Imigongo Art Project

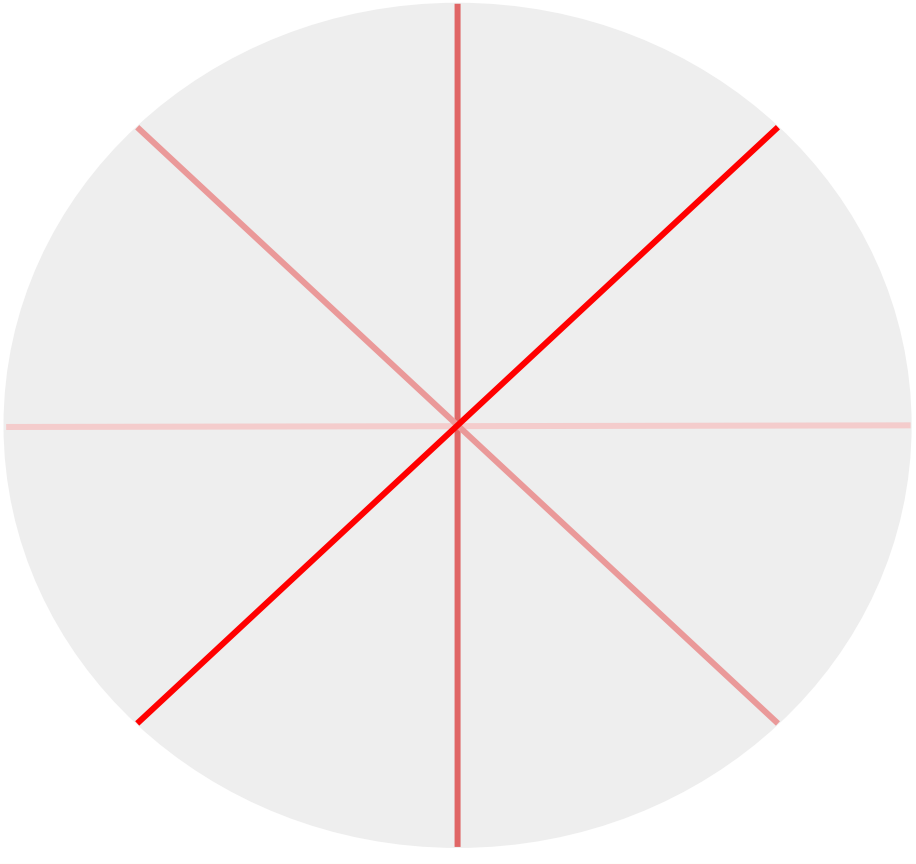
Step One: *Find Inspiration*

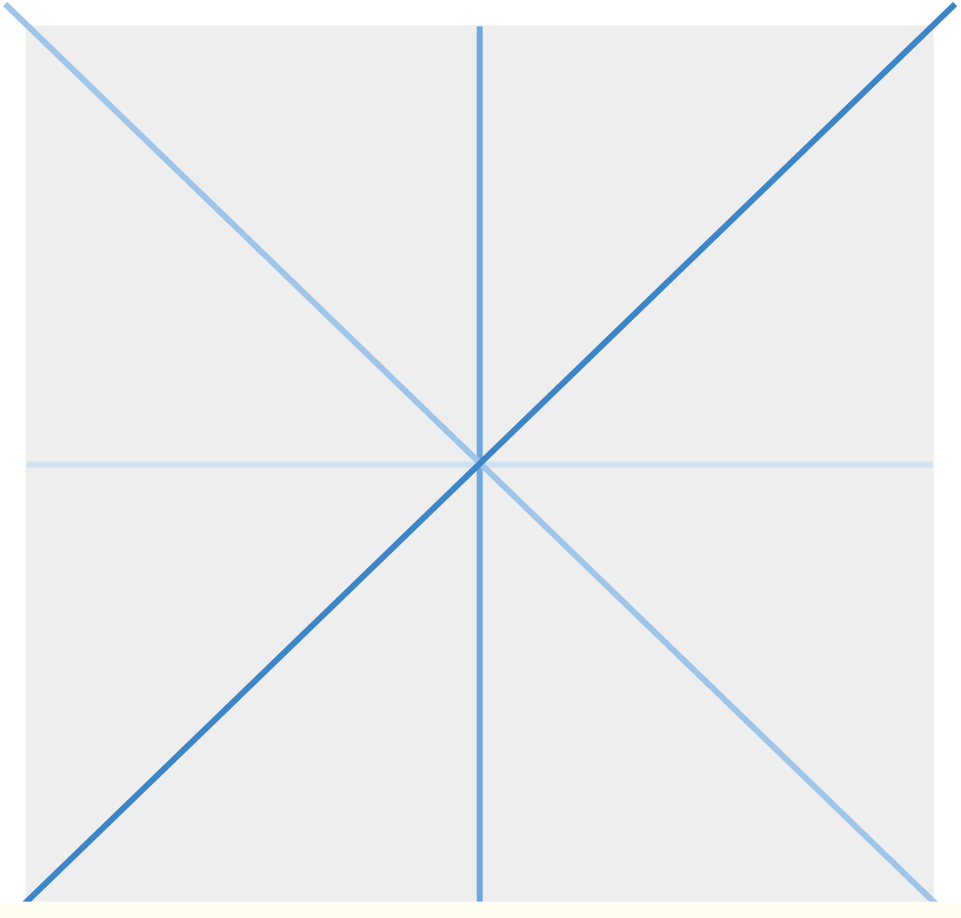
You can use this Inspiration Board, find your own piece of Imigongo art online, or create your own!

Step Two: Select a Base

These are the most common bases used in Imigongo art, but, you can use the shape tool to create your own!

