LESSON 5

Architecture is created from basic geometric shapes. In this lesson you will learn to identify those forms which compose the elevation of a building. When studying the elevation of a building, you are able to see different building materials, the elements which make up the building (windows, doors, etc) and the basic geometric shapes that form that building. You will be given the chance to compose your own elevation for *YOUR* building.

Geometry: the study of shapes (2D) and objects (3D).

Elevation: a drawing which shows any side of a building viewed as a two dimensional surface

Two-dimensional: having only two dimensions such as length and height. Not showing any depth.

Sir Christopher Wren, a famous British architect, designed many churches, cathedrals, chapels, and libraries. His works became famous after the Great Fire of London in 1666. Wren used basic geometric shapes to compose simple and elegant elevations of these buildings.

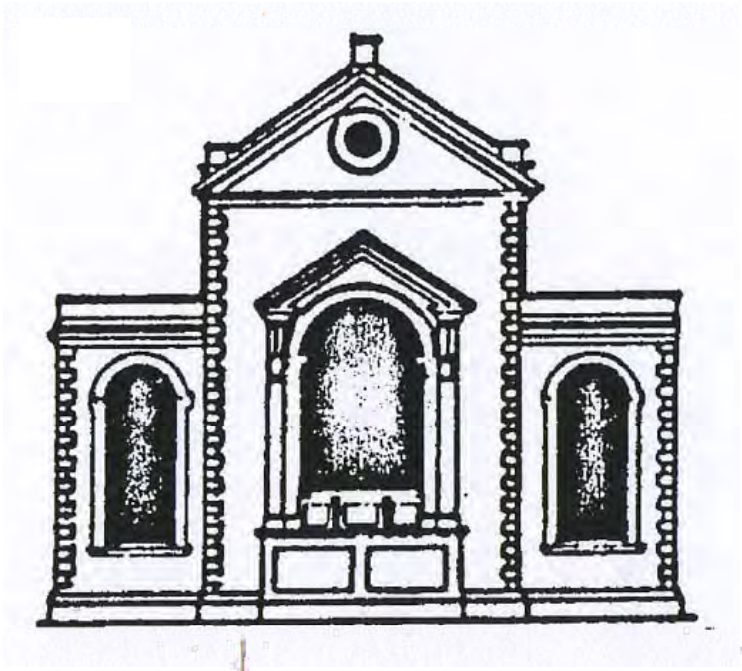
Wren claimed that the basic ideas of architecture are beauty, firmness and convenience. Beauty is harmony of objects, bringing pleasure to the eye. Beauty is in nature, which is rational, geometric, uniform, and proportional. Firmness is the state or quality of being solidly constructed. Convenience is something of value or use.

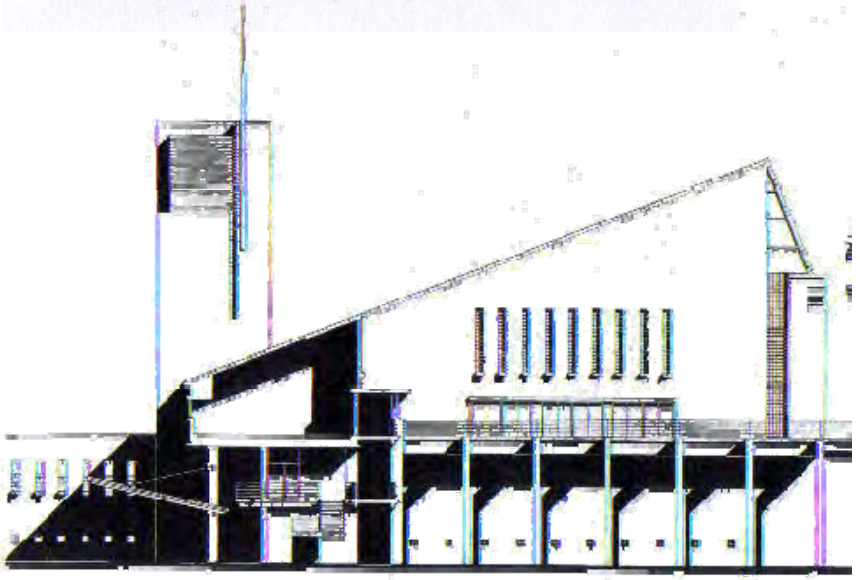
Assignment:

As a class, list and draw as many geometric shapes on the board as possible. Then using a marker trace over the geometric shapes you see in the elevations to the right.

