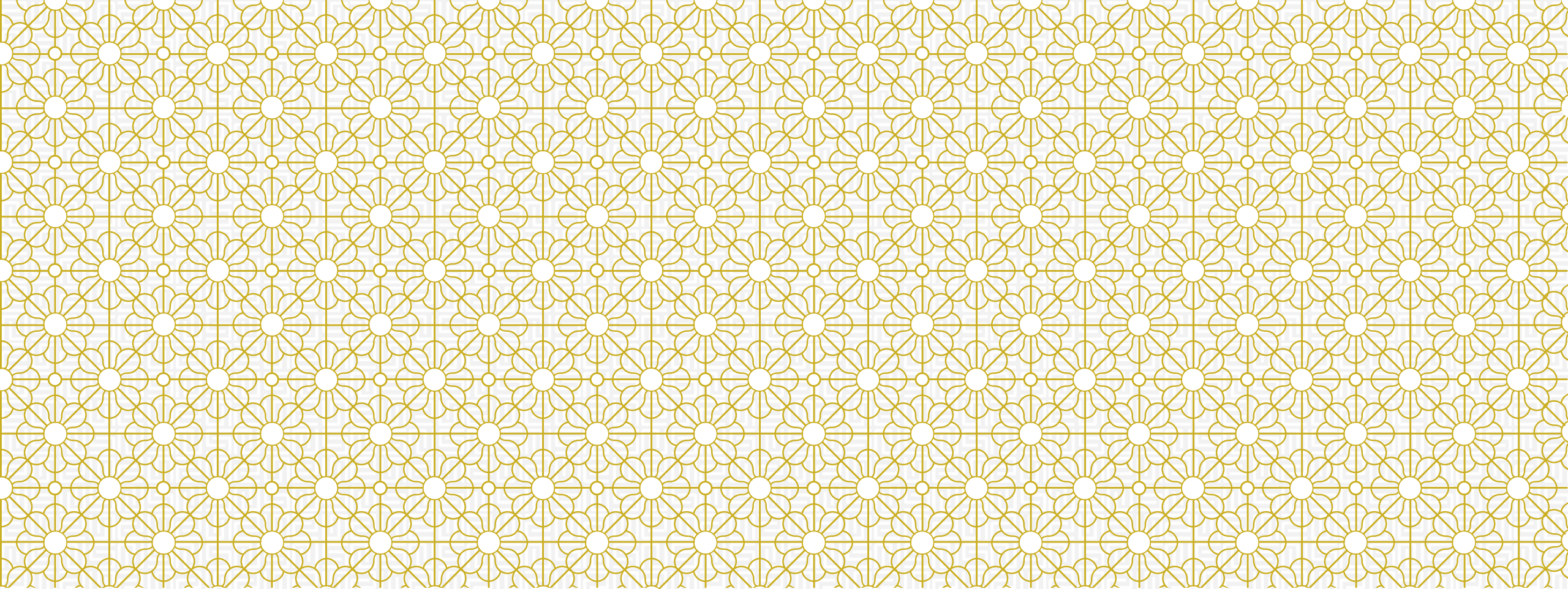




FORM

Shape

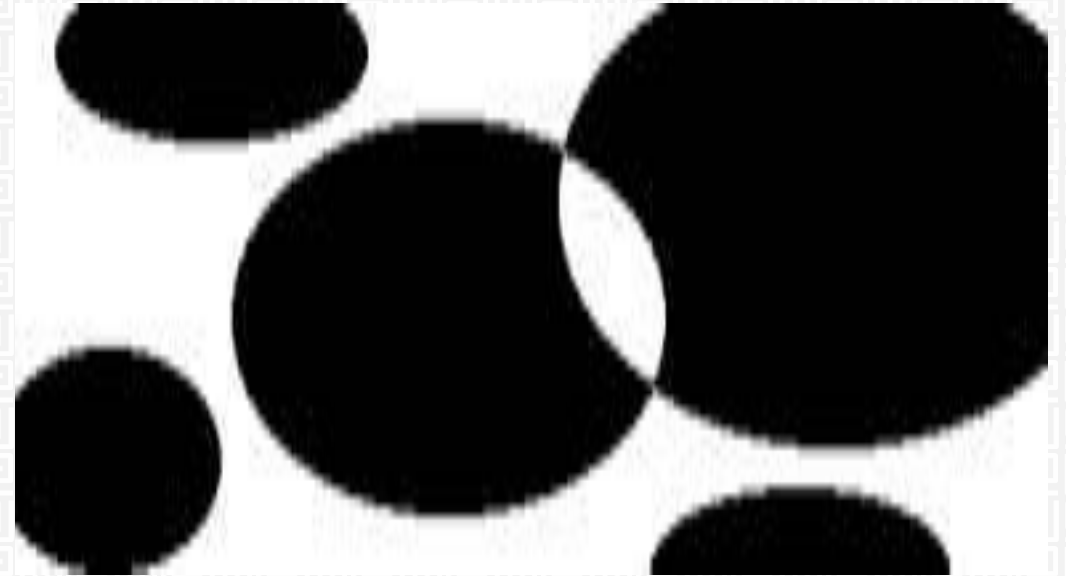
Properties of Form

Transformation of Form

SHAPE

A shape is a visually perceived area created either by an enclosing line or by color or value changes defining the outer edge.

Shape is two-dimensional and has height and width, but no depth.

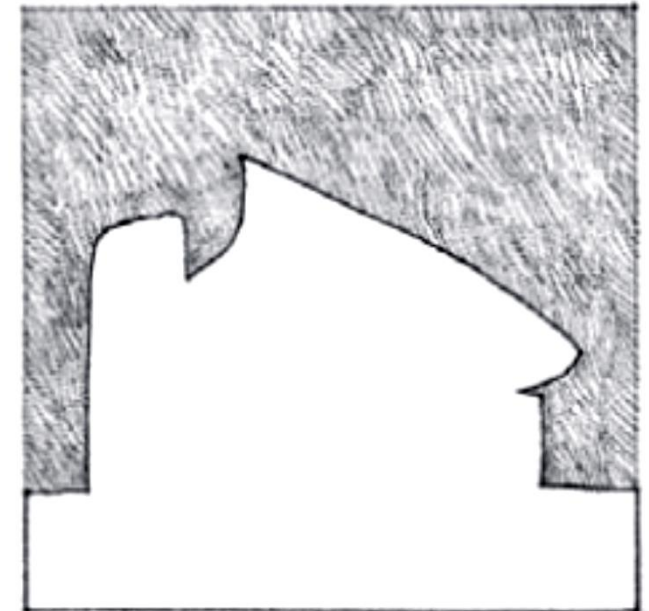
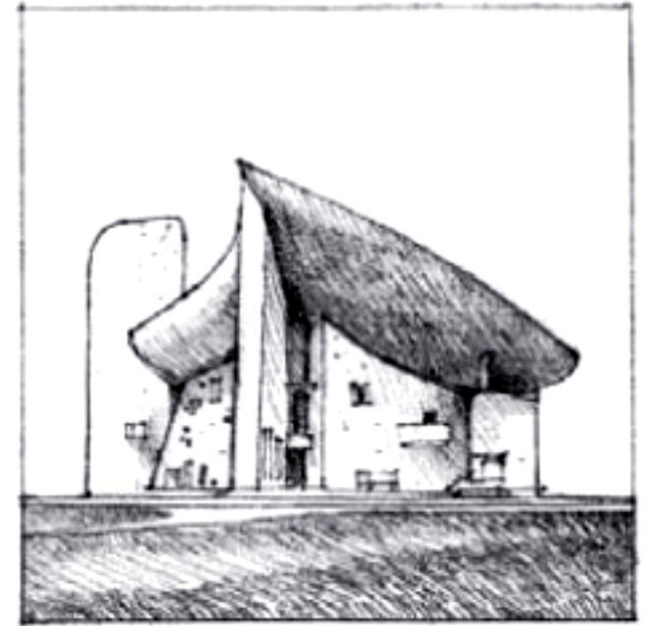


SHAPE

Shape refers to the **characteristic outline** of a **plane figure** or the **surface configuration** of a **volumetric form**.

It is the primary means by which we **recognize, identify, and categorize** particular figures and forms.

Our **perception of shape depends** on the **degree of visual contrast** that exists along the **contour** separating a **figure from its ground** or between a **form and its field**.



TYPES OF SHAPES

There are two general categories that are used to describe shapes.

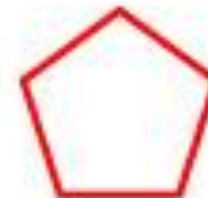
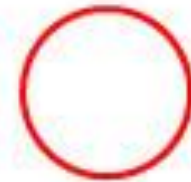
Geometric and **Free-Form** or **Organic** Shapes



TYPES OF SHAPES

Geometric Shapes

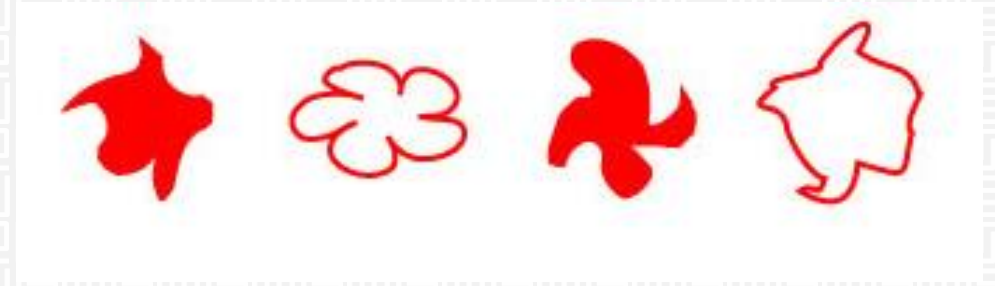
- Can be described using mathematical terms
- are very regular or precise
- are more often found in man-made things
- squares, rectangles, triangles, circles, oval, pentagons and so on.



TYPES OF SHAPES

Free-form or Organic Shapes

- are difficult to describe using definitions
- are irregular or uneven
- are more often found in nature
- the shape of clouds, puddles, trees, leaves, rocks...