Step Three: Reflections Time





Pick your lines of reflection. ***This will make it easier in the art process.***

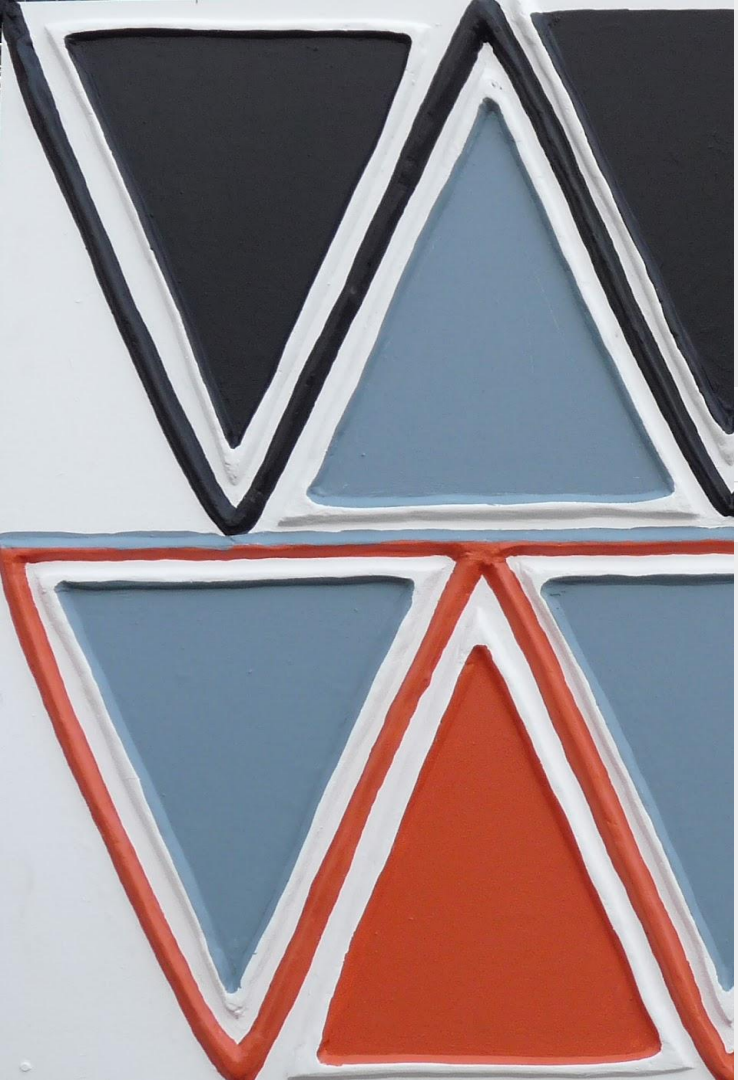
Step Four: *Begin Designing*

Project Instructions

Using (or creating!) shapes, lines and designs, **create a virtual version of imigongo art.** You can create your own or replicate one you find online. Your image should contain *at least*:

- ❑ **1** line of reflection
- ❑ **1** example of rotation
- ❑ **1** order of symmetry
- ❑ Meaningful colors

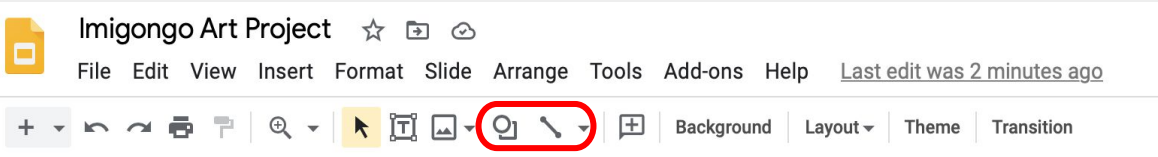
Once complete, you will **write 3 paragraphs about your art and its geometrical properties.**



Some Tips!

Making your own shapes & designs:

Use the  tools in the above toolbar to create your own lines, designs and shapes!



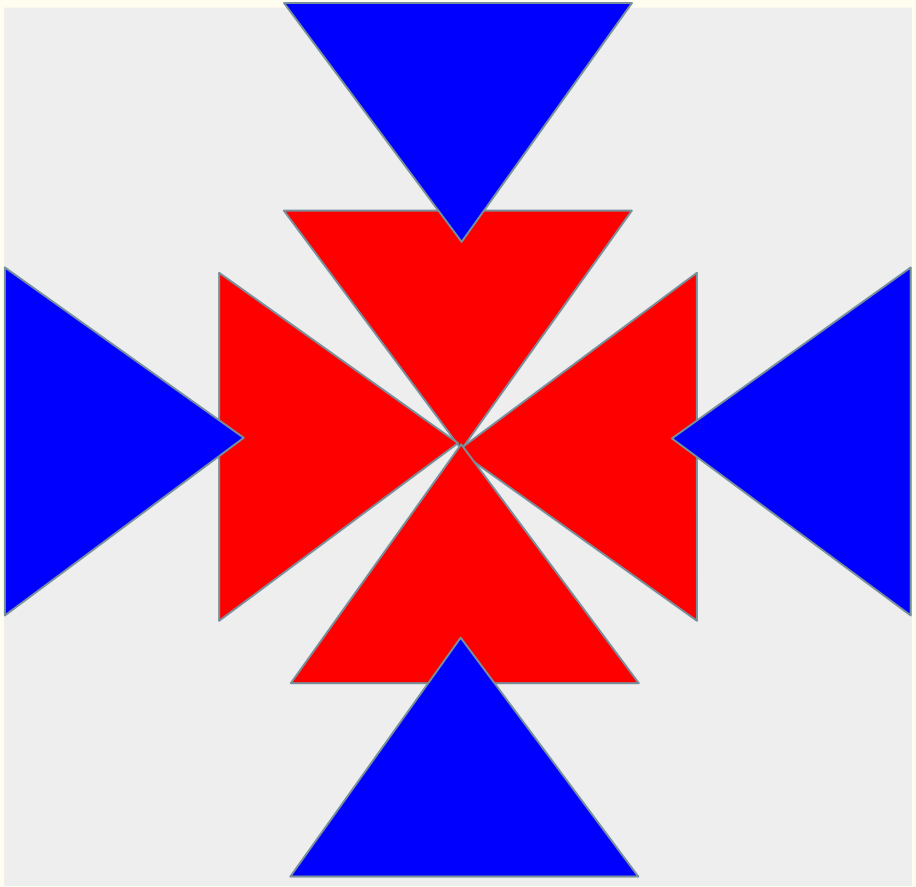
Helpful tools (Copy & Paste):