Geometry List:

Elevations:



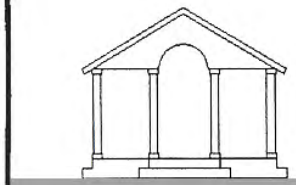
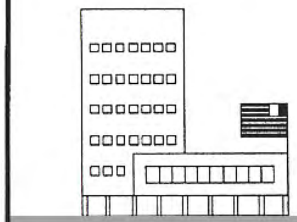
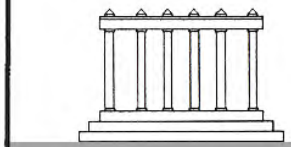
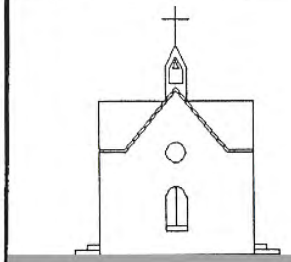


Drawing: Singapore American School, Singapore
Medium: Ink on Mylar, 36" × 24" (91 × 61.4 cm)
Courtesy of Perkins & Will Architects

Architects and engineers use many different shapes when they design a building. These shapes give the building a special look. Each of the buildings on this page has several shapes.

Assignment:

Count each shape that you see and write the number in the box under that shape.

BUILDING	square	rectangle	triangle	circle	semi-circle	other shapes
						
						
						
						

Assignment:

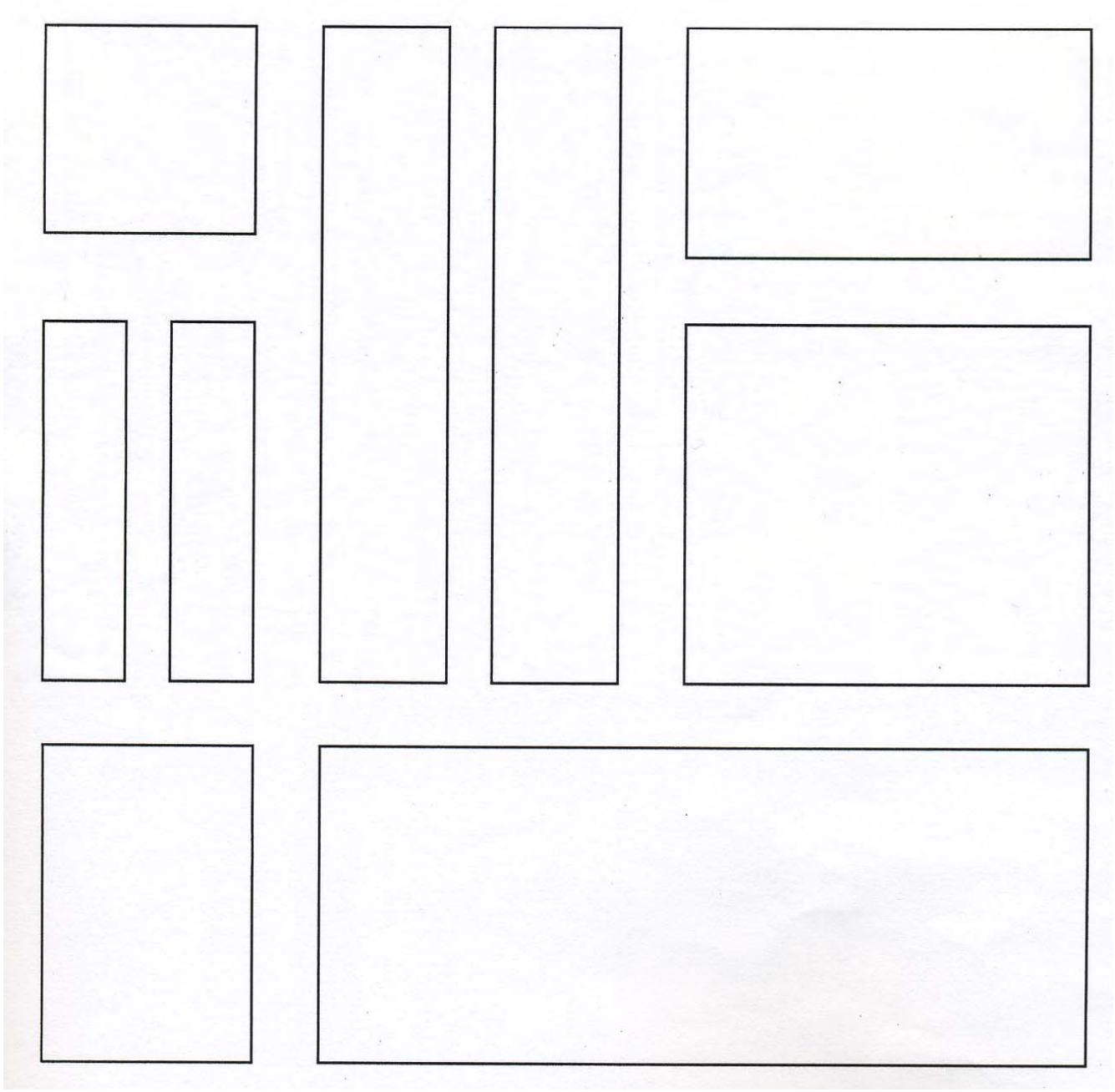
Use this page to compose your elevation. Use the shapes on the next two pages to do this. First lay the shapes down and move them around until you are happy with your elevation, then glue the pieces down.