TYPES OF SHAPES

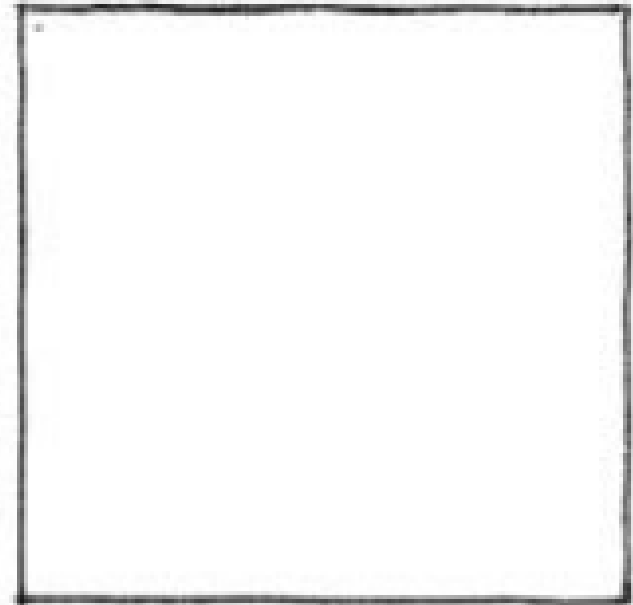
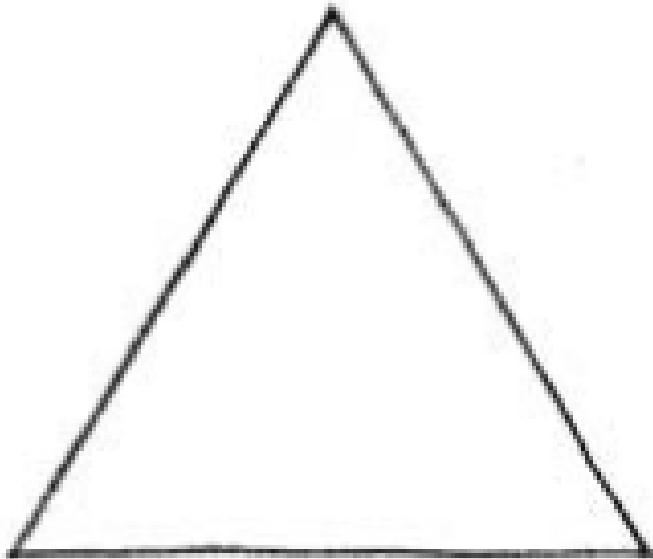
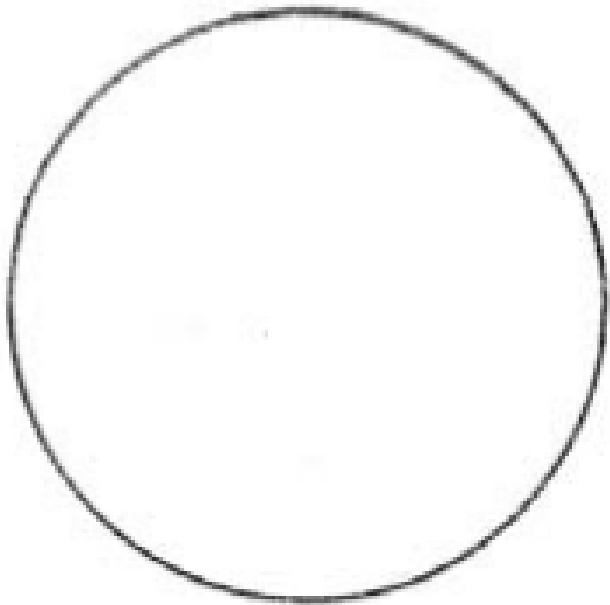
Positive and Negative Shapes

- ❑ shapes may be considered positive or negative depending on how they are used.
- ❑ **Positive shapes** are usually those which are **the subject matter** within a work of art.
- ❑ **Negative shapes** (or space) are those in the background or around the positive shapes.

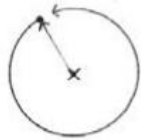
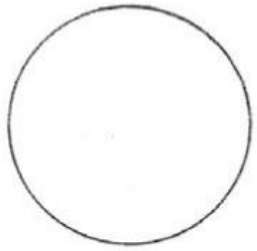


PRIMARY SHAPES

- Gestalt psychology affirms that the mind will simplify the visual environment in order to understand it.
- primary shapes: the **circle**, the **triangle**, and the **square**

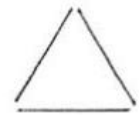
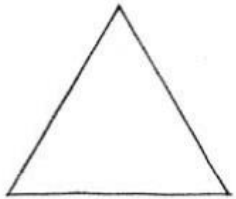


PRIMARY SHAPES



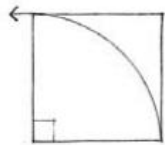
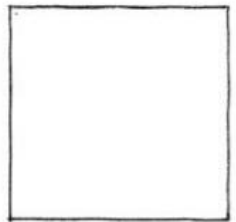
Circle

A plane curve every point of which is equidistant from a fixed point within the curve



Triangle

A plane figure bounded by three sides and having three angles

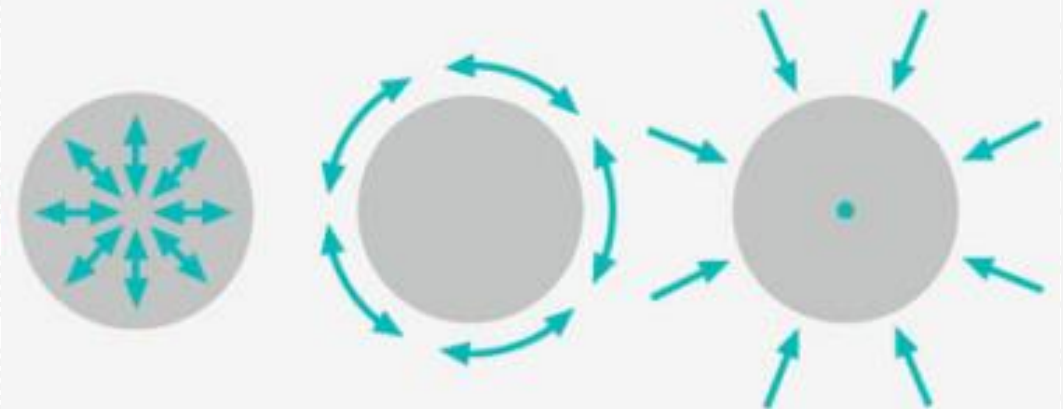
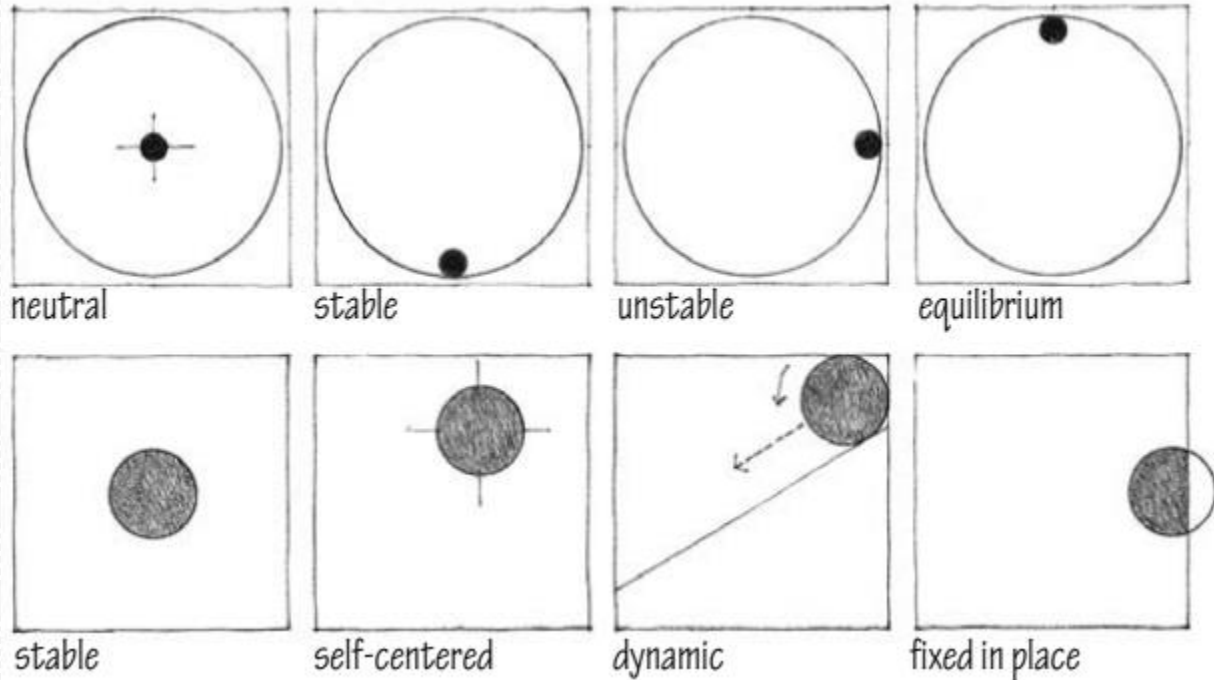


Square

A plane figure having four equal sides and four right angles

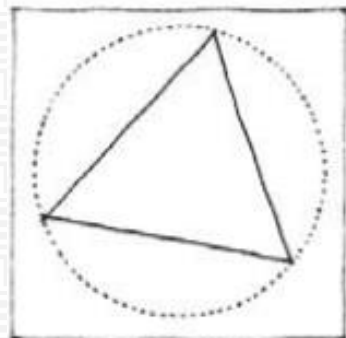
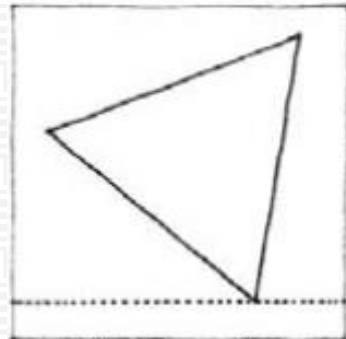
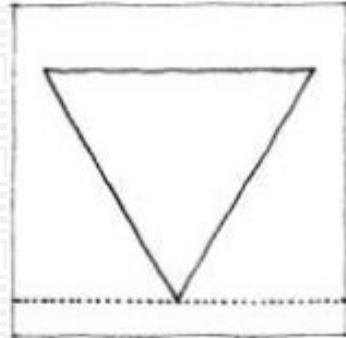
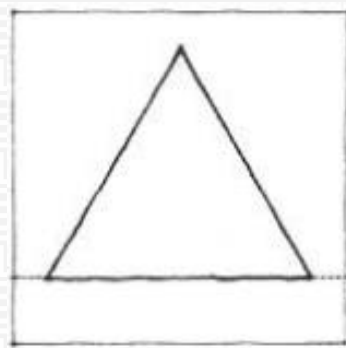
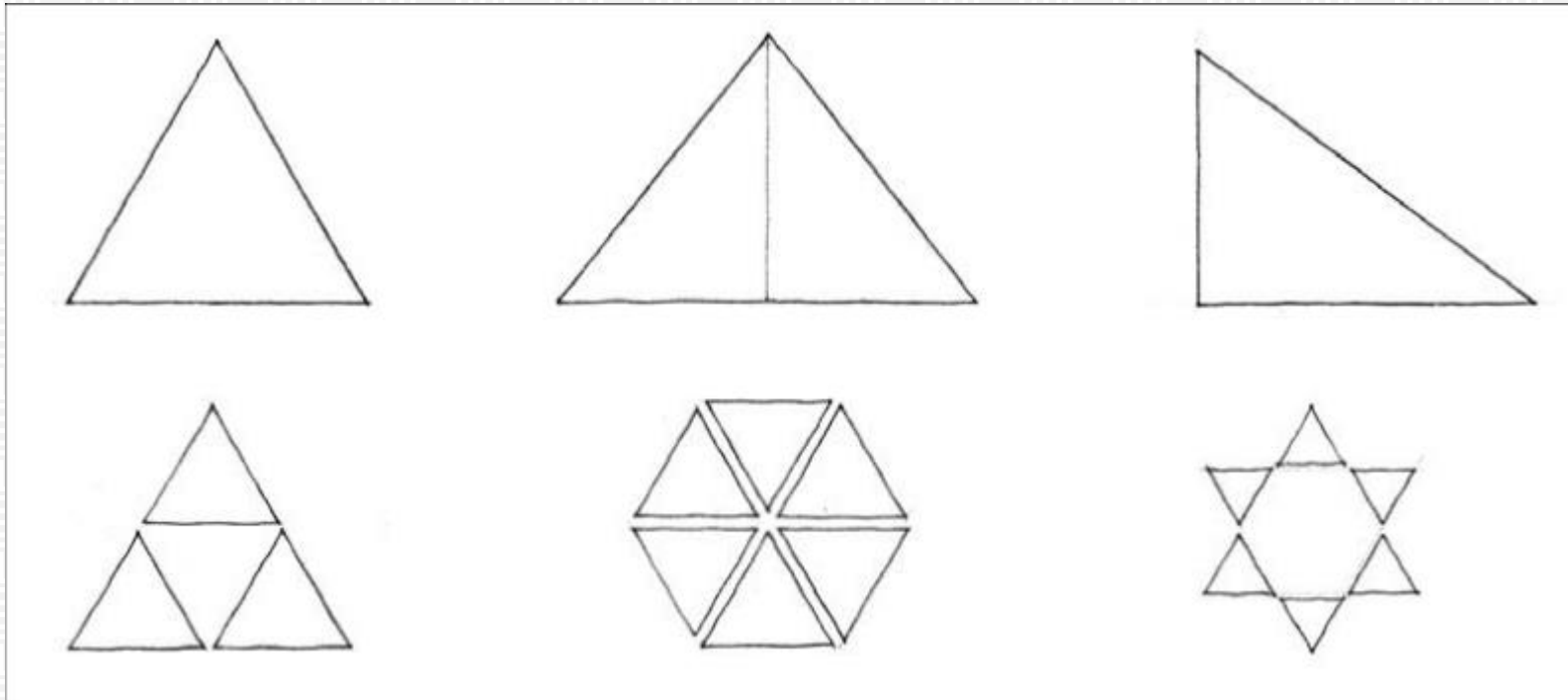
CIRCLE

□ The circle is a centralized, introverted figure that is normally stable and self-centering in its environment.



