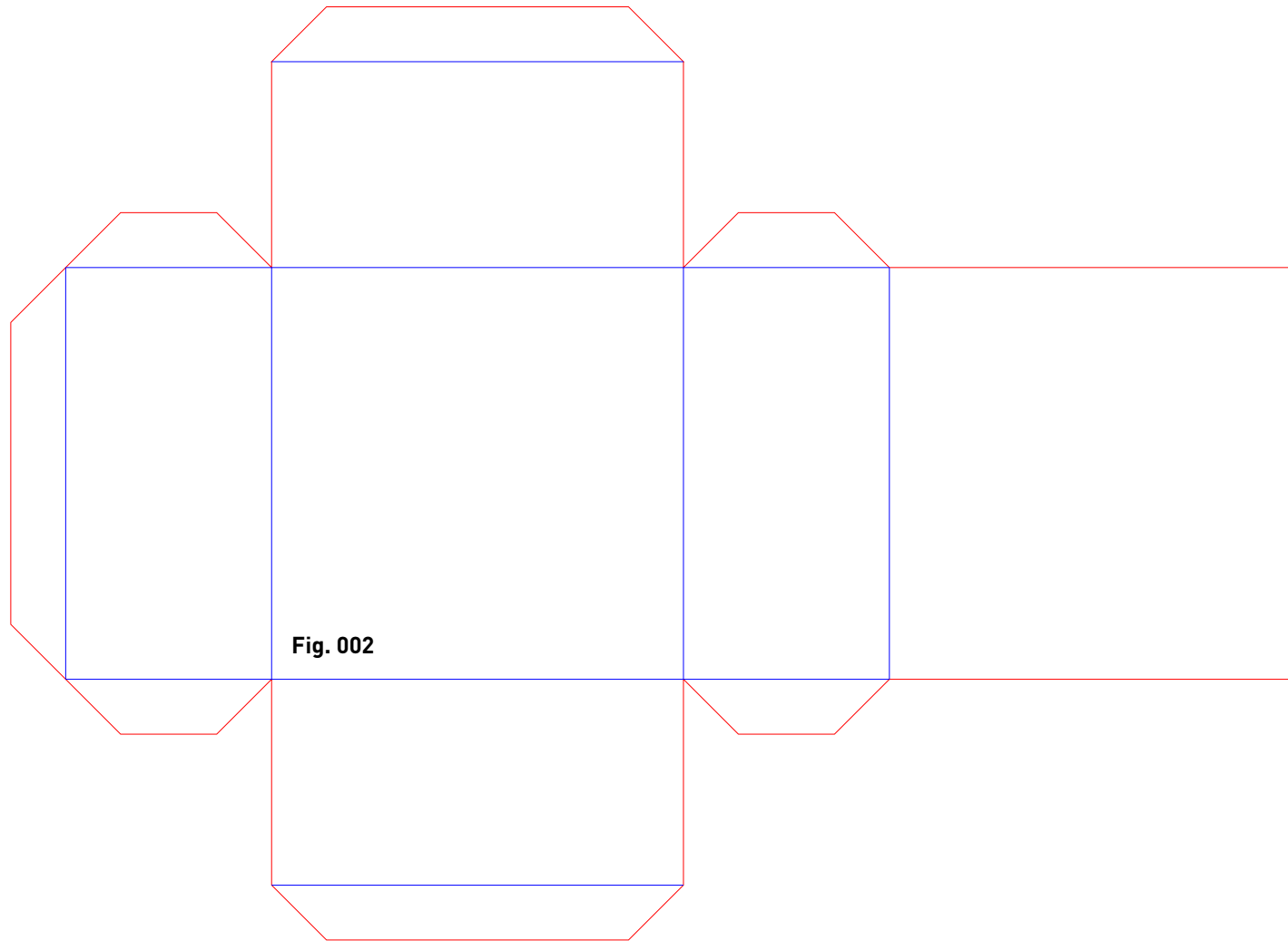
FIG. 002

By introducing a single plane through the center of the cube, parallel to two of its faces, we divide it into two equal parts. This simple cut reveals new possibilities for form manipulation and composition.





