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Geometry & Art

ODTU GVO High School

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Introduction

My project aims to investigate how geometric transformationss are employed to produce unique patterns and how these patterns have been used in sontemporary art both historically and currently.

A. Dürer's copper plate engraving Melencolia I, 1514

From Past to Present

- Architecture
- Interior design
- Fine arts
- Textiles
- Ceramics
- Metal work
- Mosaics
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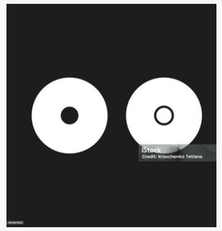
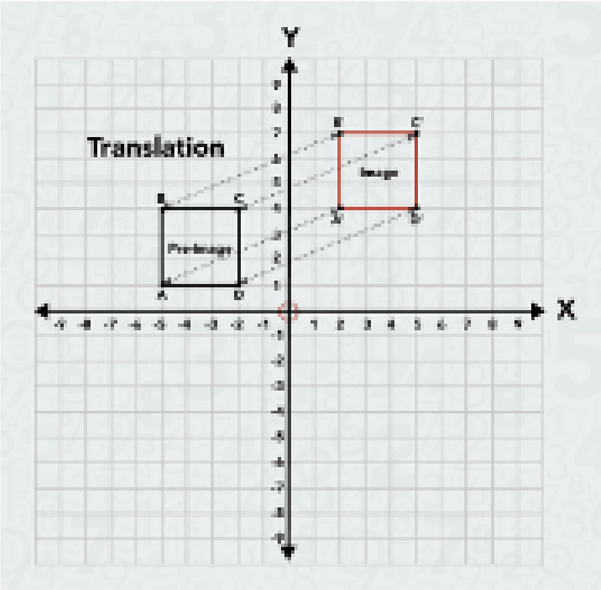


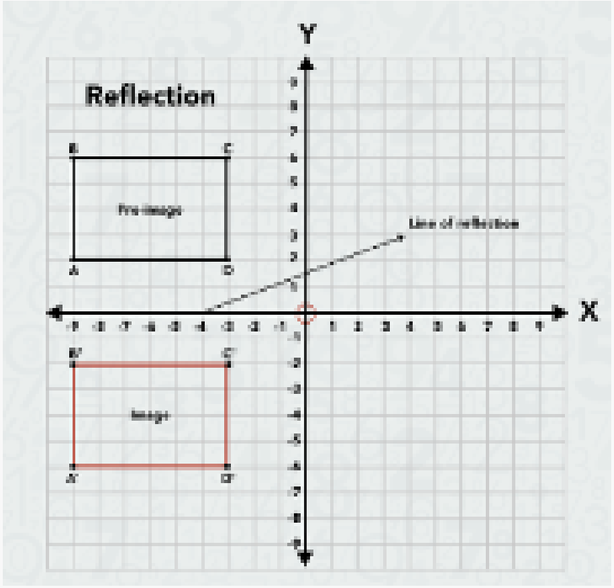
Algorithmic Art by sprit11 on Pixabay

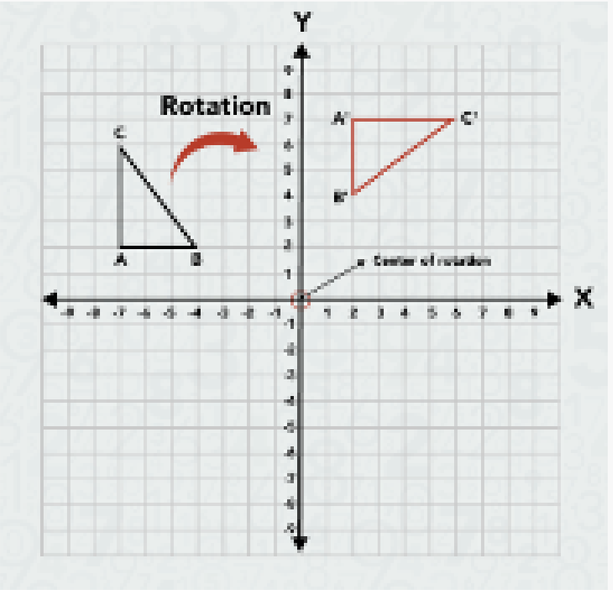
Great Pyramid of Khufu

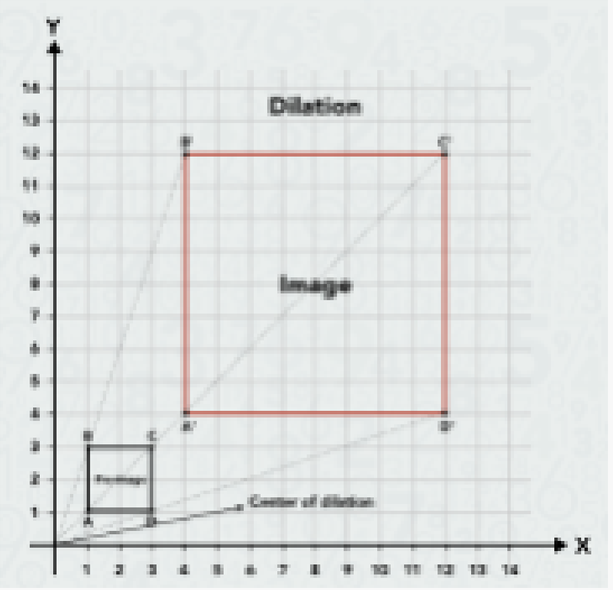
The Dipylon Amphora

Geometric Transformations









Historical Use of Geometry in Art

Summers

- Lived in Mesopotamia
- First ancient geometry in cuneiform

Cuneiform Geometry Problems

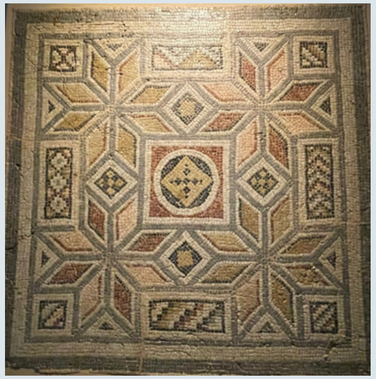
Egypt

- Architectures, such as Pyramids
- Potteries.