You can use commands to copy and paste to help create your art. Use Copy **(Ctrl/⌘ + C)** to **select the design** you want, and Paste **(Ctrl/⌘ + P)** to **place it in your design**.

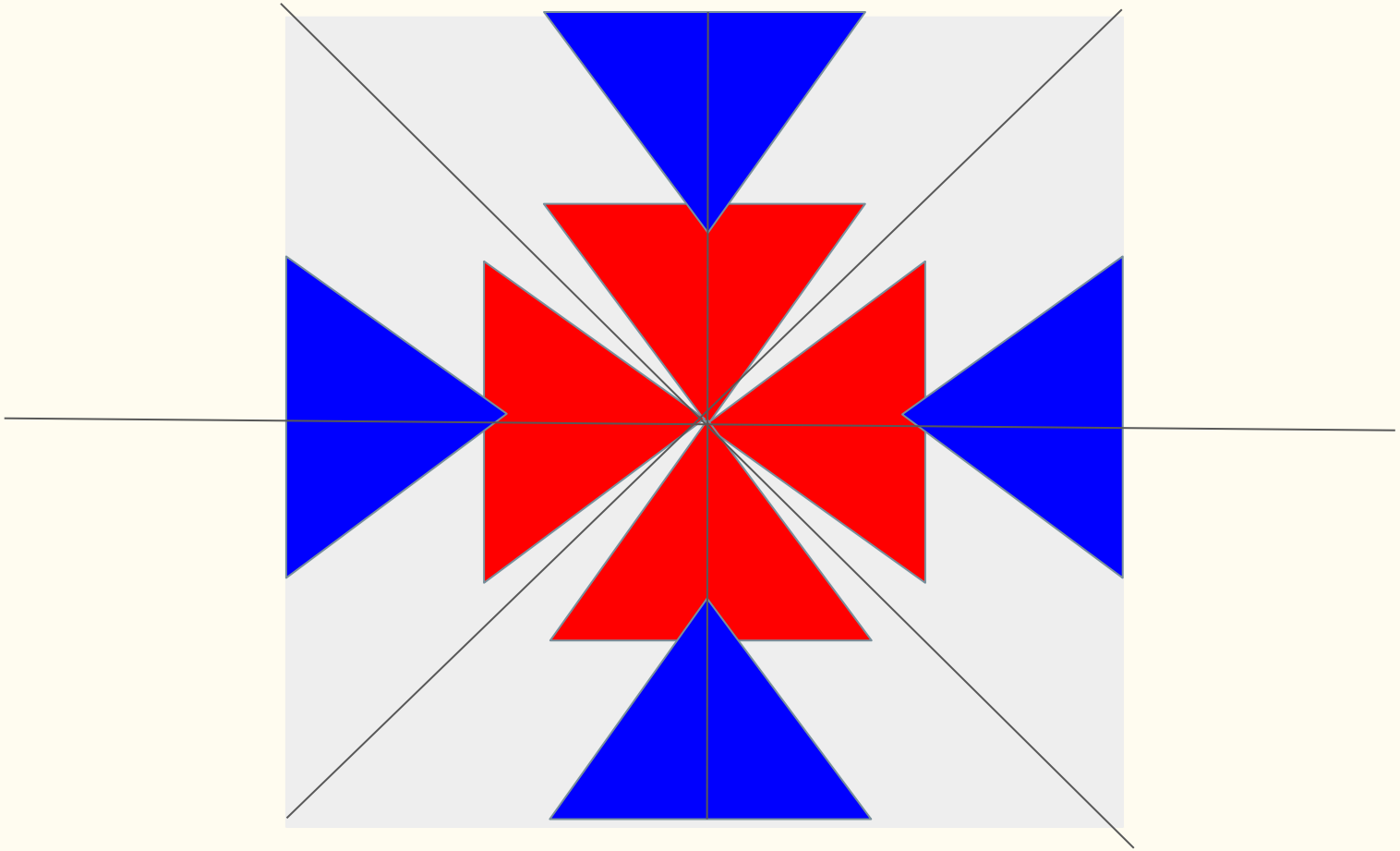
Rotations and Reflections:

Rotate: You can also rotate shapes yourself using this symbol. Or, right-click (Mobile: Press/Hold) on a shape and select 'rotate.'