Laser cut / One color



Laser cut / Two colors

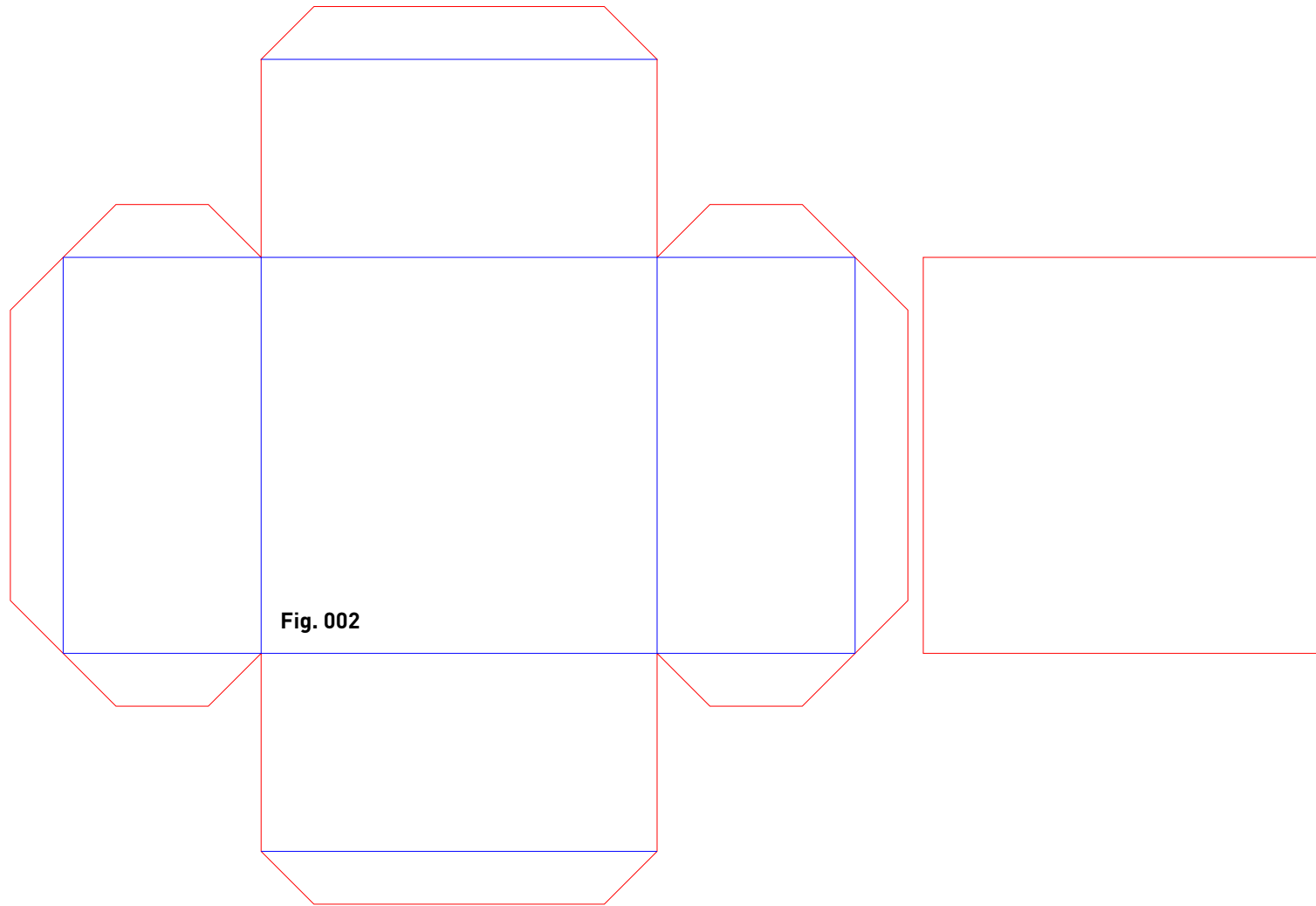
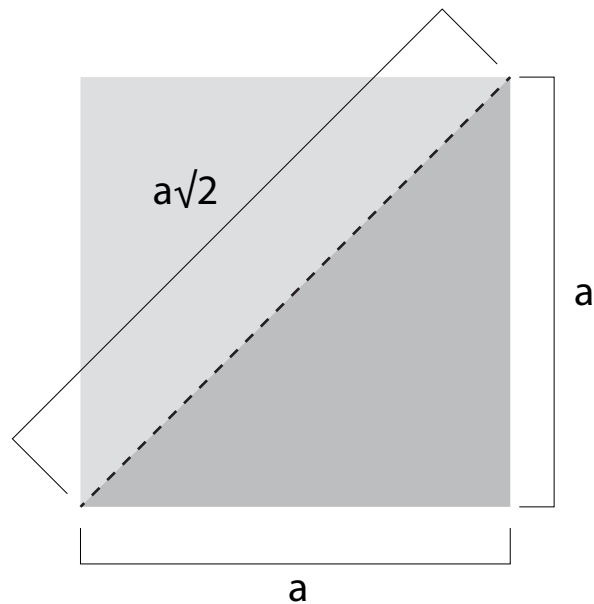
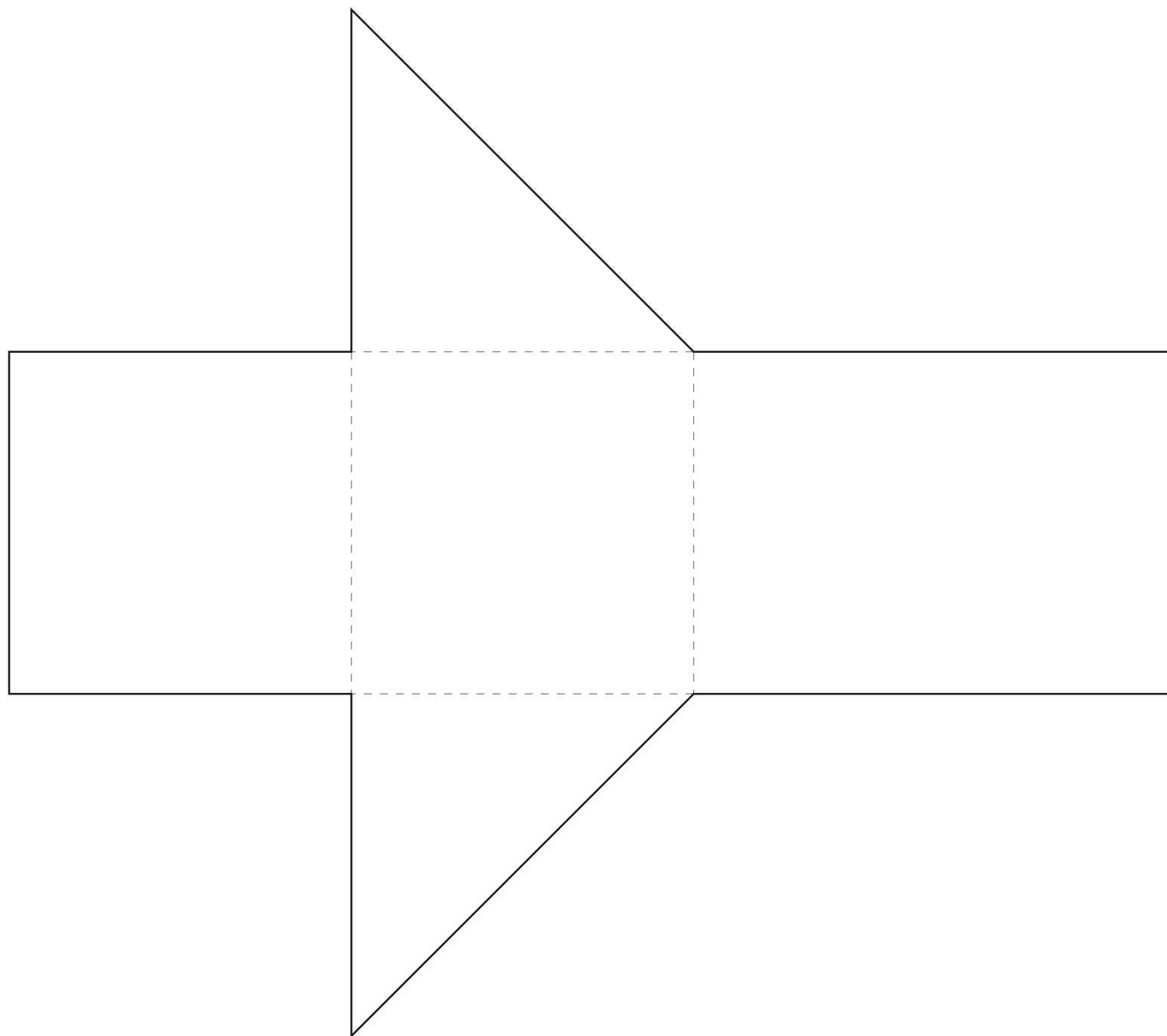