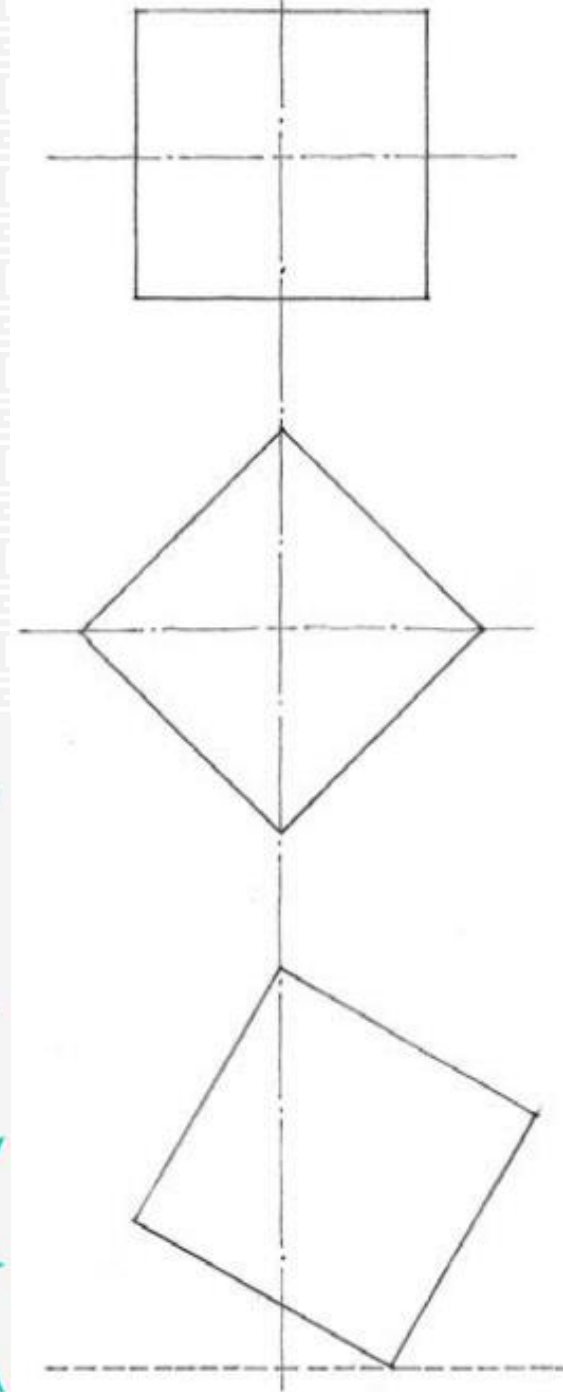
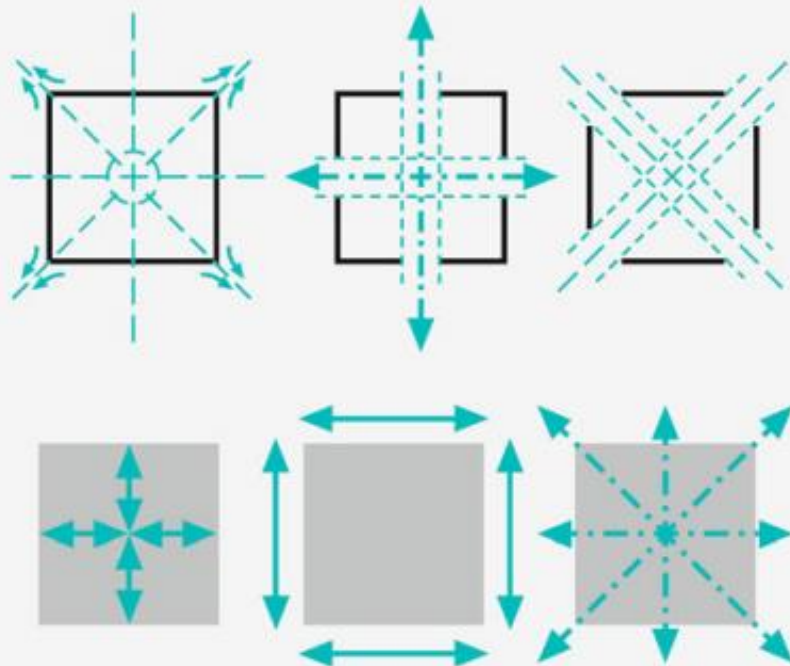
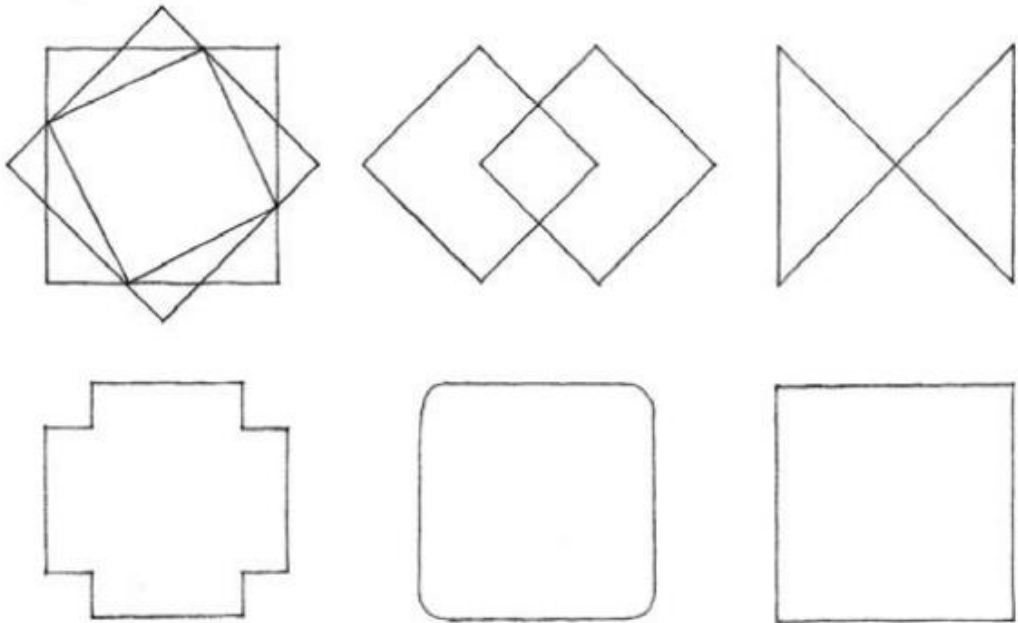
TRIANGLE

The triangle signifies stability.



SQUARE

The square represents the pure and the rational

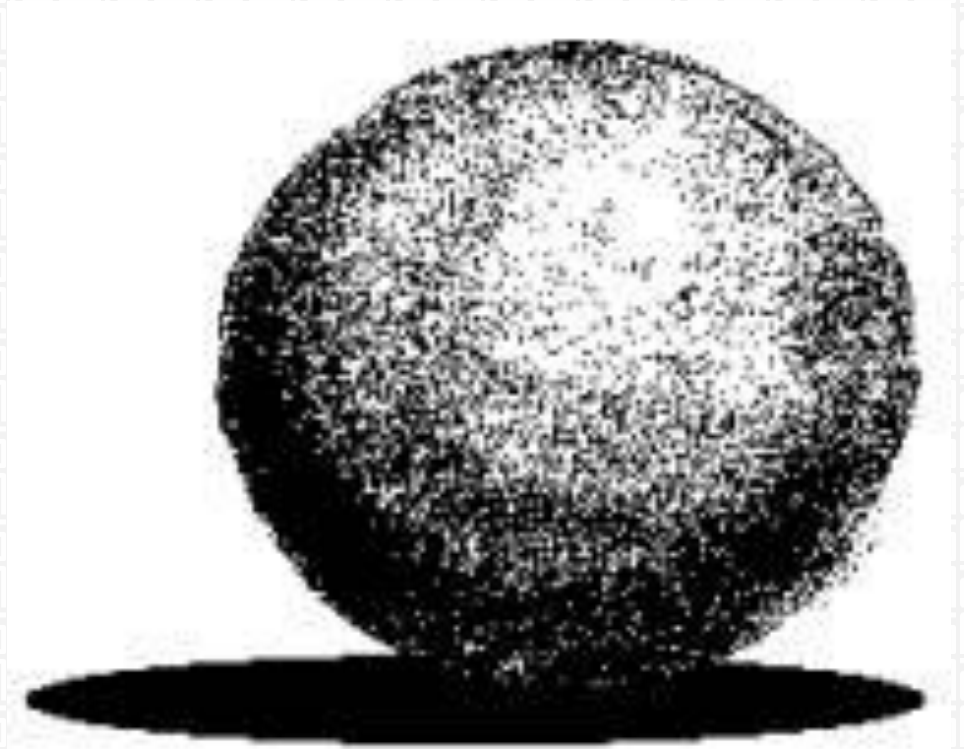


FORM

Form: **Visible aspect** of an **object or figure**.

Form as an **element of design** is more than a shape that is seen; it is **a shape** with definite **size, color and texture**.

It is therefore the **equivalent** of the **summation** of the components that we call **visual element**.