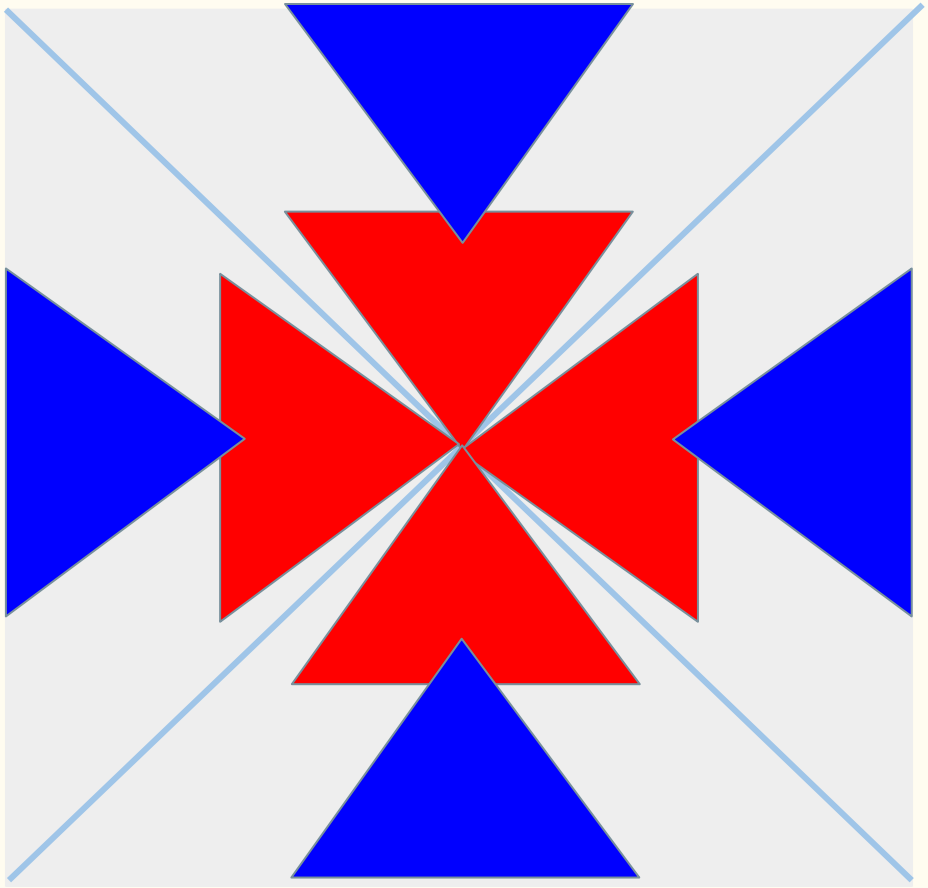
Reflections: Some tools can help making mirroring your artwork easier. Using the 'rotate' tool, you can flip shapes horizontally or vertically.