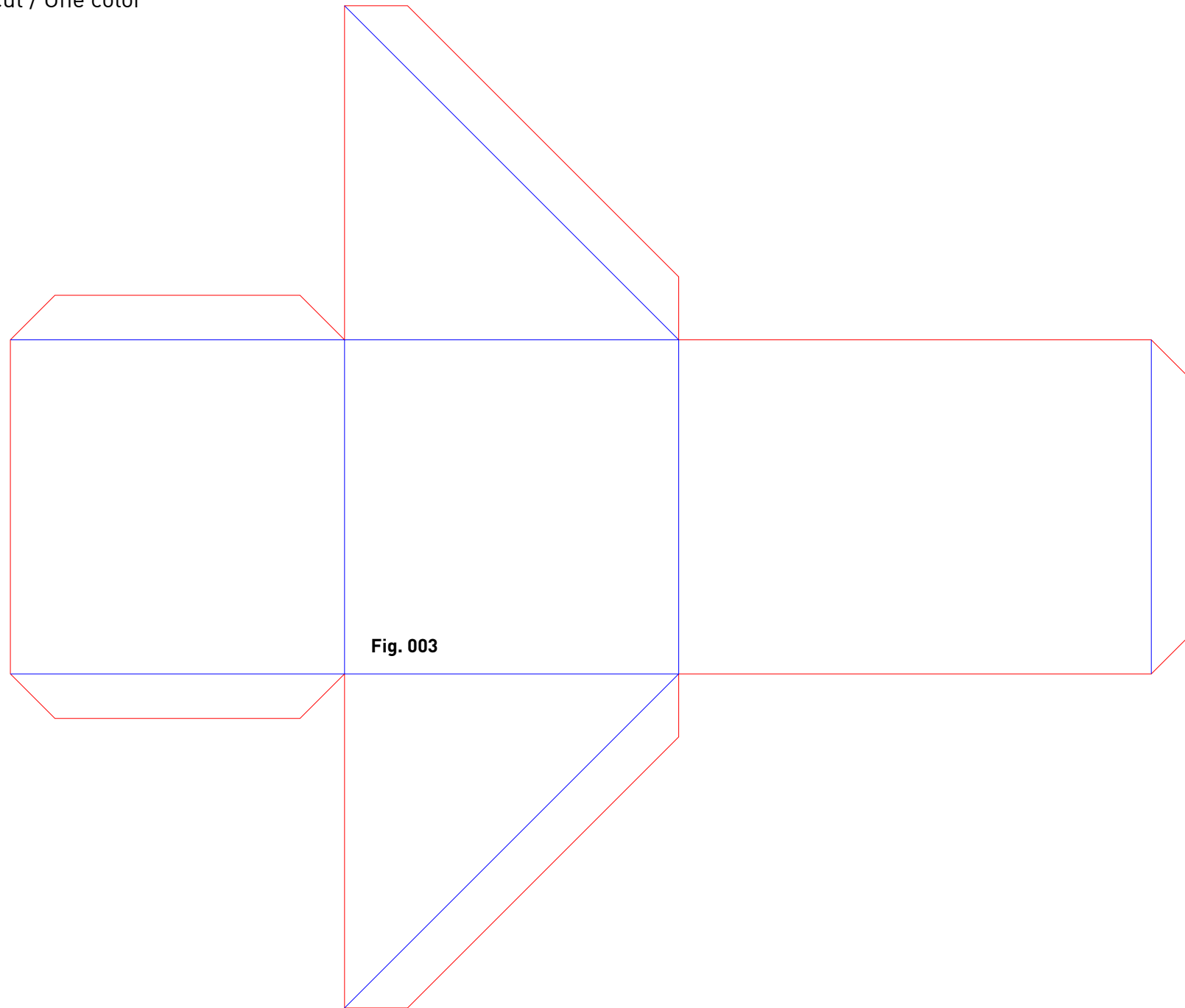
FIG. 003

In this exploration, we divide the cube using a plane that extends from one edge to its opposite extreme. This cut slices through two faces at a 45-degree angle, creating two right-angle isosceles triangular sections. By shifting from a simple parallel division to an angular cut, we introduce new geometric relationships and a more dynamic transformation of the original form.