Egypt Pottery

Romans

- Lived in Mesopotamia
- Interior design: mosaics



Mosaics

Historical Use of Geometry in Art

Greek

- Sculpture, textiles, decorative vasos.

Greek Decorative Art

Islam

- Architectures, such as Mosques
- Ceramics, girih tiling, woodworks, rugs.

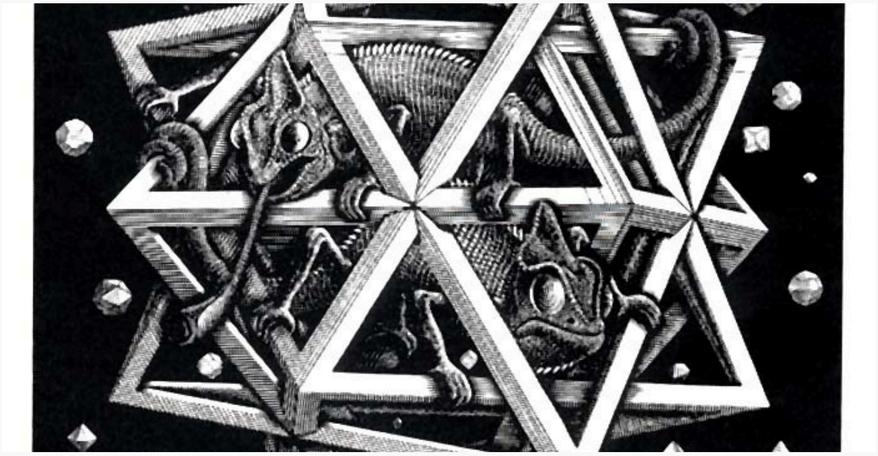
Great Mosque of Kairouan

Alaeddin Mosque

Kilim

Geometric Transformations in Contemporary Art

Three Musician, Pablo Picasso



Stars, M.C. Eschers

Cubism

- Translation, reflection, and rotation.
- Elaborated these patterns into animals, birds, humans, and other figures.
- Pablo Picasso, Maurits Cornelis Escher

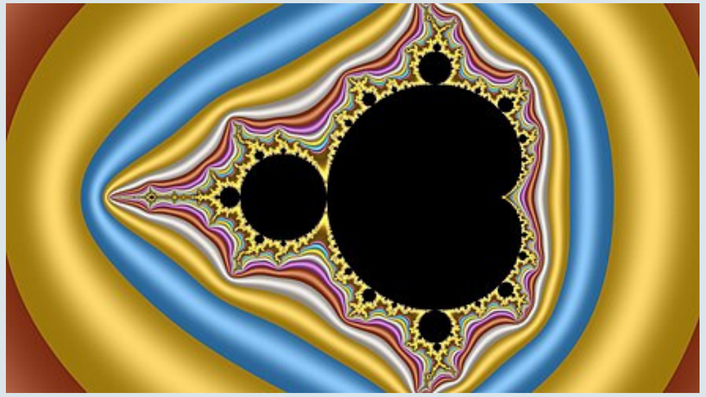
Fractal Art

- Fractal: Geometric shape containing detailed structure at arbitrarily small scales.
- Fractals are used in computer graphics, begining of algorithmic art.
- Benoit Mandelbort

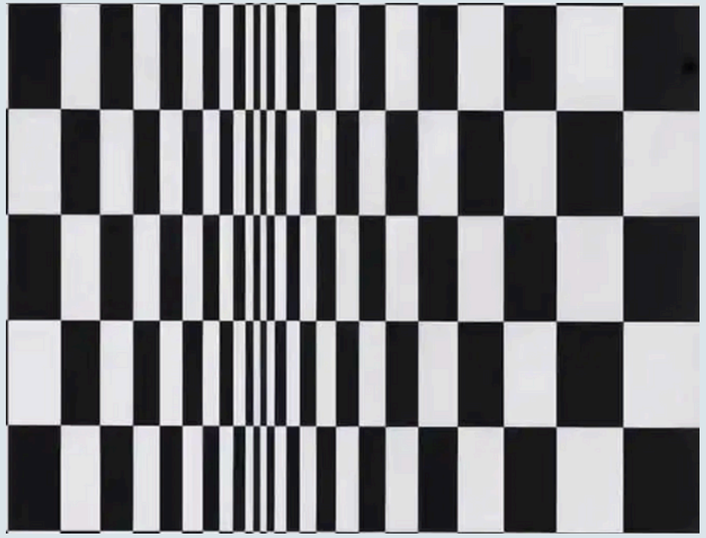
Optical Art

- Repeating geometric shapes, which are usually in black and white colors.
- Dynamics of sightd, creates movements and color.
- Bridget Riley

Geometric Transformations in Contemporary Art



Fractal Art



Optical Art

Algorithmic Art

Thank you