Assignment:

By cutting and pasting the shapes provided, design at least one elevation for your building. What do you want your elevation to say about your specific building? Should it be symmetrical? Low and horizontal? Tall, wide, solid, open with lots of glass, etc?

When you are done, go back in your free time and add renderings of the building materials that you would use to construct your building. Add people, trees, cars or anything else to your elevation(s)!

Have fun using your creative and visual thinking skills!



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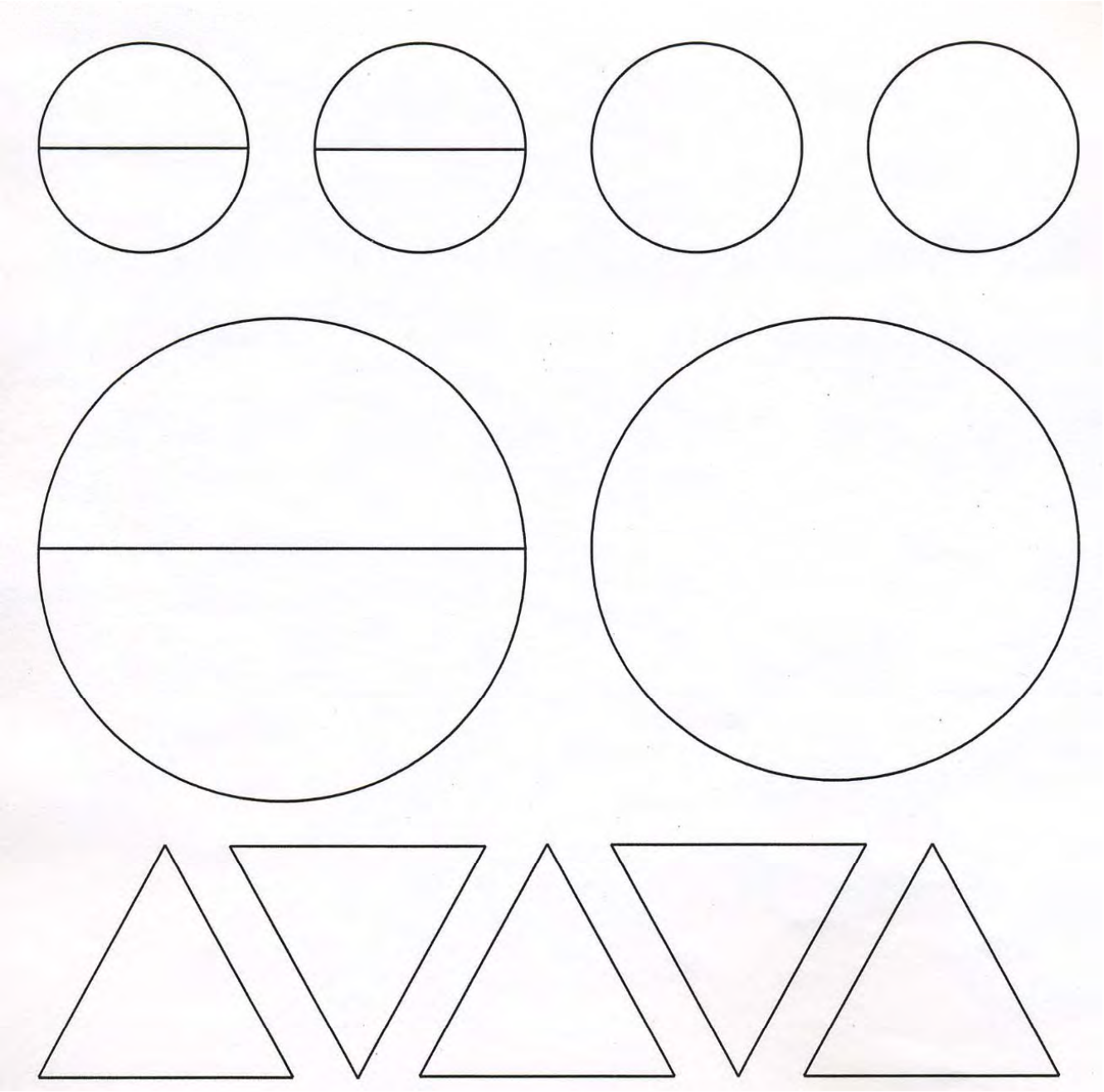

Building of the Week:

San Miniato al Monte was a monastery built in Florence, Italy from 1018 to 1207. Notice the many shapes that are used in the composition of this elevation. This is a very unique Florentine Romanesque church that influenced architects such as Leon Battista Alberti during the Italian Renaissance.