Laser cut / One color



Laser cut / Two colors

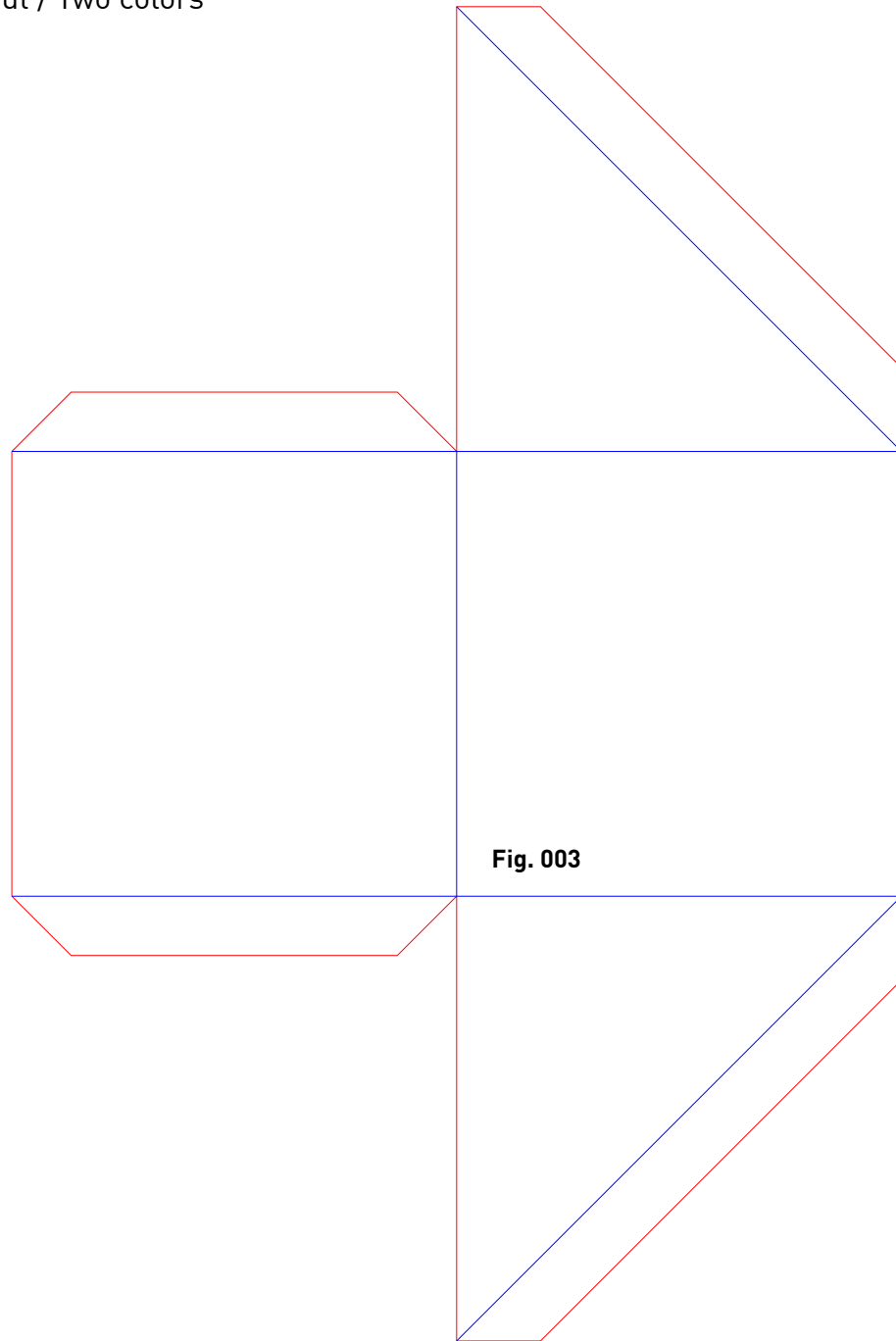


Fig. 003

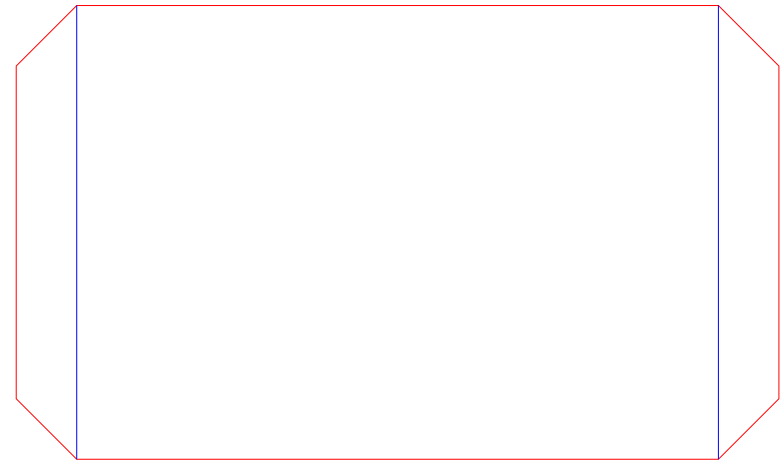
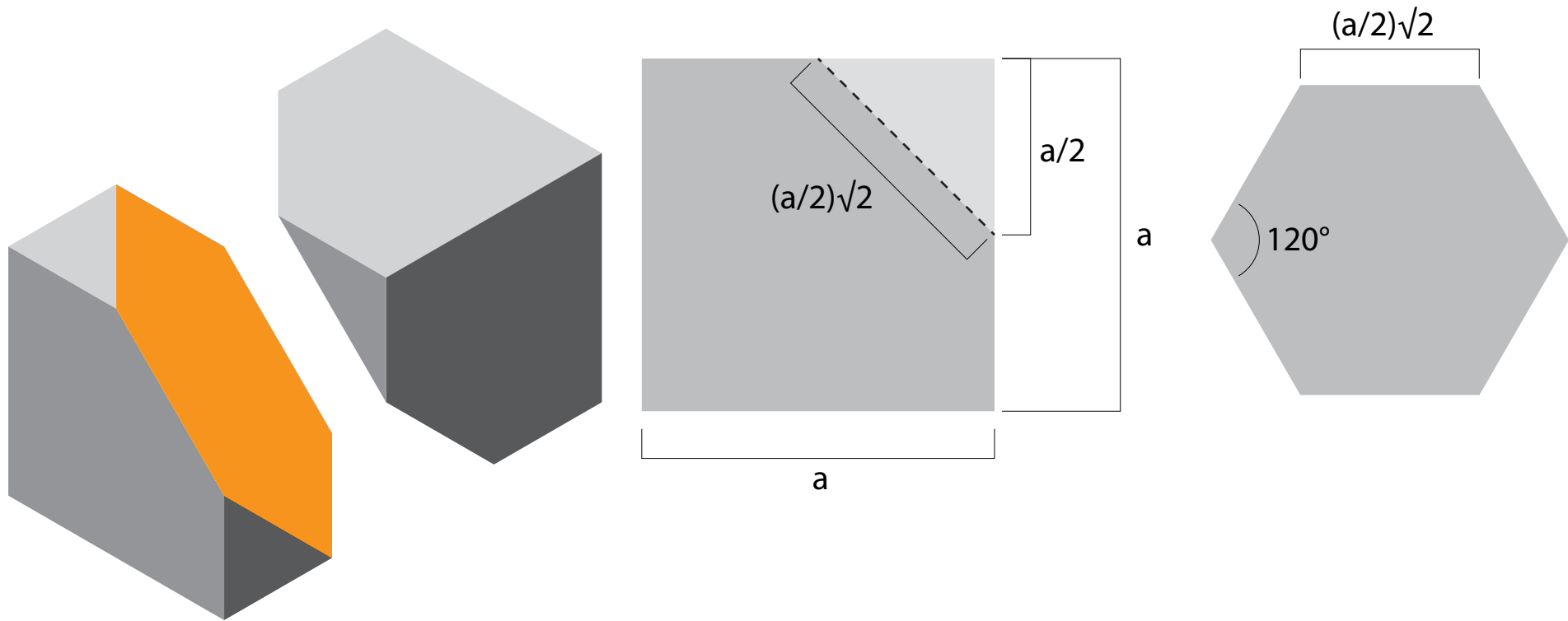
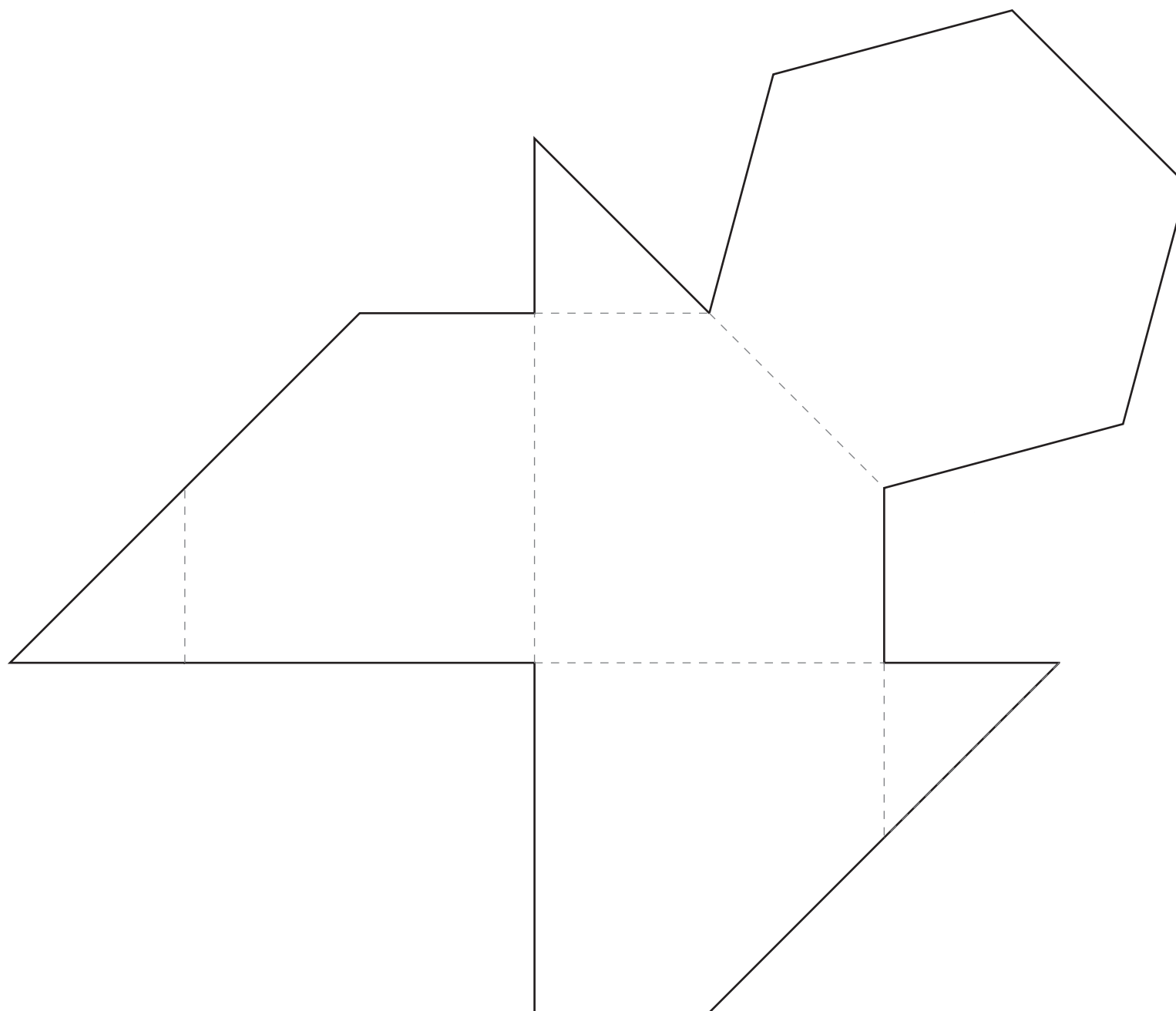


FIG. 004

In this modification, we introduce a plane that removes $1/8$ of each of the six faces of the cube at a 45-degree angle. The cut follows a path from the midpoint of one vertex to the midpoint of the next, gradually transforming the structure. As a result, the cube is once again divided in half, but this time, the newly formed face at the cut is a perfect hexagon. This operation highlights how subtle geometric shifts can lead to unexpected yet highly structured forms.





