Polygon Triangulation

A. Ahmadi

1390-2

This is an example of formula

$$\frac{\sqrt{2x-1}}{x+1}$$

- First item
- Second
  - 1111
  - book
- this is thirs one.

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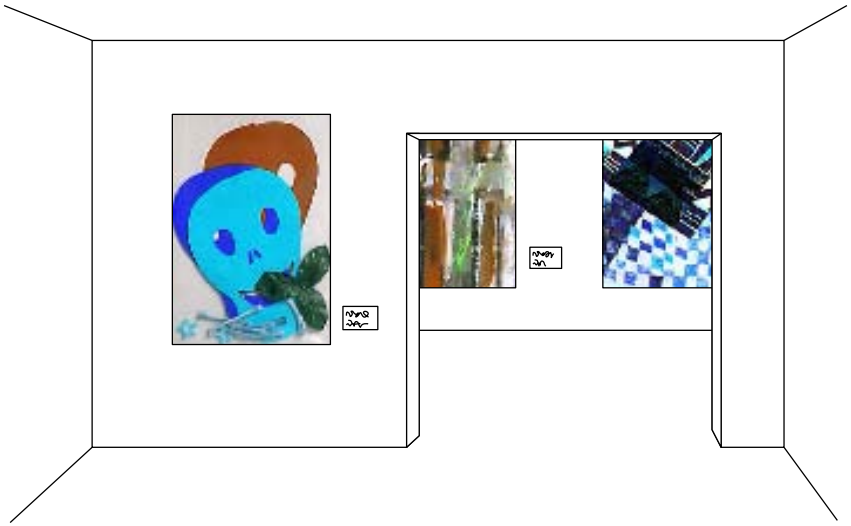
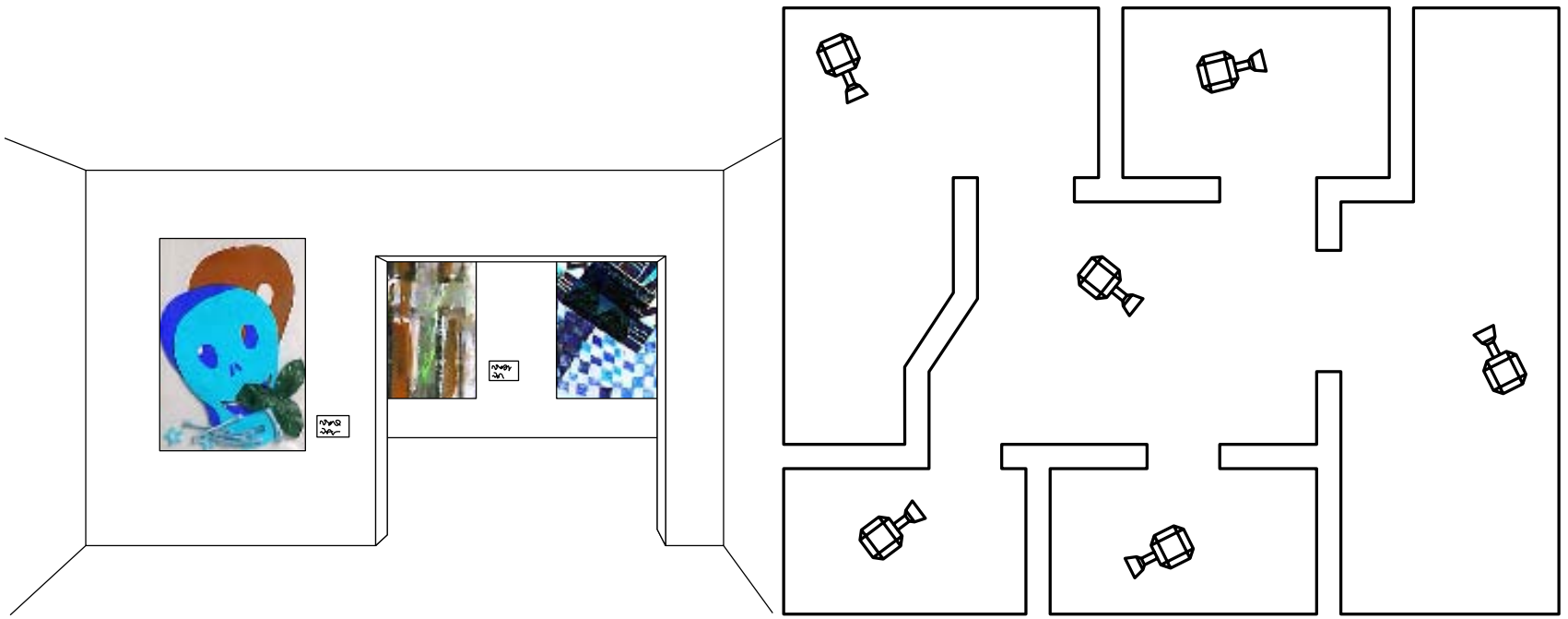
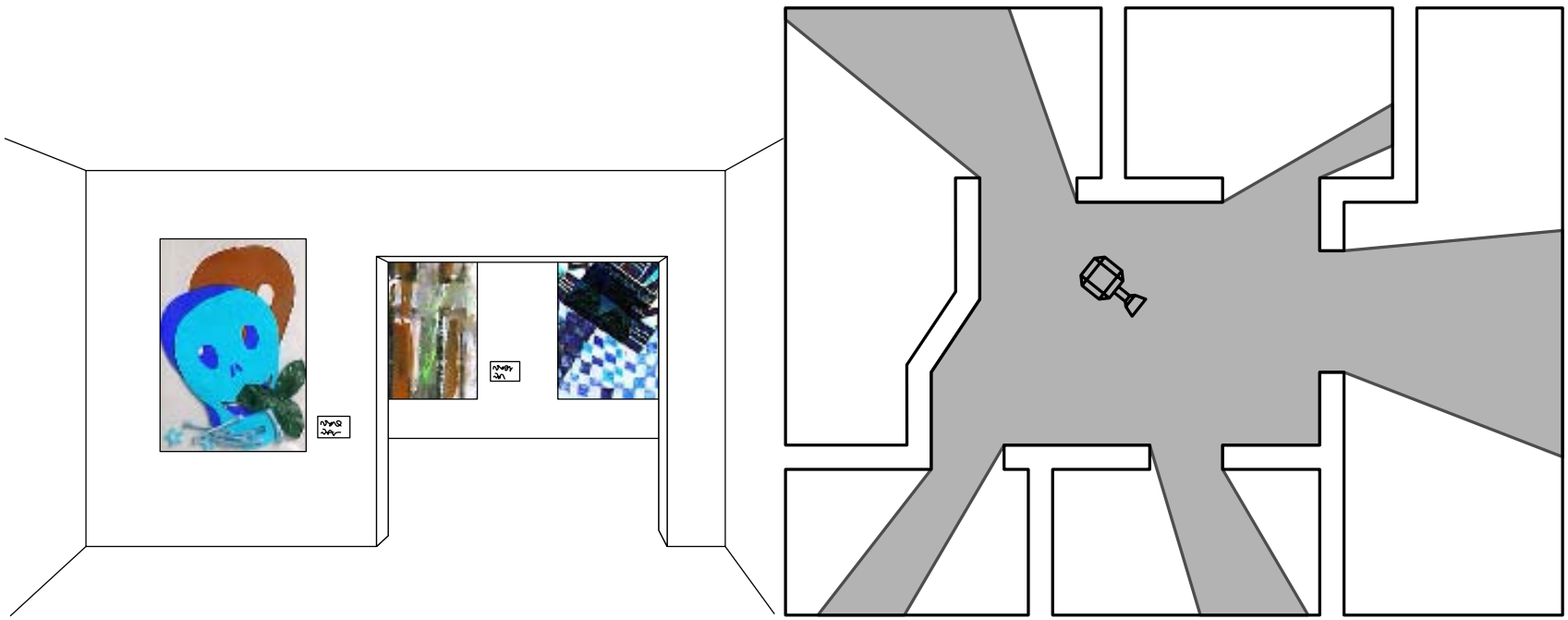


