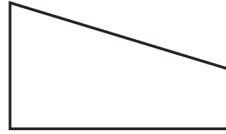


□ Pei's Polygons or Trapped by ...

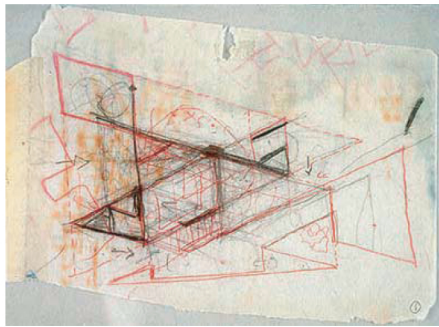
Architect I. M. Pei faced a difficult challenge when he designed the National Gallery of Art East Building. He had to create a building design that would fit the site's irregular, trapezoidal shape.

Here is the shape of the building site:

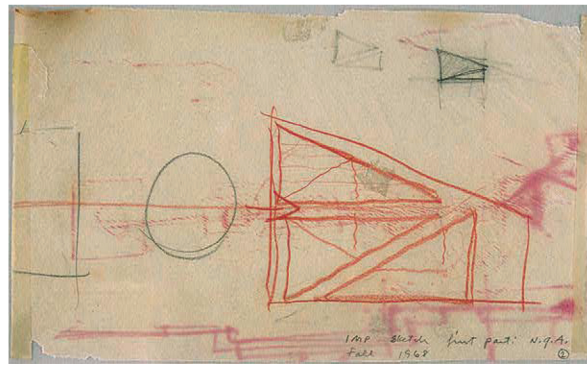


How would you design a museum building to fit into this space? When Pei made his rough sketch, he came up with two triangles . . .

"I sketched a trapezoid on the back of an envelope. I drew a diagonal line across the trapezoid and produced two triangles: one for the museum and one for the study center. This was the beginning."



I. M. Pei
Early conceptual sketch for building plan,
National Gallery of Art East Building
fall 1968



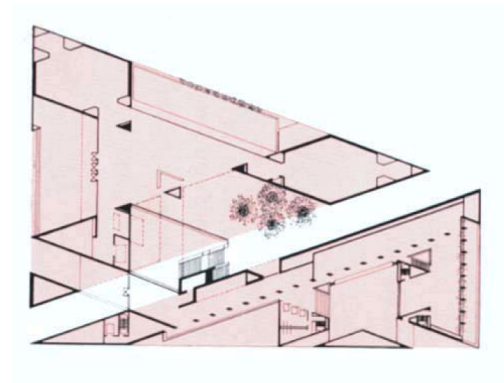
I. M. Pei
Working sketch for building plan,
National Gallery of Art East Building
winter 1969

Pei adopted the triangle and its companion, the pyramid or tetrahedron, as the geometric theme for the new National Gallery East Building.

Here is a diagram of the East Building:

The large triangle houses the atrium and the museum. It is an isosceles triangle. The small triangle houses offices, a study center, and a library. It is a right, scalene triangle.

The shapes of the new gallery's towers, offices, galleries, and elevators are triangles, parallelograms, trapezoids, or hexagons. All can be subdivided into different types of triangles—and then recombined into the more complex polygons so that everything fits together.

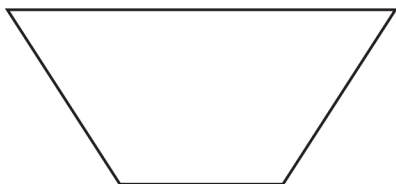


Pei's Polygons or Trapped by ...

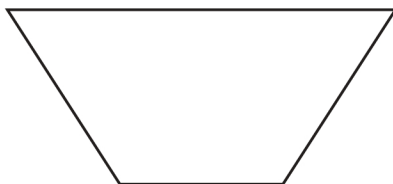
Polygon Patterns:

Using straight lines only, divide these polygons into the number of triangles indicated. Then, cut out the divided polygons and build your own polygonal pattern. Add color to individual triangles.

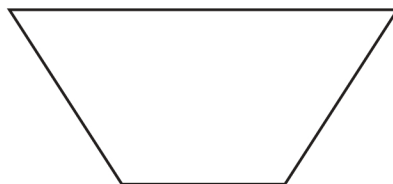
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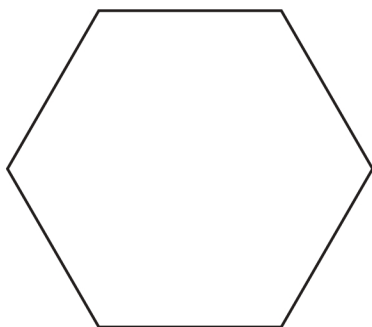
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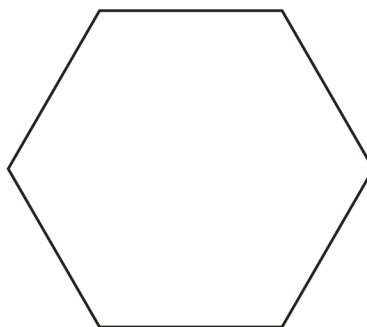
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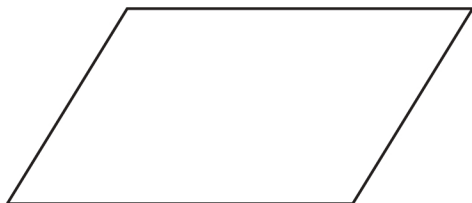
4



6



2



4