Laser cut / One color

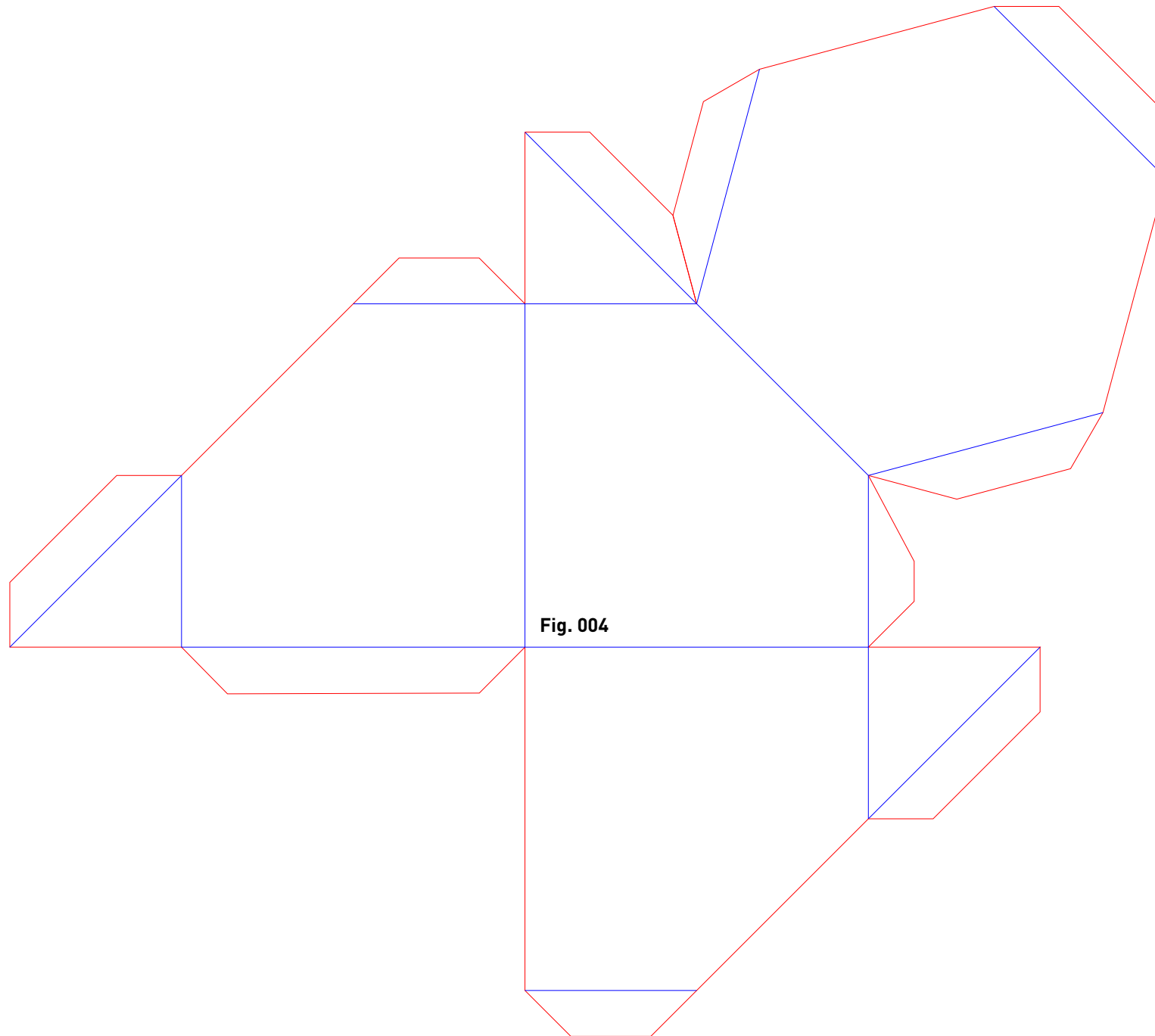


Fig. 004

Laser cut / Two colors