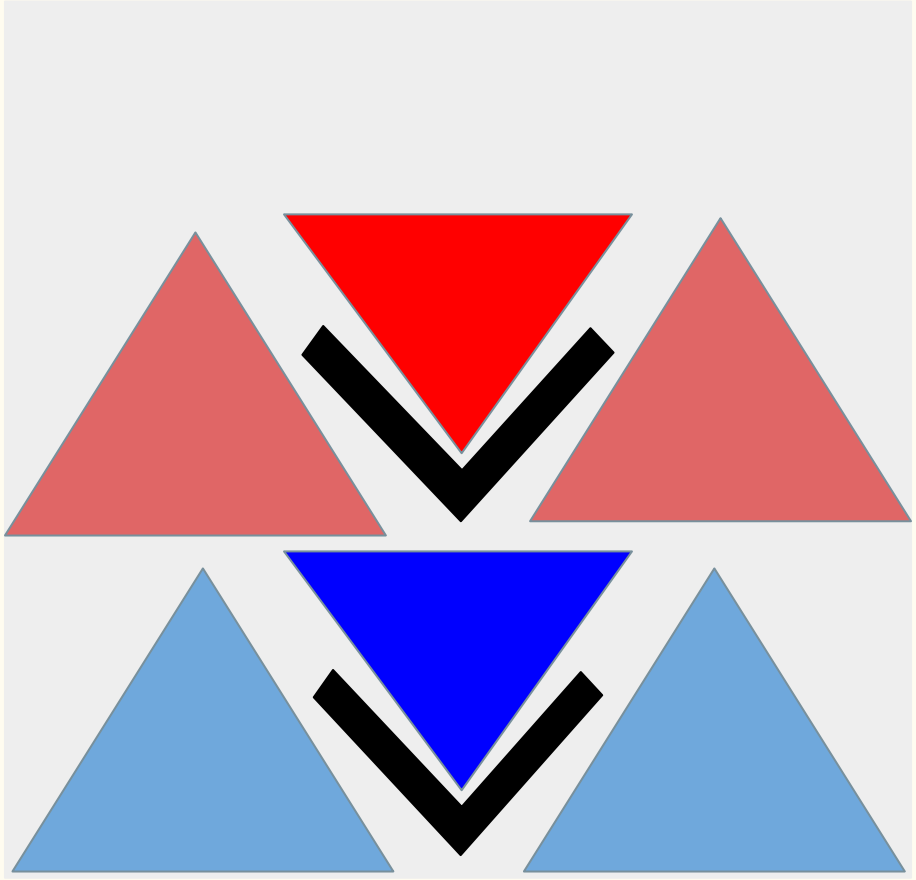
Take 2



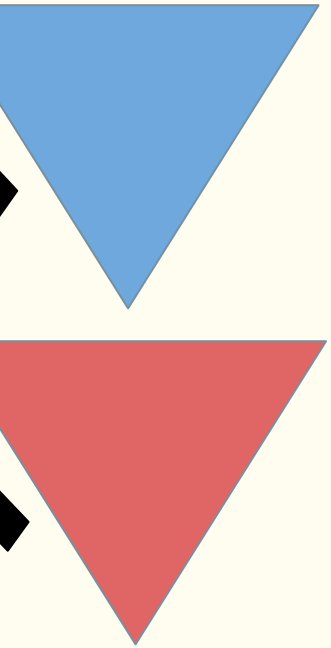
Reflection Lines

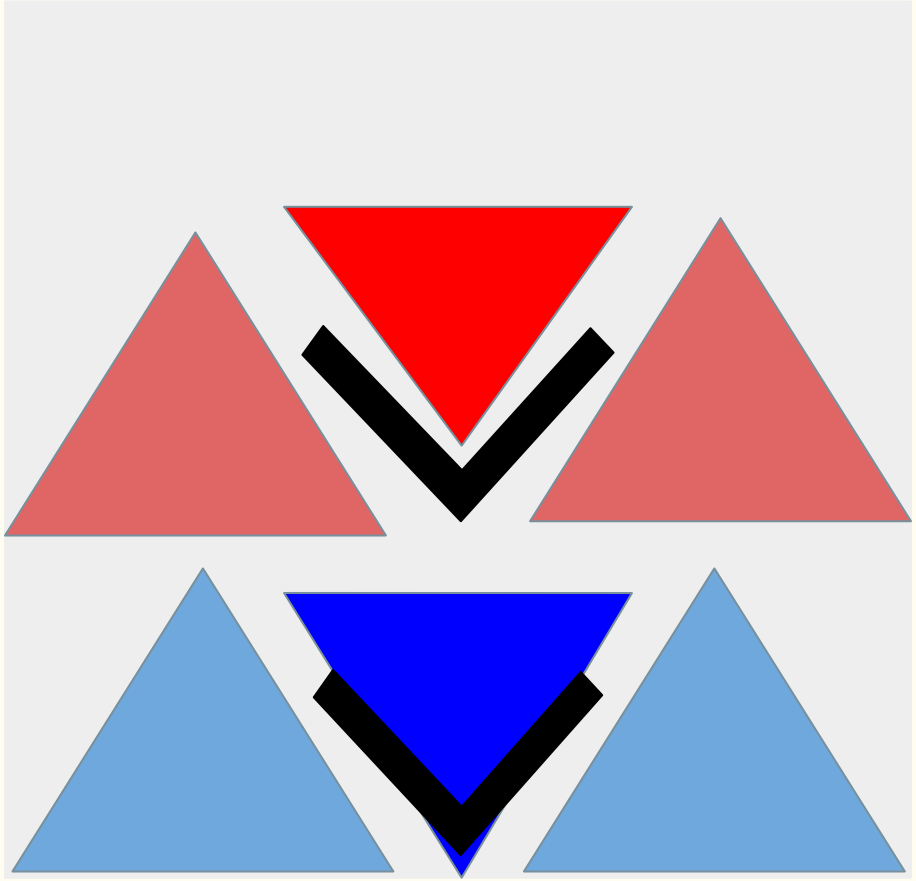


Take 2

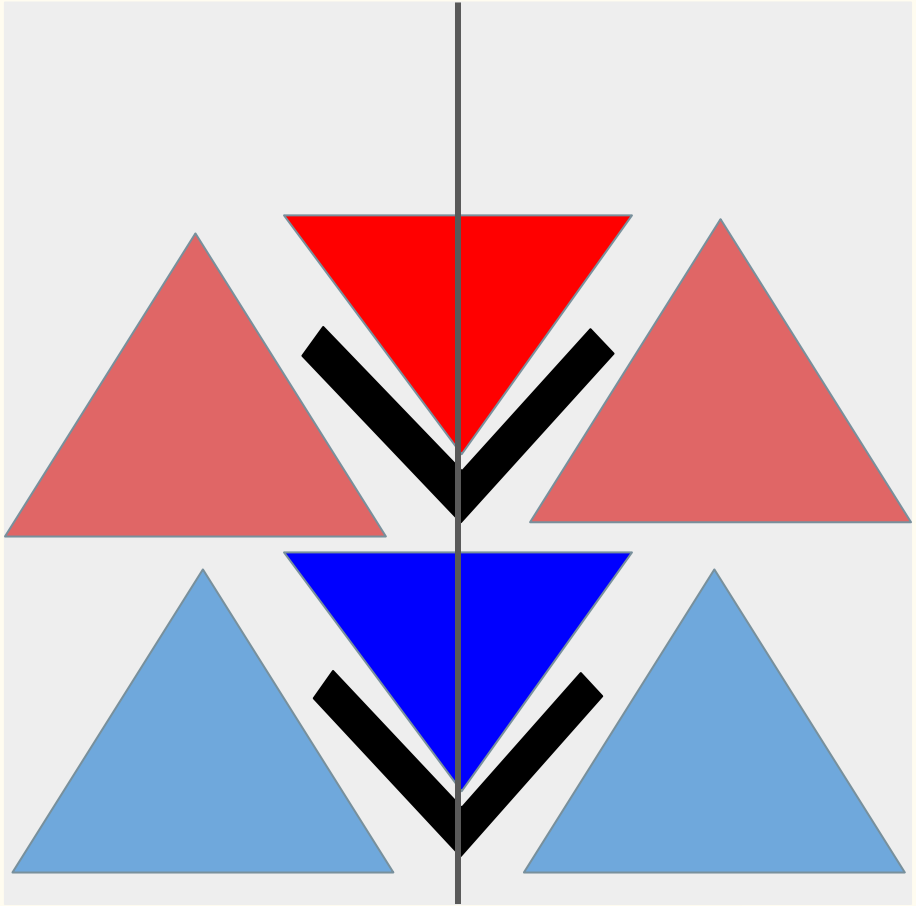


Using this space, design your own piece of Imigongo art!