FORM

Types of Forms: depending on the nature of the shape, they can be divided into:

- Geometric and Organic Form: created from geometric and organic shapes
- Positive and Negative Form

FORM

PROPERTIES OF FORM

- Conceptual
- Visual
- Relational
- Practical

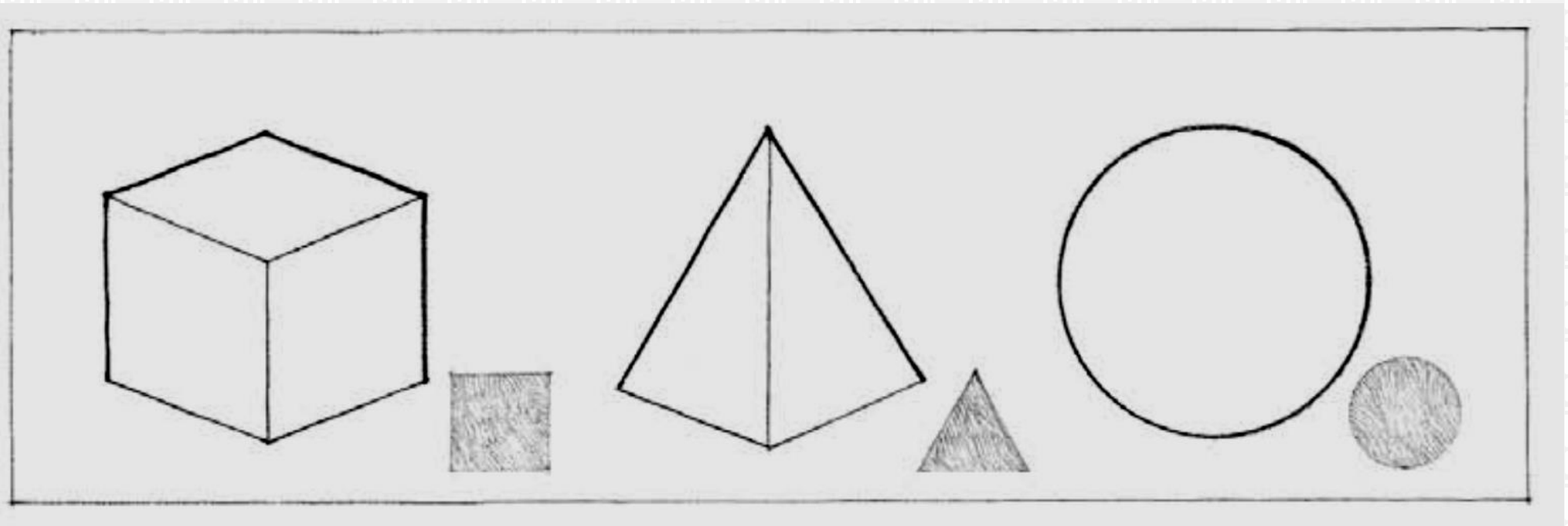
VISUAL PROPERTIES OF FORM

These are representations of conceptual elements on a material medium.

- Shape
- Size
- Color
- Texture

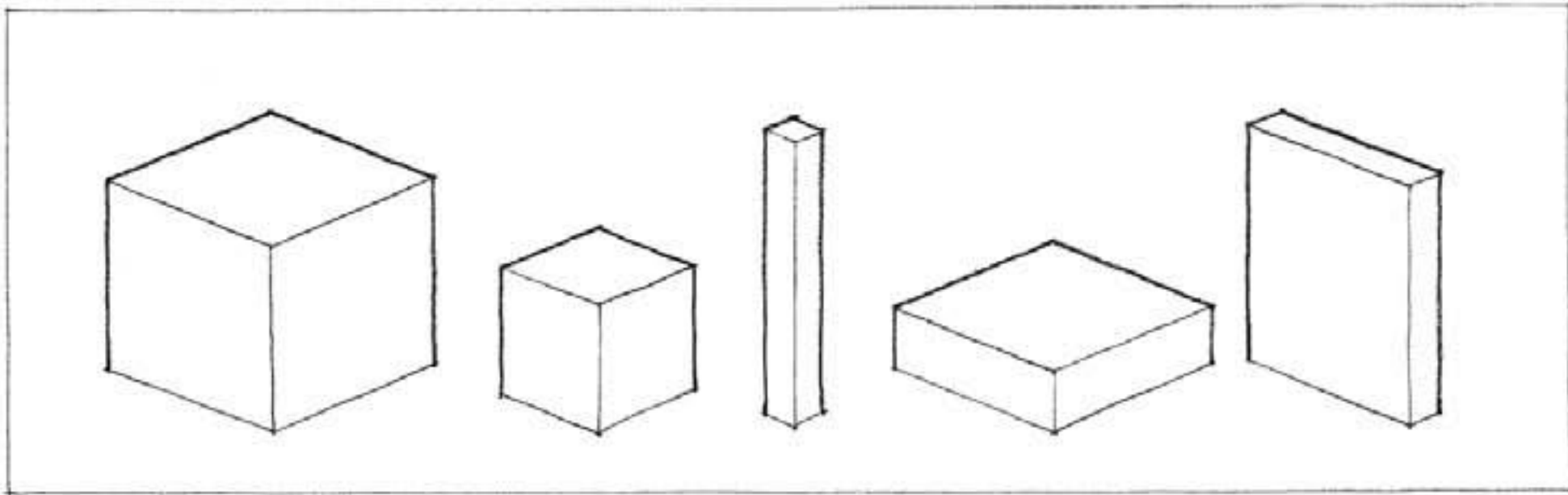
SHAPE

Shape is the principal aspect by which we **identify and categorize forms**.



SIZE

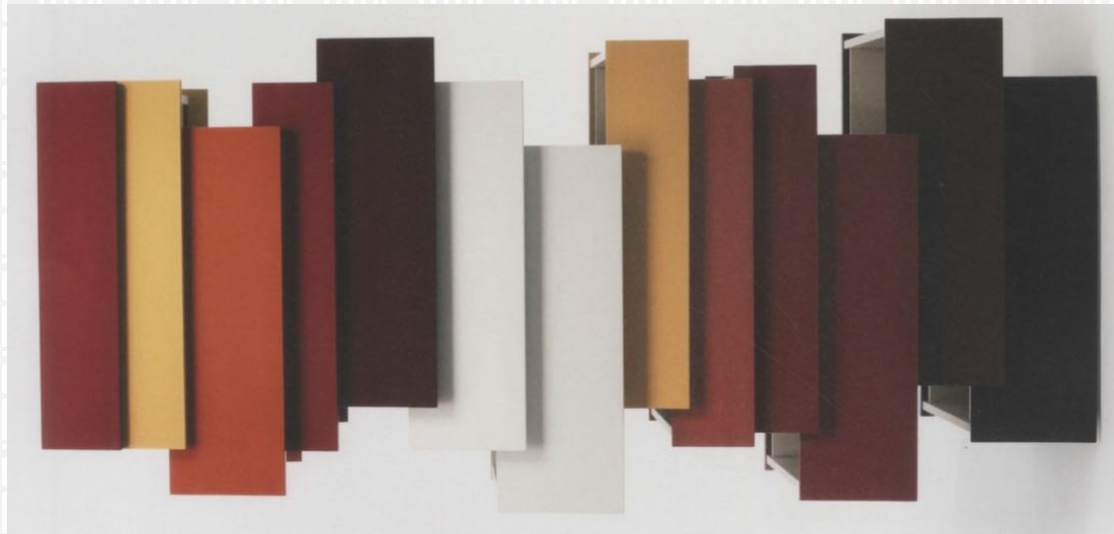
The **physical dimensions** of length, width, and depth of a form. While these **dimensions** determine the **proportions** of a form, its **scale** is determined by its **size relative to other forms in its context**.



COLOR

Color is the attribute that most **clearly distinguishes** a **form** from its **environment**.

It also affects the visual weight of a form.



TEXTURE

The **visual and especially tactile quality** given to a **surface** by the size, shape, arrangement, and proportions of the parts.

Texture also **determines the degree** to which the surfaces of a form **reflect or absorb incident light**.



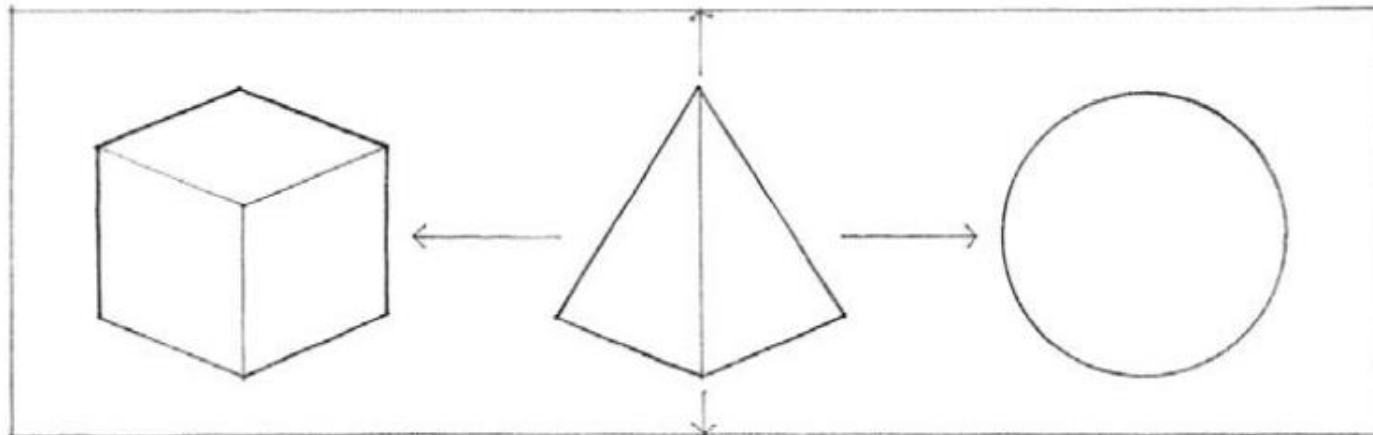
RELATIONAL PROPERTIES OF FORM

Forms also have **relational properties** that govern the **pattern and composition** of elements:

- Position
- Orientation
- Visual Inertia

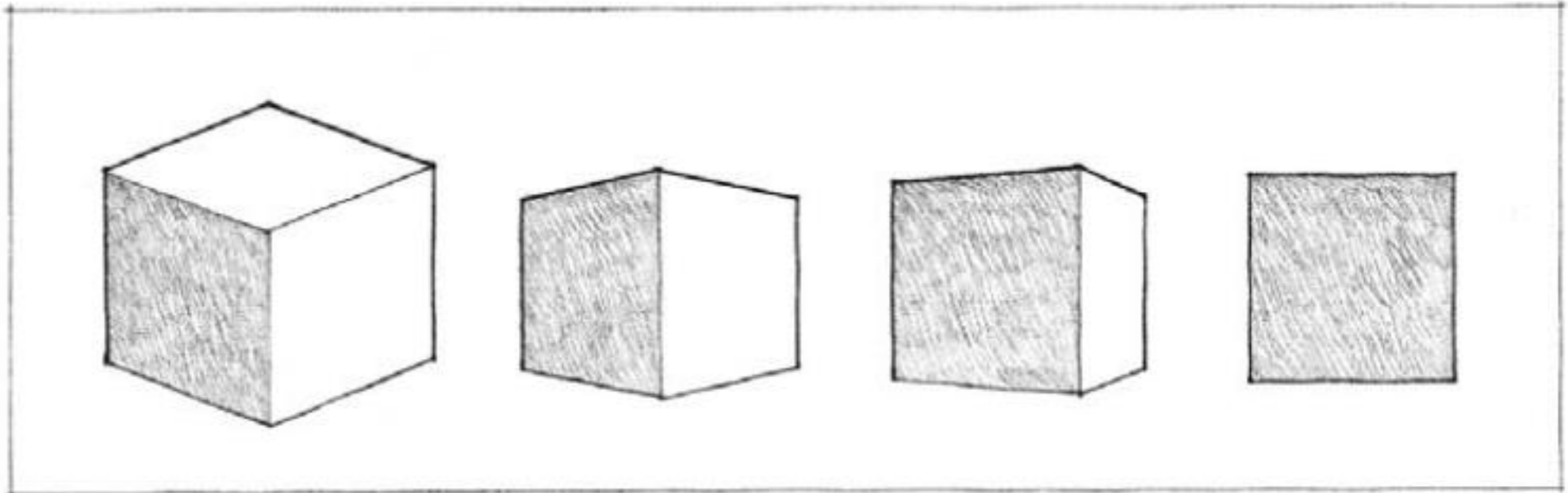
POSITION

- The **location** of a form **relative** to its **environment** or the **visual field** within which it is seen.