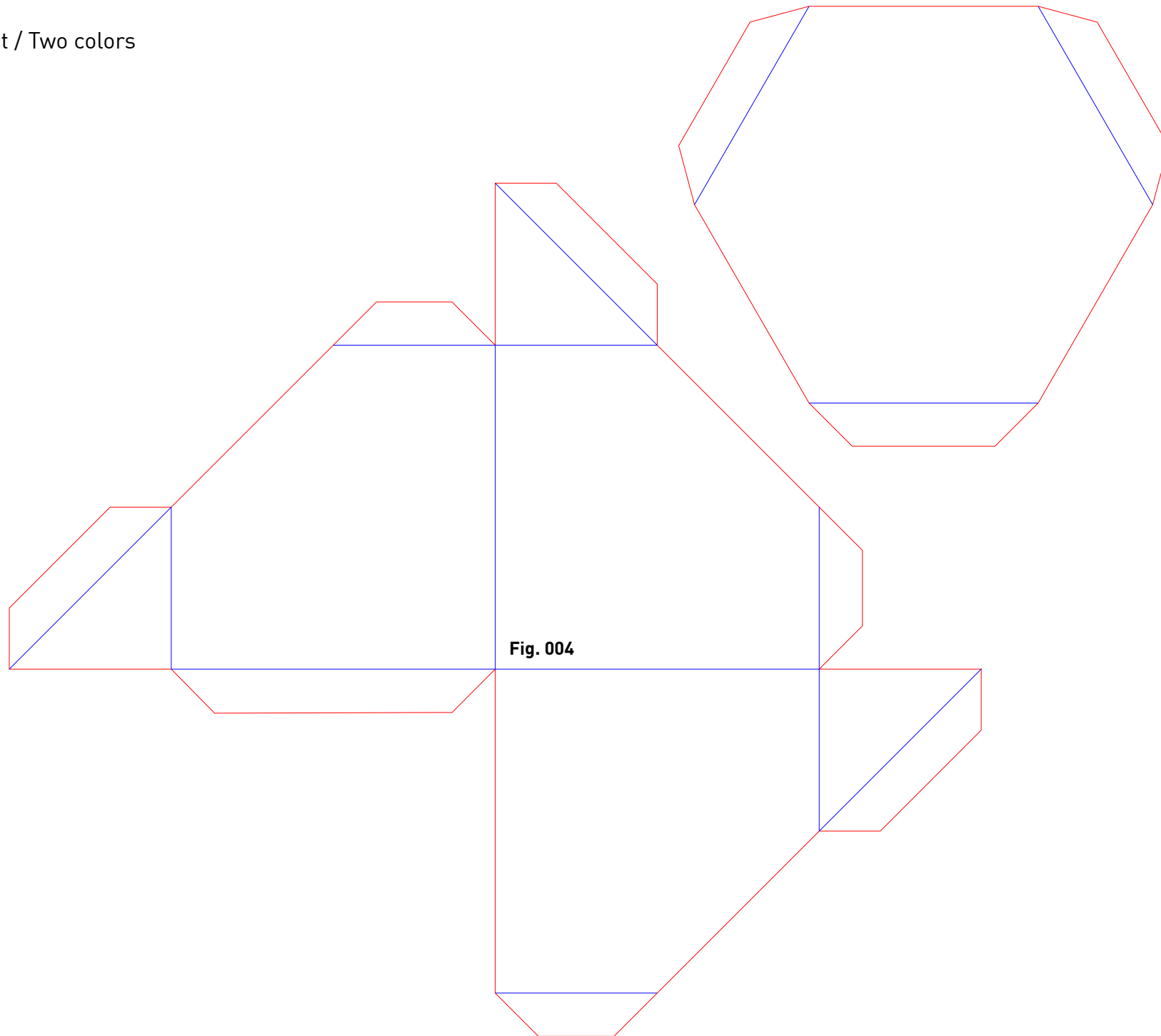
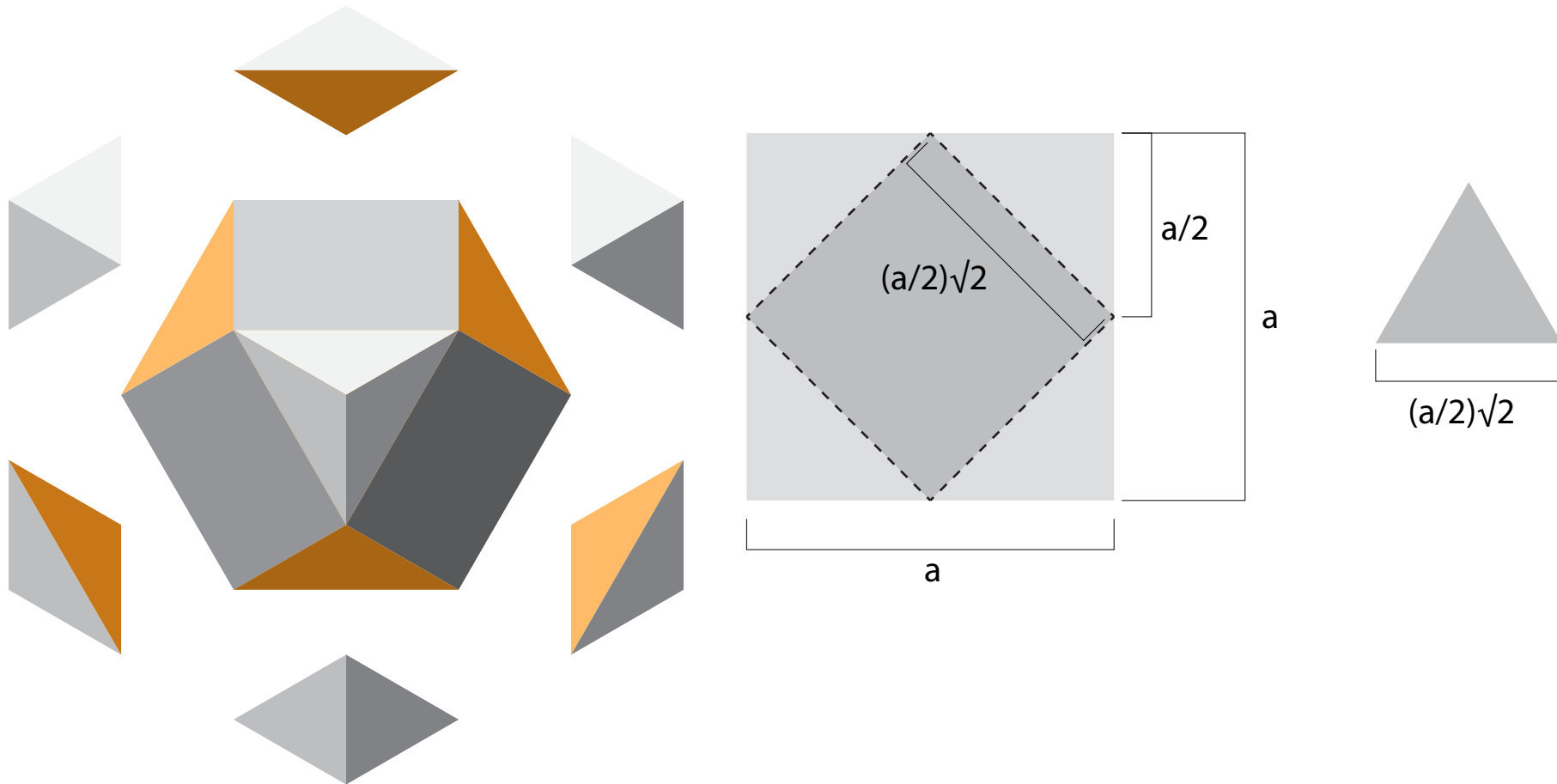
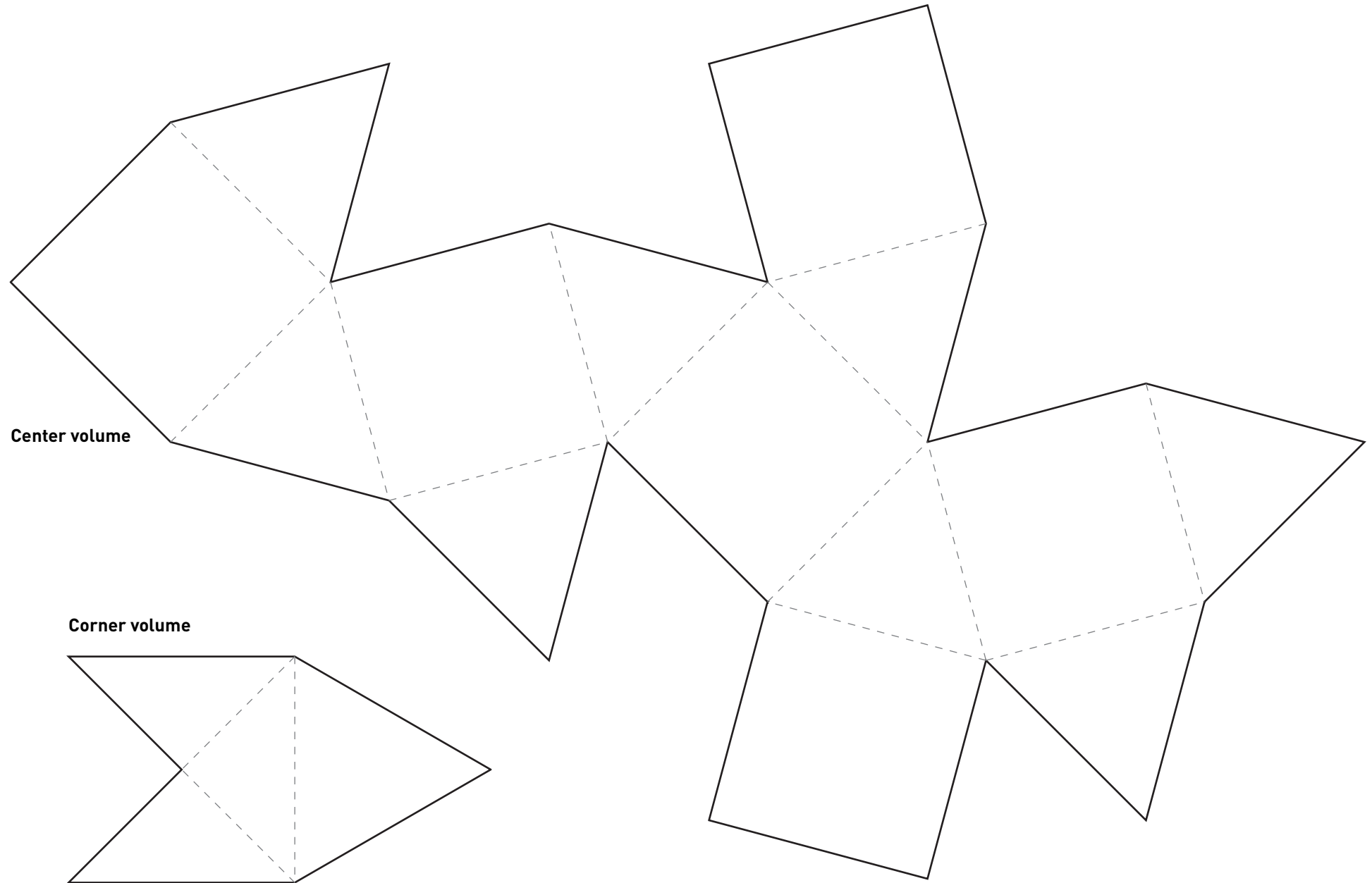