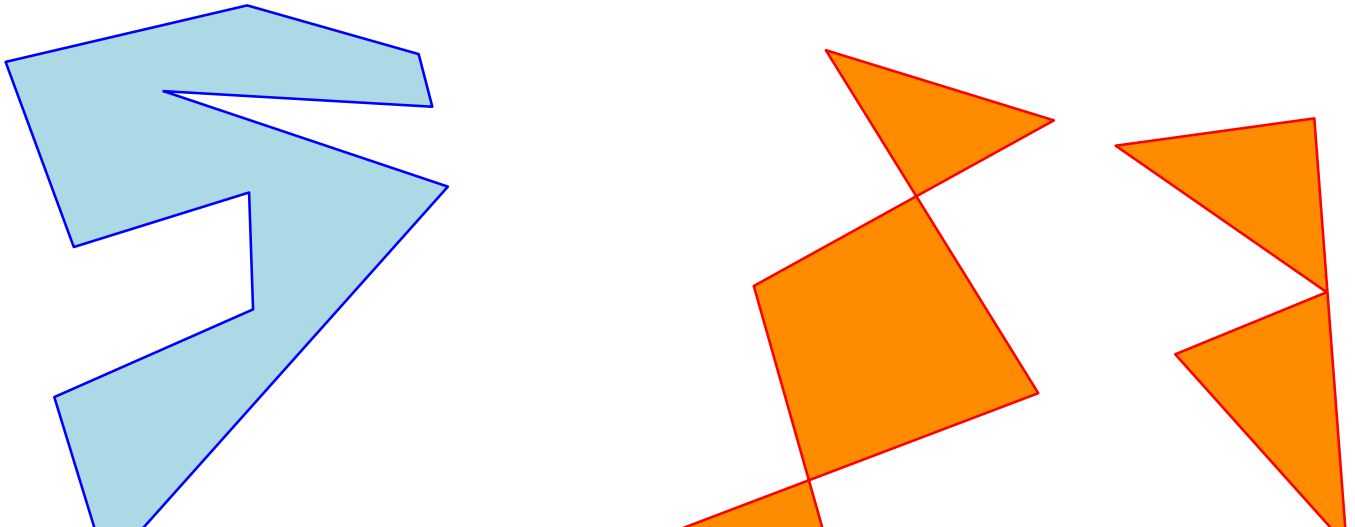




Triangulating Polygons

Definitions

- Simple polygon: Regions enclosed by a single closed polygonal chain that does not intersect itself.
- Question: How many cameras do we need to guard a simple polygon?
  Answer: Depends on the polygon.
- One solution: Decompose the polygon to parts which are simple to guard.



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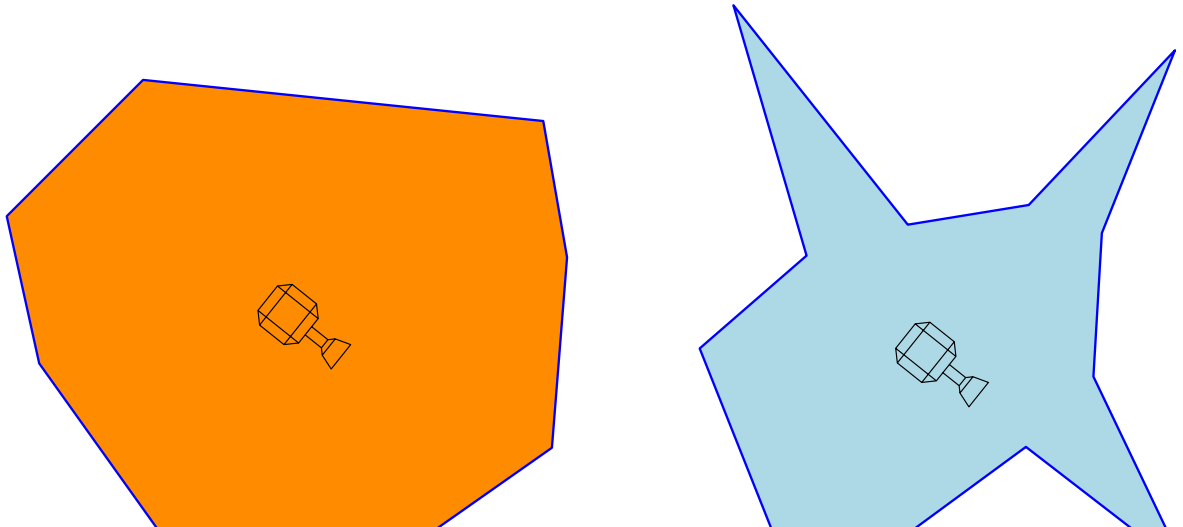

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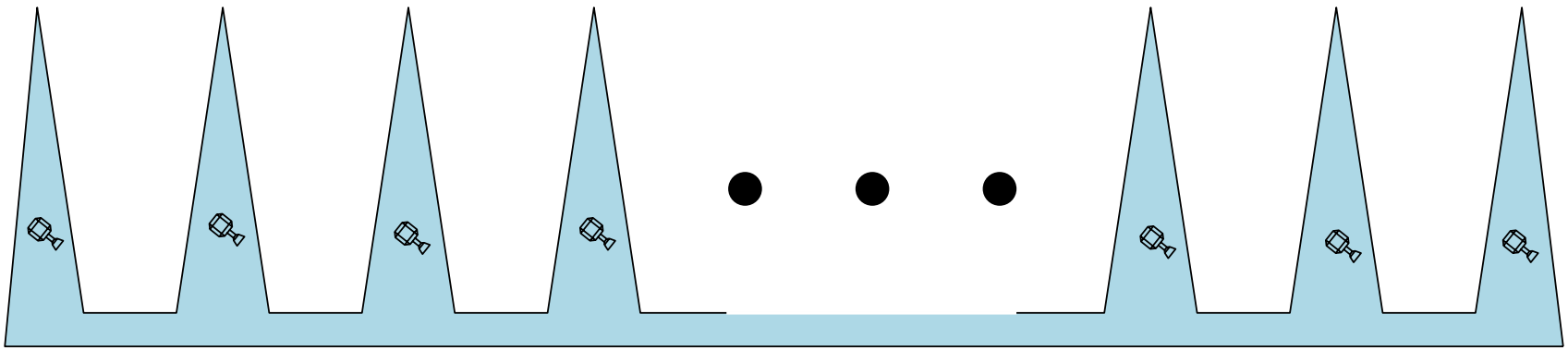

Questions:

- Does a triangulation always exist?
- How many triangles can there be in a triangulation?

Theorem 3.1

Every simple polygon admits a triangulation, and any triangulation of a simple polygon with n vertices consists of exactly $n - 2$ triangles.

Proof. By induction.

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