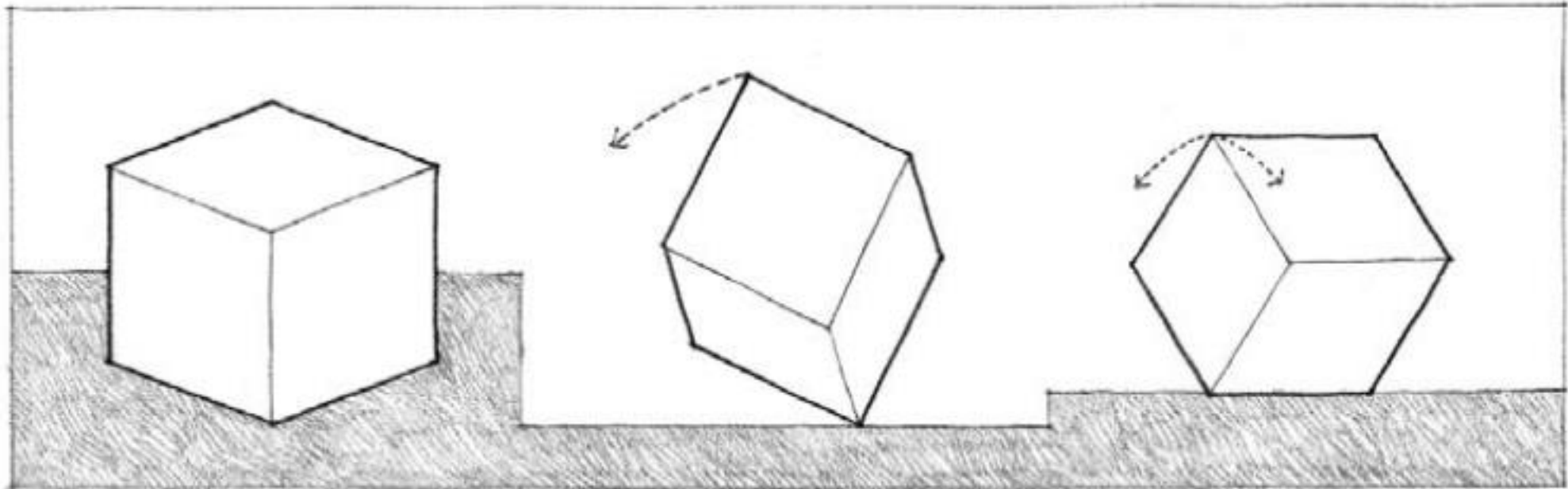
ORIENTATION

Orientation The direction of a form relative to the ground plane, the compass points, other forms, or to the person viewing the form.



VISUAL INERTIA

The **degree of concentration and stability** of a form. The visual inertia of a form **depends on** its **geometry** as well as its **orientation relative to the ground plane, the pull of gravity, and our line of sight.**

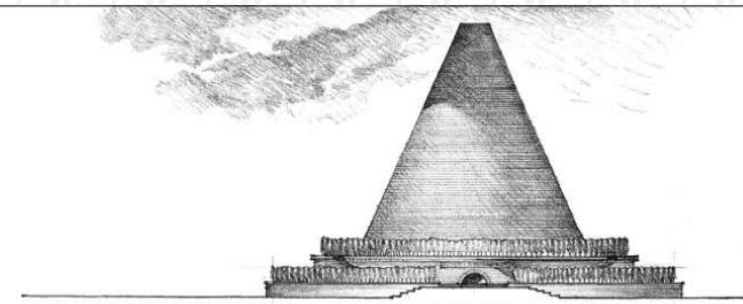
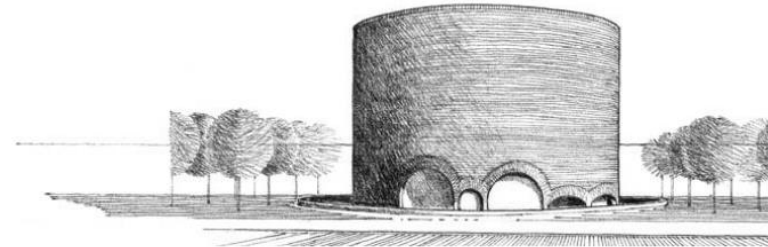
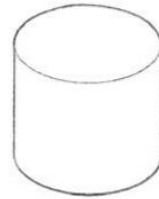
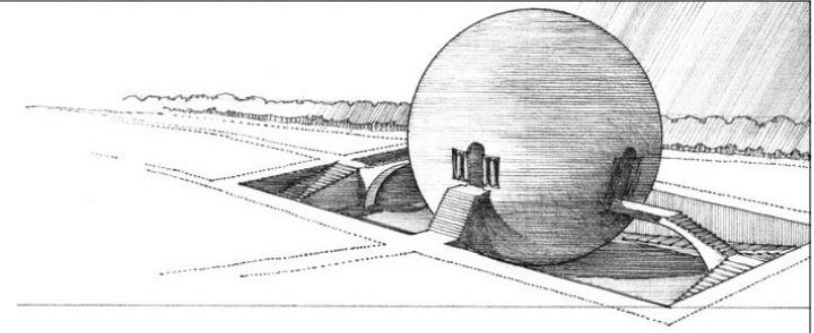
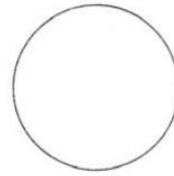


PRACTICAL PROPERTIES OF FORM

- the content of any design: a framework that can be used to describe what is behind every design work.
- **Representation.** When a shape is derived from nature or the man-made world, it is representational. Representation may be realistic, stylized or near-abstract.
- **Meaning.** Meaning is present when the design conveys a message.
- **Function.** Function is present when a design is to serve a purpose.

PRIMARY SOLIDS

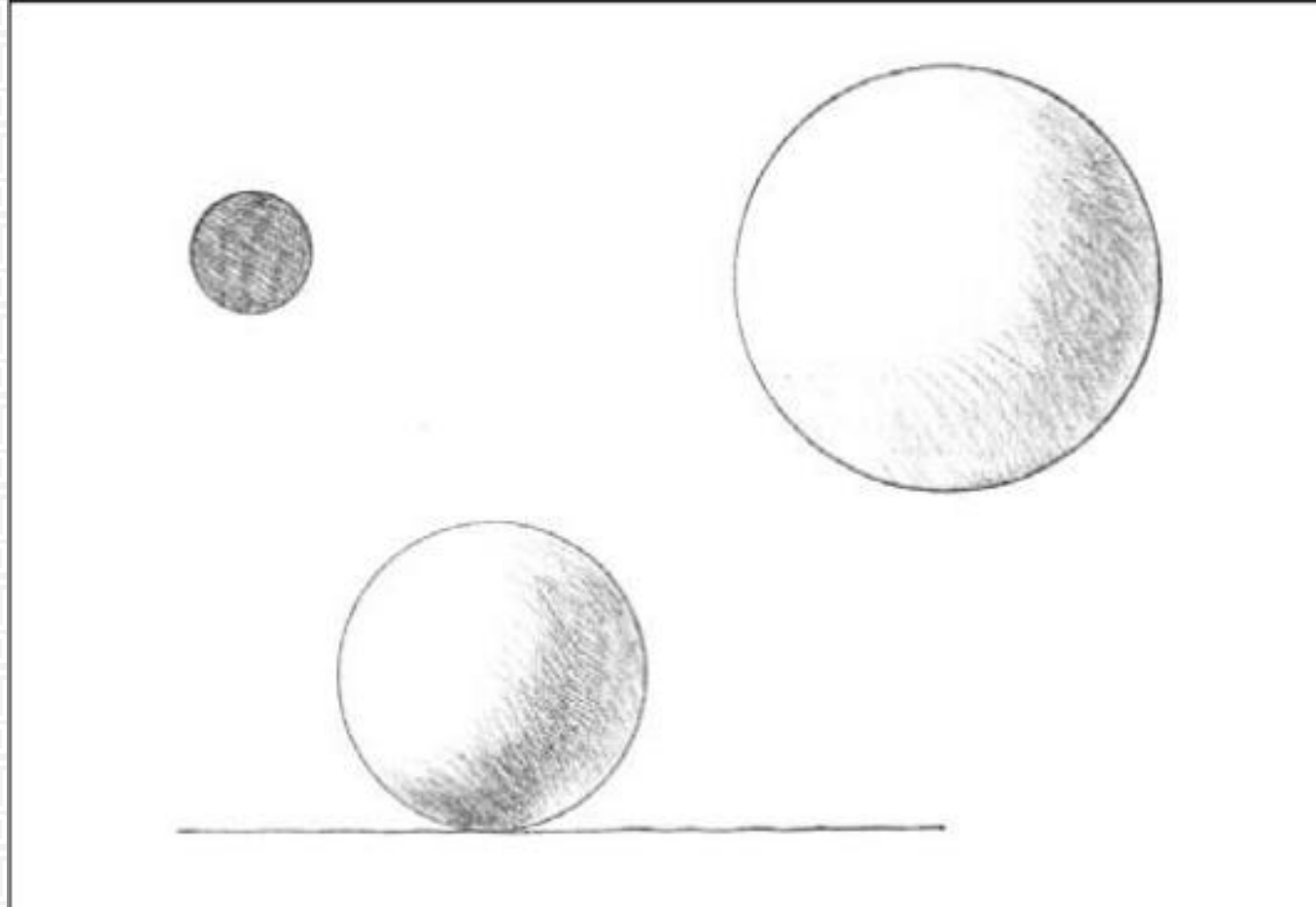
□ Primary shapes extended or rotated to generate volumetric forms or solids that are distinct, regular, and easily recognizable.



PRIMARY SOLIDS

SPHERE

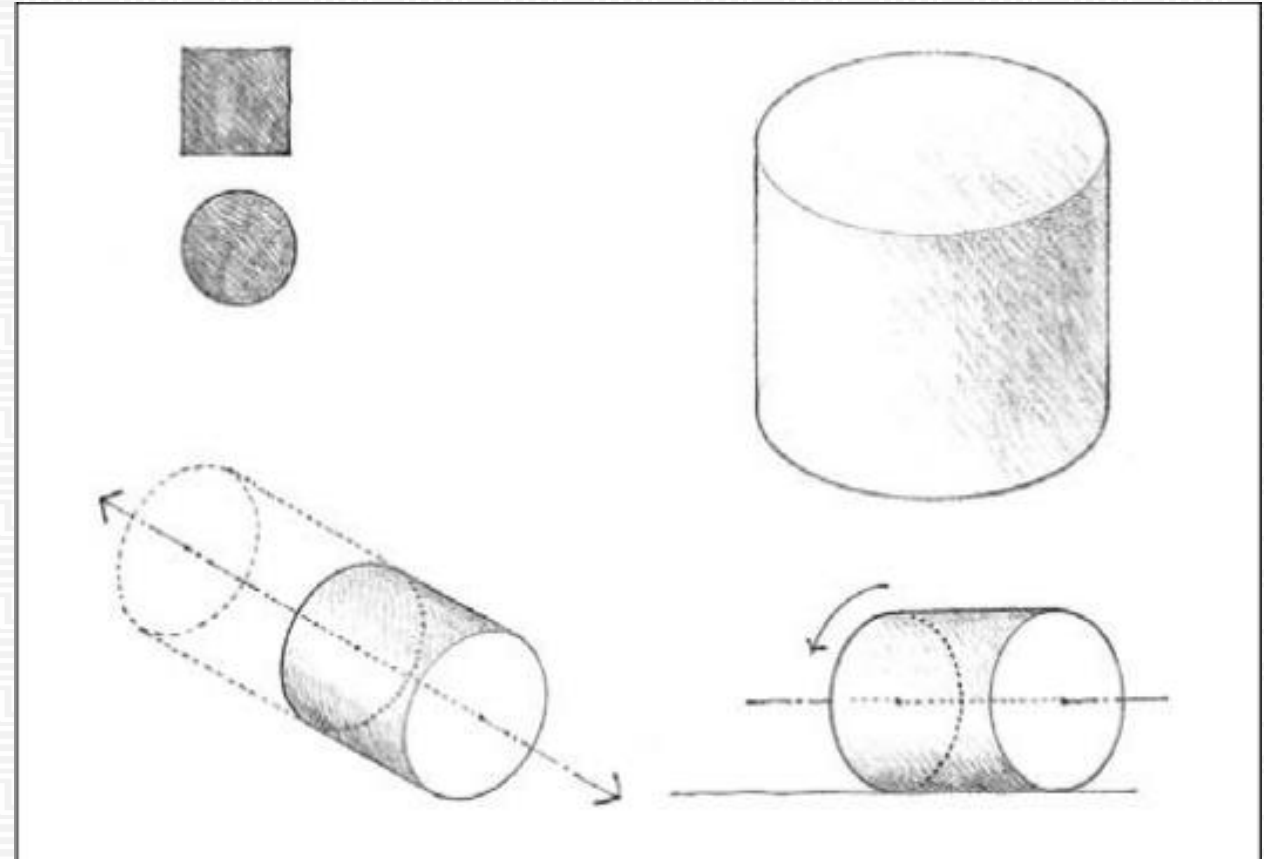
□ A solid generated by the revolution of a semicircle about its diameter, whose surface is at all points equidistant from the center