FIG. 005

In this exploration, we cut away $1/8$ of each face by connecting the midpoints of adjacent edges. This operation removes the cube's eight corners, leaving behind eight small triangular solids. The remaining central form becomes an intricate polyhedron, composed of both triangular and square faces. This transformation demonstrates how a simple, systematic cut can generate a more complex and multifaceted structure.





Center volume

Corner volume

Laser cut / One color

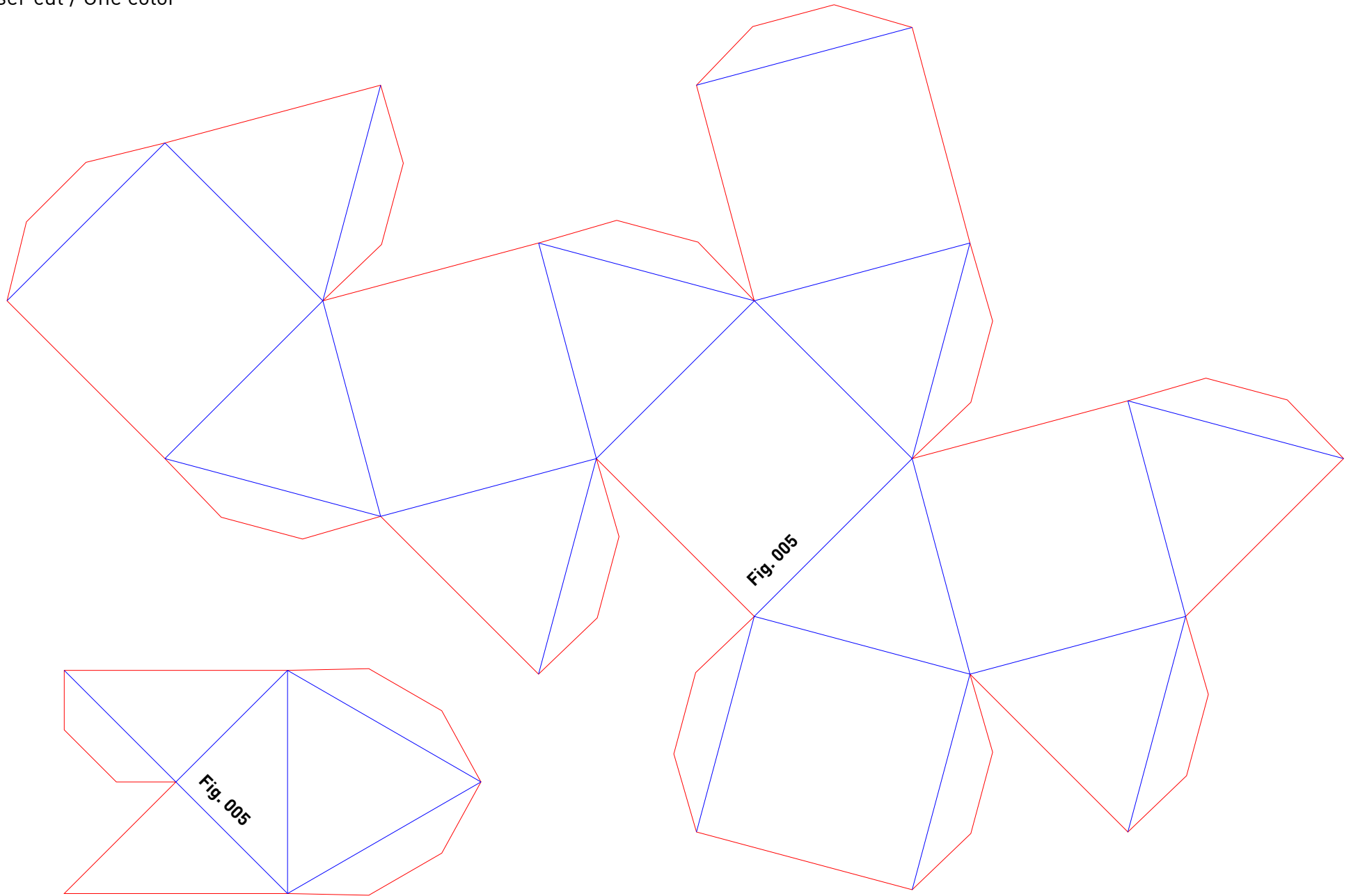
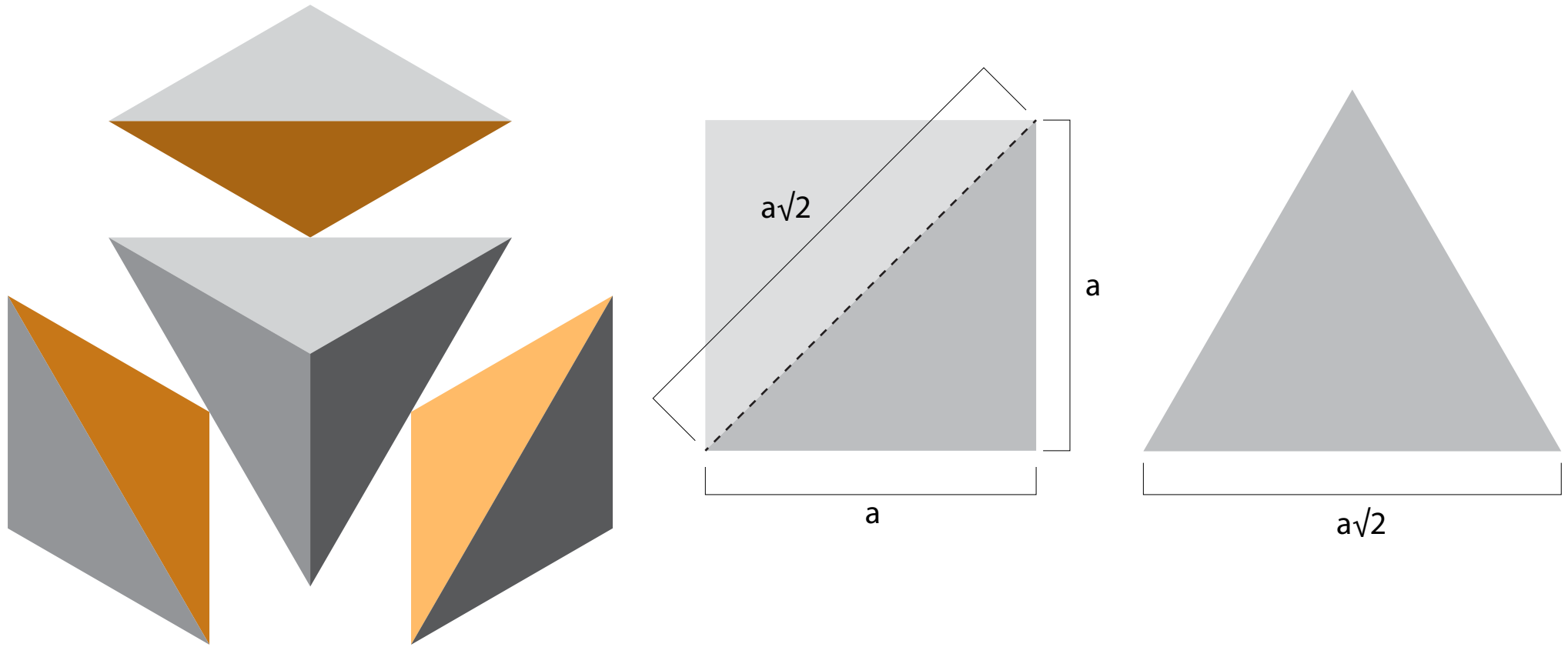
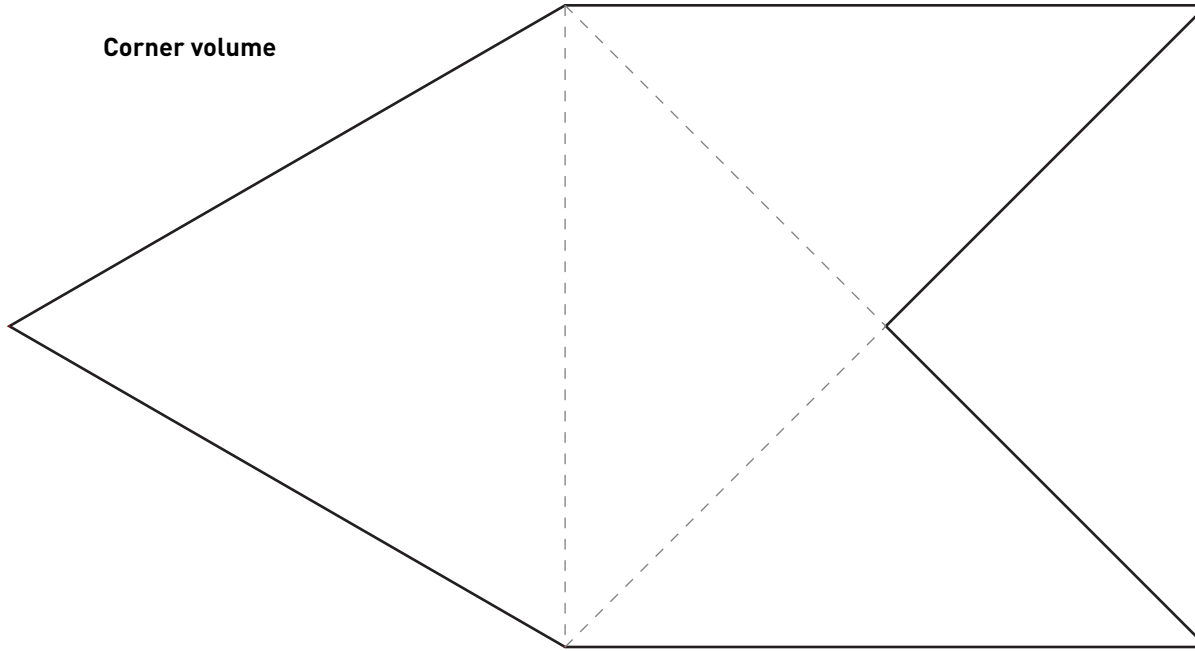