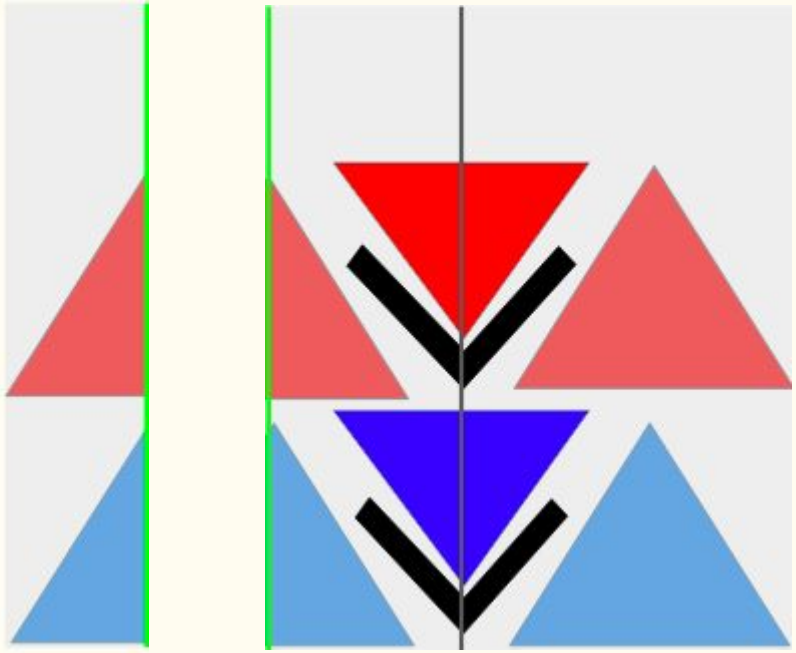




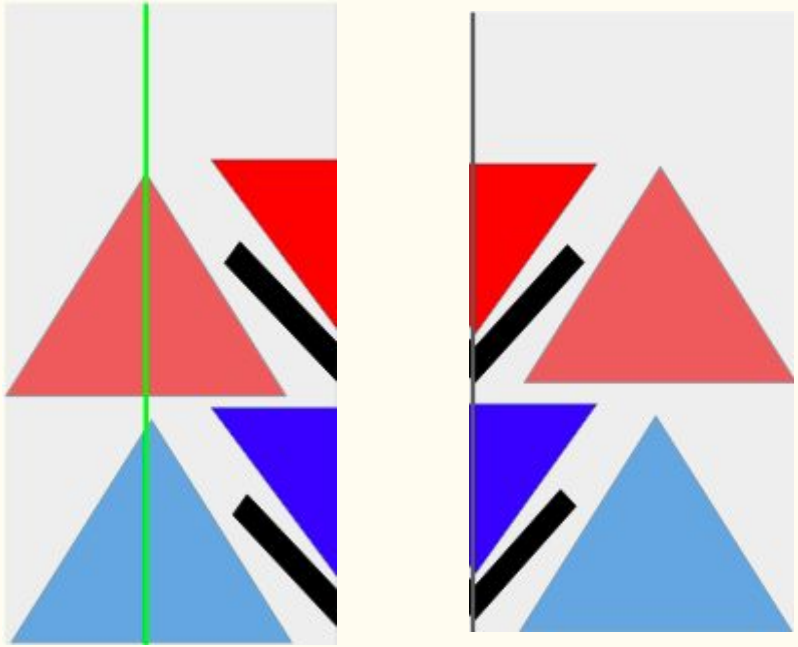
ROTATION



REFLECTION



Picture 1 - not a reflection



Picture 2 - yes!
A reflection!

REFLECTION

Step Five: Writing Portion

Writing Portion

Paragraph 1:

- What is Imigongo art?
- What is its origin?
- What mathematical properties are seen in Imigongo art? **Think about:**
  - Part & whole
  - Reflections
  - Rotations

Imigongo art is a form of art used with cow dung. It's a tradition in Rwanda. Imigongo art originated in Rwanda where they used cow dung for art and added colors to it to make it scream out a message. Rwanda cleans cow dung with ash so that it's less dirty. They also used traditional colors. During the genocide in Rwanda no one was really making imigongo art. Imigongo art shows parts and wholes of shapes and it also shows their reflections and rotations. In the shapes of imigongo art there are lines of reflection shows many sides there are in that shape is how many lines of reflection there will be.

Writing Portion

Paragraph 2:

- How did you make your art?
  Think about:
  - Your strategy
  - The shapes
  - The colors
  - The overall design

If you used an inspiration picture paste it below:

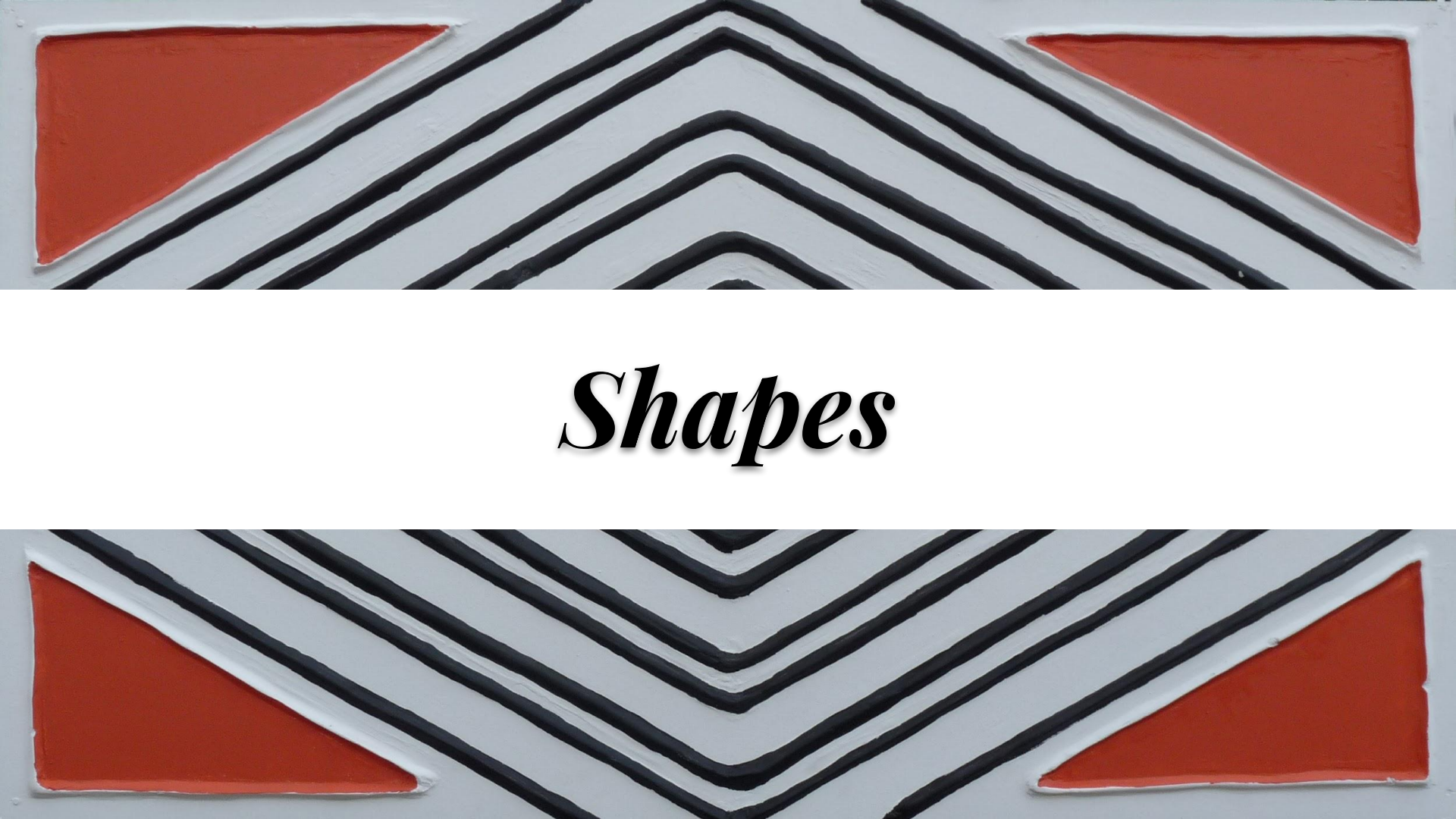
My first strategy was to recreate the triangles first and follow my inspiration photo which didn't go so well. Then I wanted to recreate the shapes of my art. After that I wanted to add colors onto my shapes and the overall design was a fail. The reason why I failed was because I didn't make any rotations or reflections into my art I just added shapes, colors, and designs I didn't really plan out my strategy. After I looked at some pictures that had reflections rotations and still had the shapes I saw that I needed to reflect my shapes which created rotations. These pictures were helpful because I remembered in class when I was told about the number of sides in a shape is the number of reflections.

Writing Portion

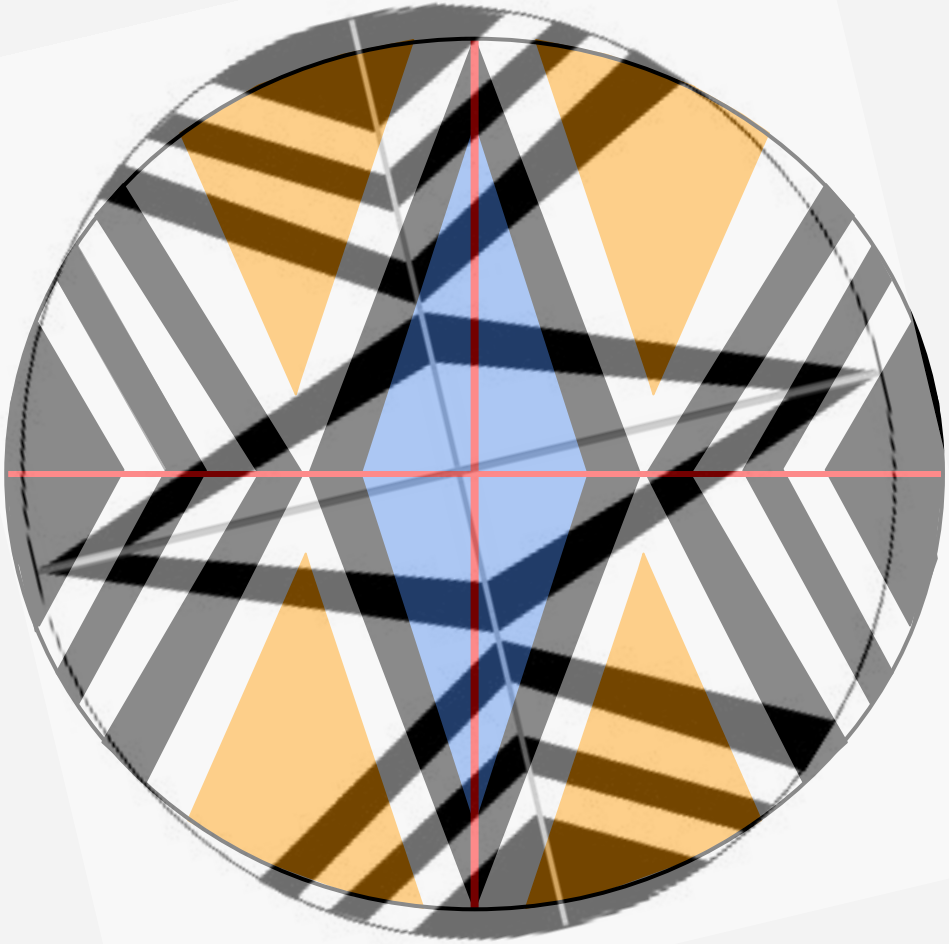
Paragraph 3:

- Define rigid motion transformations
- Explain the math in your art:
  - Rotations
  - Reflections & Symmetry
  - Order of Symmetry
- Justify how you know these rigid motion transformations exist in your artwork.