PRIMARY SOLIDS

CYLINDER

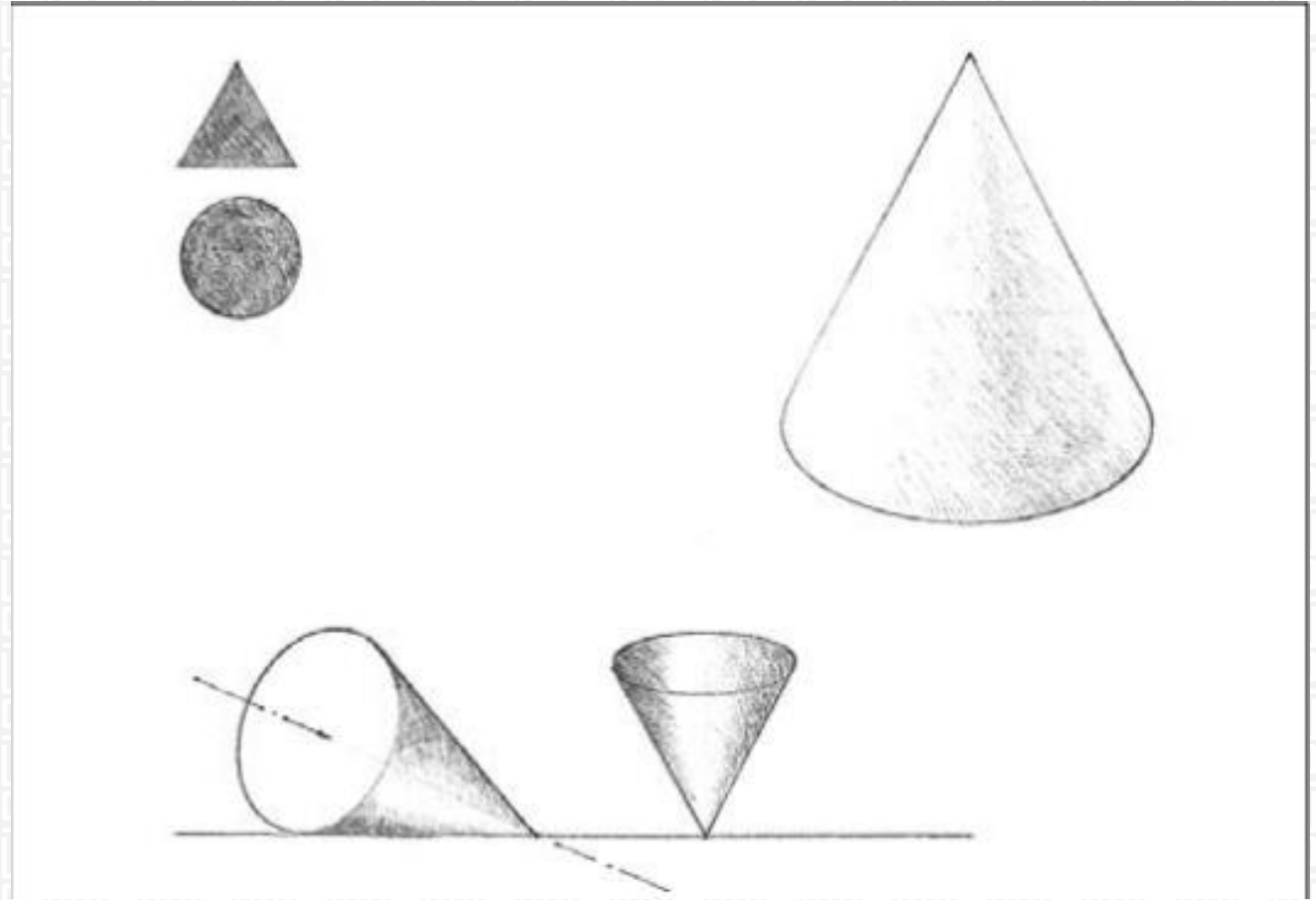
□ A solid generated by the revolution of a rectangle about one of its sides.



PRIMARY SOLIDS

CONE

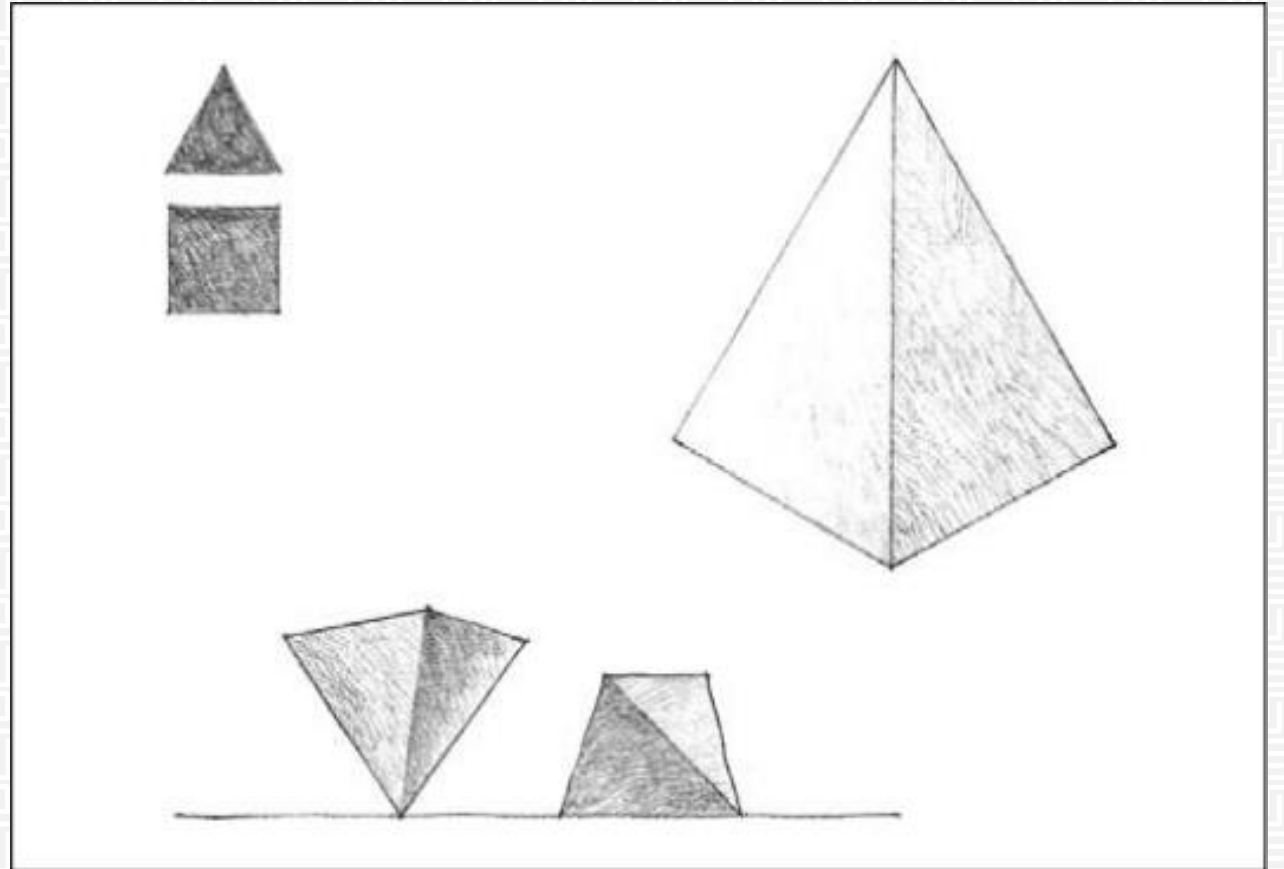
□ A solid generated by the revolution of a rectangle about one of its sides.



PRIMARY SOLIDS

PYRAMID

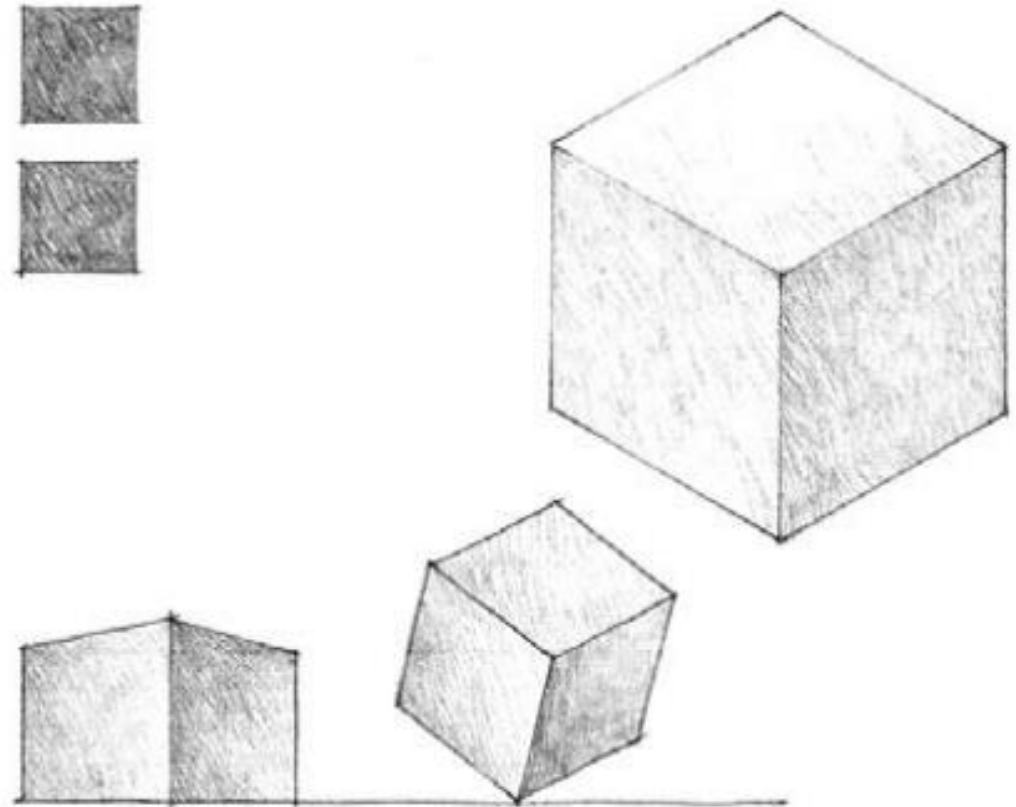
□ A polyhedron having a polygonal base and triangular faces meeting at a common point or vertex.