FIG. 006

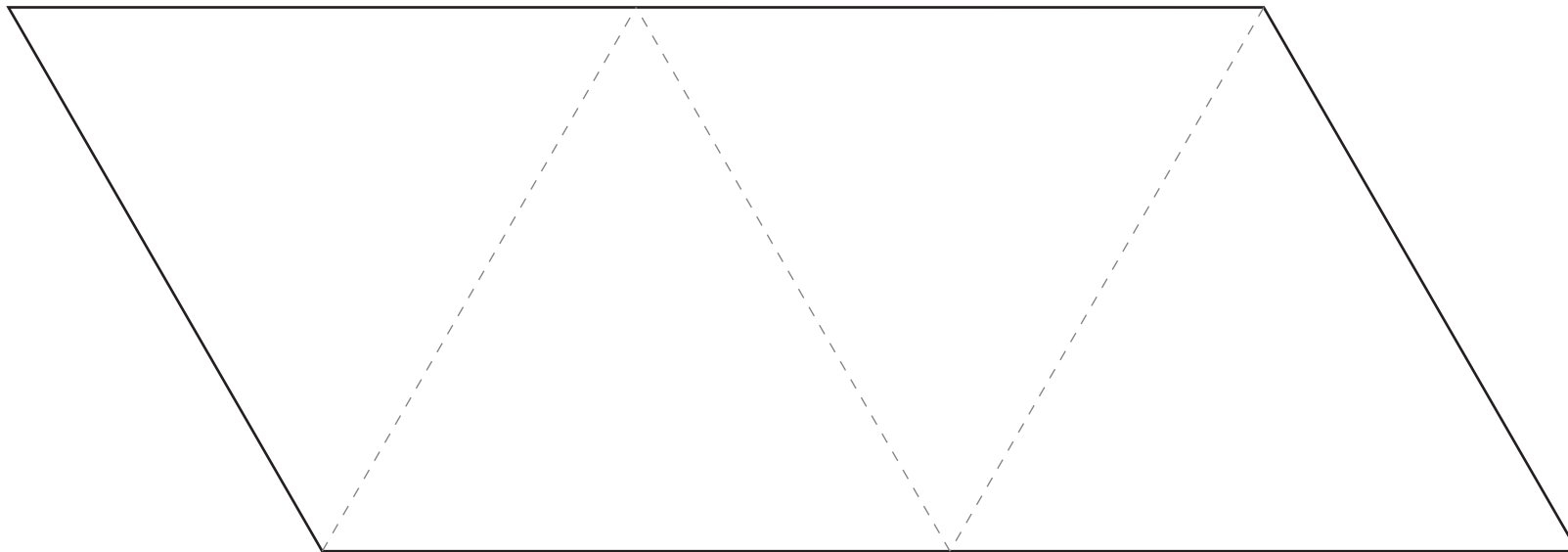
In this transformation, we cut one of the cube's faces diagonally from vertex to vertex, splitting it into two triangles. This cut extends through the entire volume, creating four large corner pieces—similar to those in the previous exploration but significantly larger. At the center, the remaining solid takes the form of a perfect tetrahedron. This exploration further demonstrates how strategic cuts can reveal hidden geometric relationships within the cube.



Corner volume



Center volume



Laser cut / One color