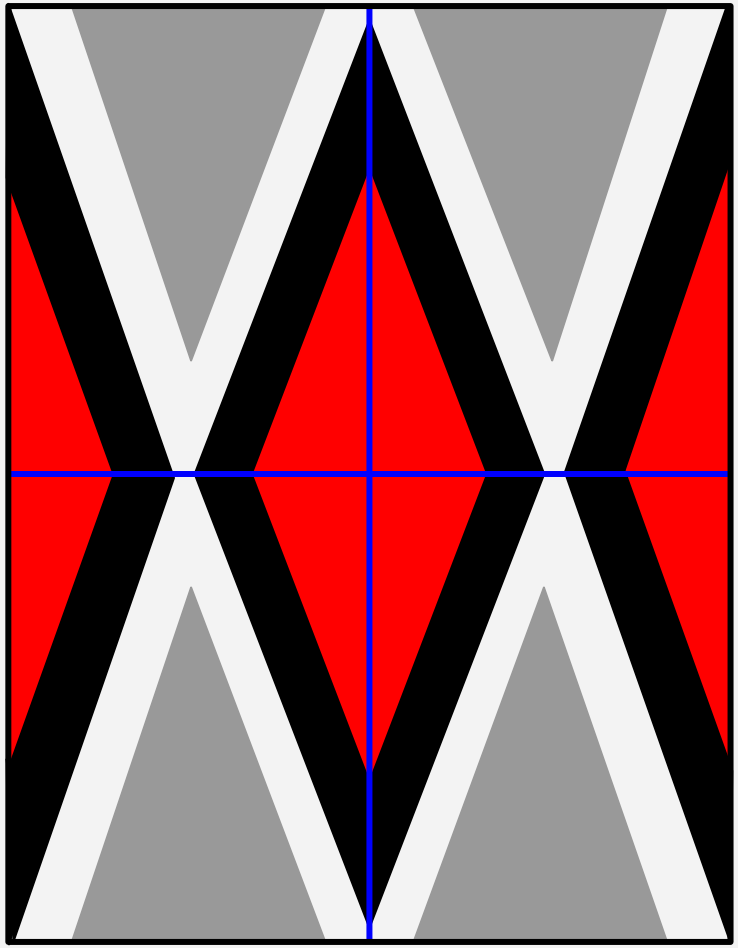
Rotations is when you can rotate your shape and it will land on itself. Reflections is when your shape can look the exact same but be on the opposite side. Symmetry is when you can cut your shape in multiple ways and they will all look the same and have same size and shape. Order of symmetry is how many times you can cut your shape. Rigid motion is when you can move your shape as many times as you can to make it land on itself. I know my shape has rigid motion because I can rotate my shape clockwise 180 degrees and it will land on itself. My shape will also reflect 4 times because each shape has another shape to mirror off of it.


Shapes

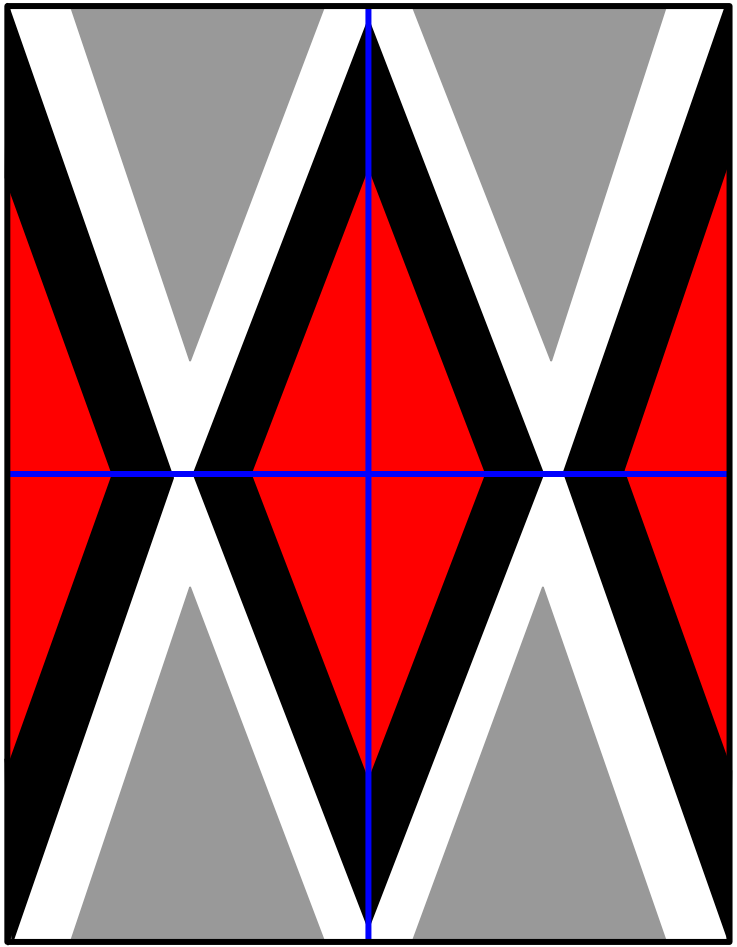
Some Examples



Perfection is not the goal.



Use these examples as a guide.



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