PRIMARY SOLIDS

CUBE

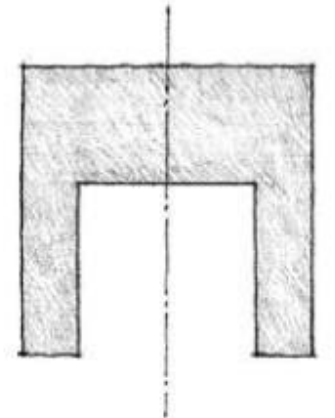
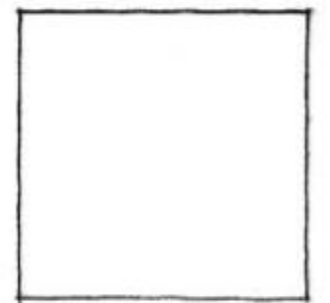
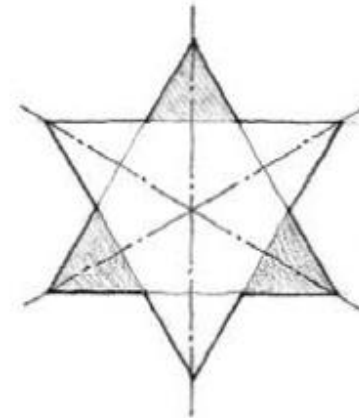
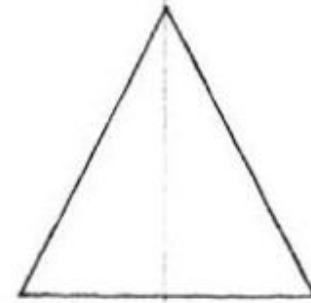
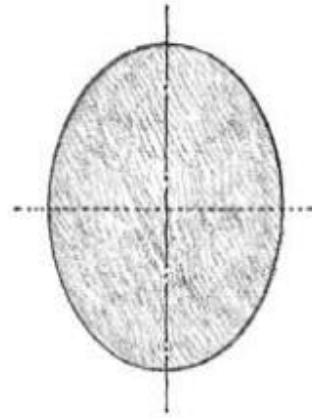
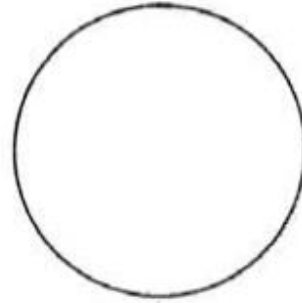
□ A prismatic solid bounded by six equal square sides, the angle between any two adjacent faces being a right angle.



REGULAR AND IRREGULAR FORM

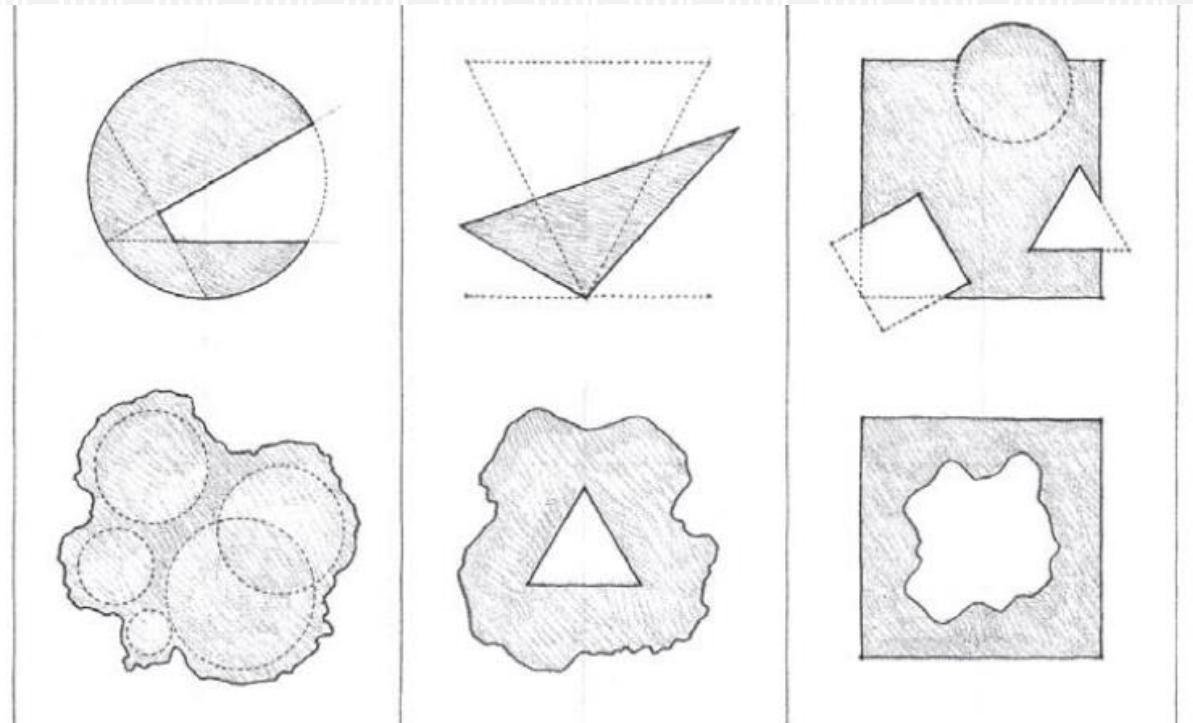
Regular forms refer to those whose parts are related to one another in a consistent and orderly manner

Forms can retain their regularity even when transformed

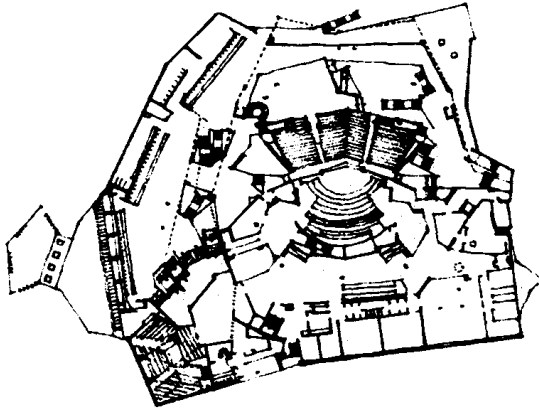


REGULAR AND IRREGULAR FORM

- ❑ Irregular forms are those whose parts are dissimilar in nature and related to one another in an inconsistent manner.
- ❑ Since we deal with both solid masses and spatial voids in architecture, regular forms can be contained within irregular forms. In a similar manner, irregular forms can be enclosed by regular forms.

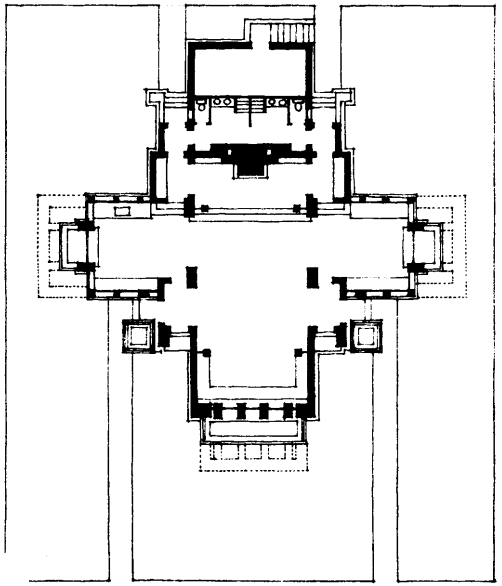


REGULAR AND IRREGULAR FORMS



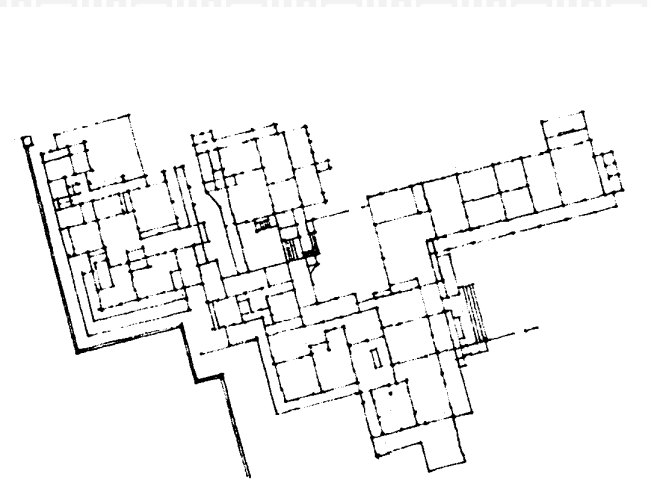
A Regular Composition of Regular Forms:

Coonley Playhouse, Riverside, Illinois, 1912, Frank Lloyd Wright



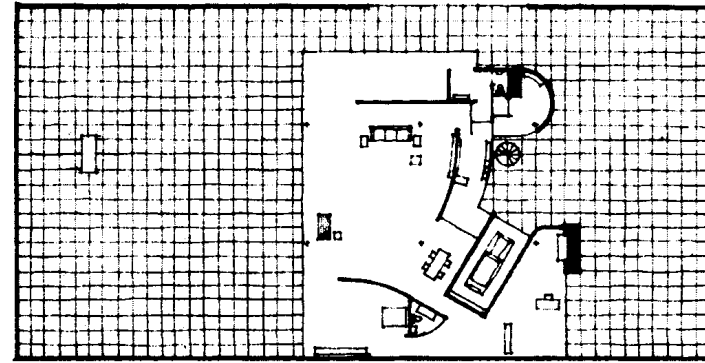
Irregular Forms:

Philharmonic Hall, Berlin, 1956-63, Hans Scharoun



An Irregular Composition of Regular Forms:

Katsura Palace, Kyoto, Japan, 17th century

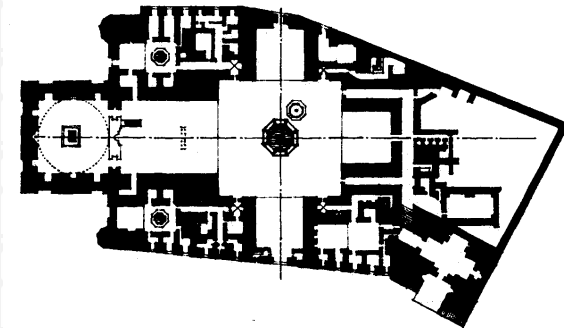


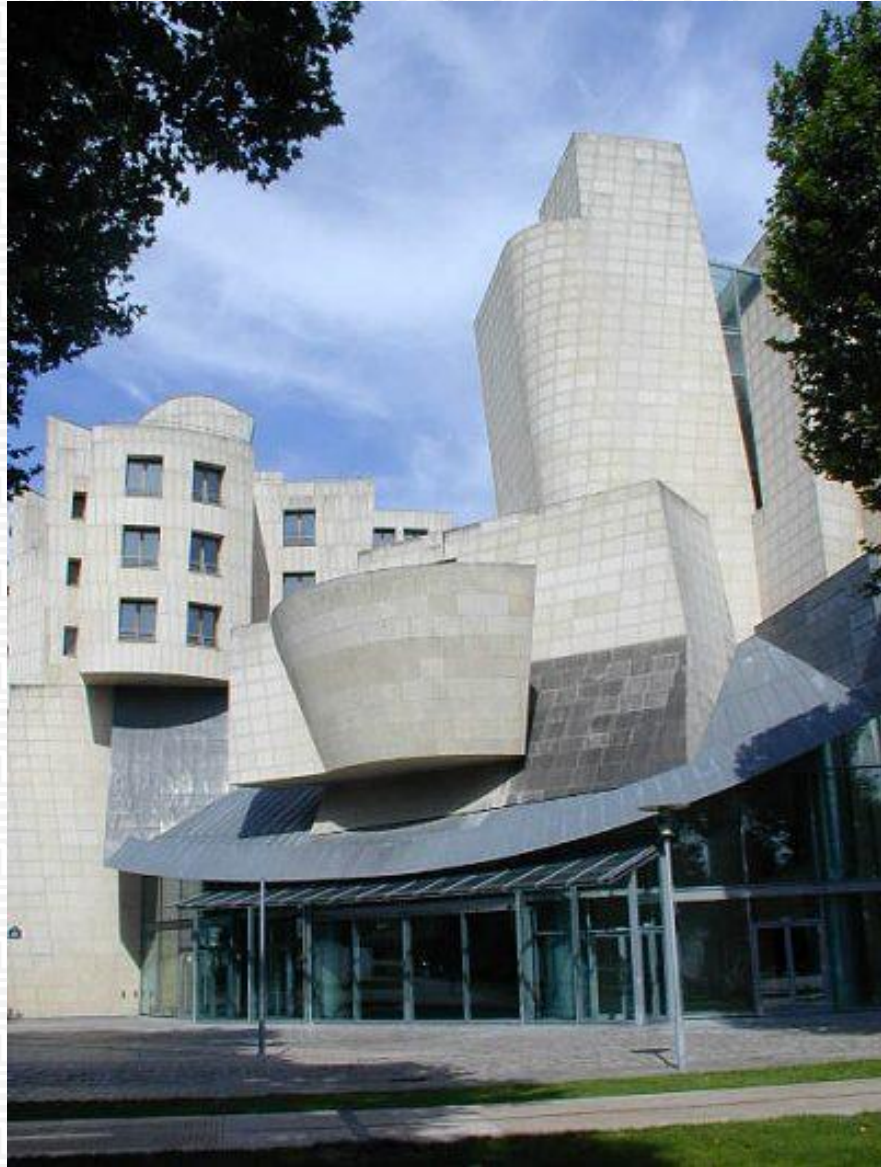
Irregular Forms within a Regular Field:

Philharmonic Hall, Berlin, 1956-63, Hans Scharoun

Regular Forms within an Irregular Composition:

Masjed of Sultan Hasan, Cairo, Egypt, 1356-63

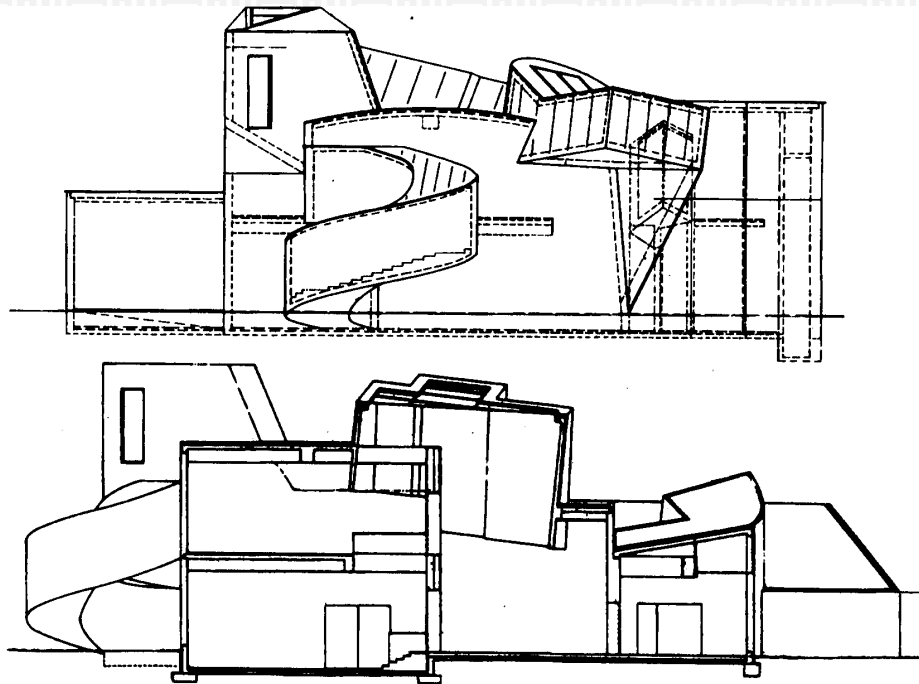


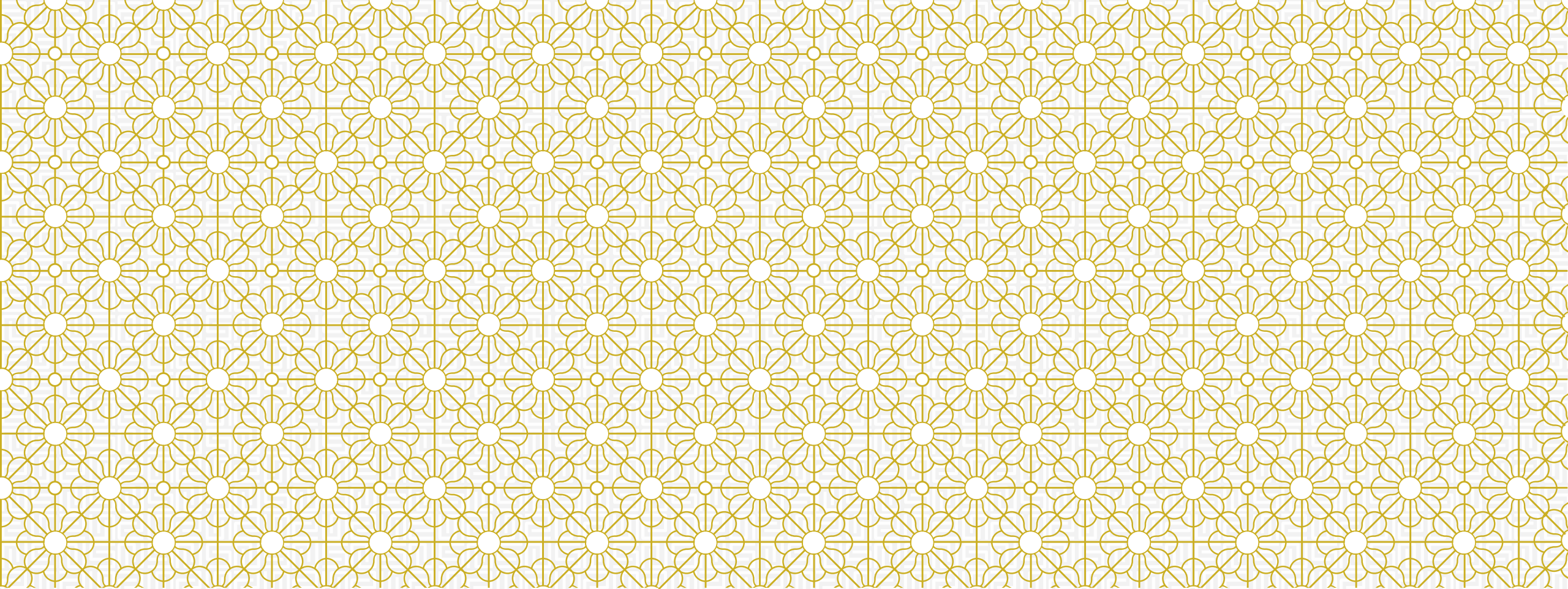


projects of architect Frank Gehry, using the concept design of the irregular forms .



projects of architect Frank Gehry, using
the concept design of the irregular forms .





TRANSFORMATION OF FORM



TRANSFORMATION OF FORM

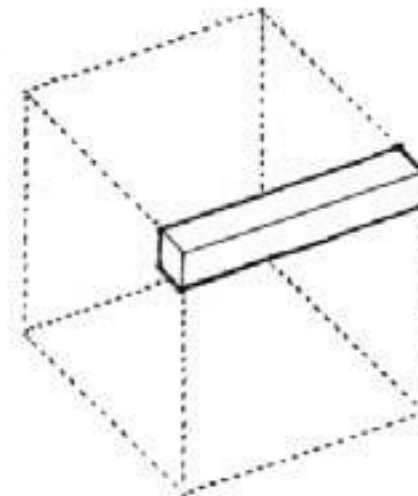
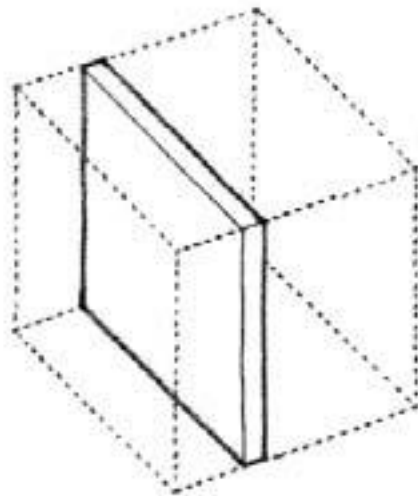
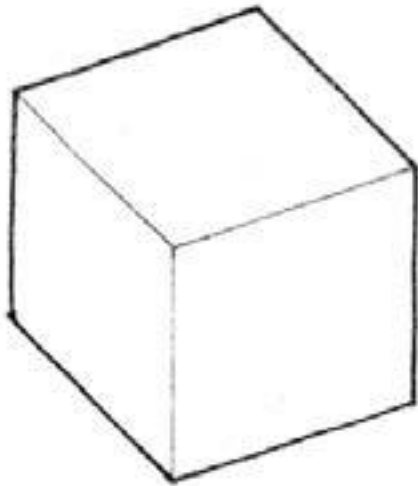
All other forms can be understood to be transformations of the platonic solids,

variations that are generated by

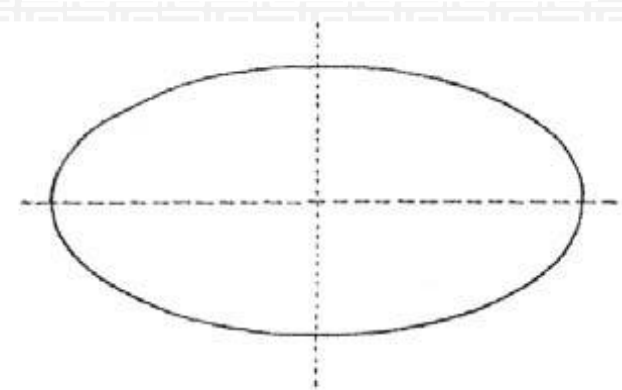
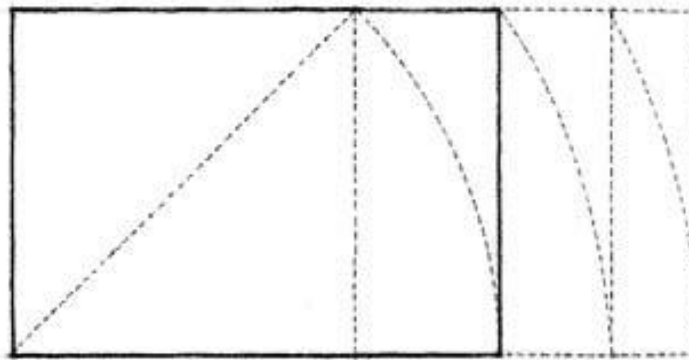
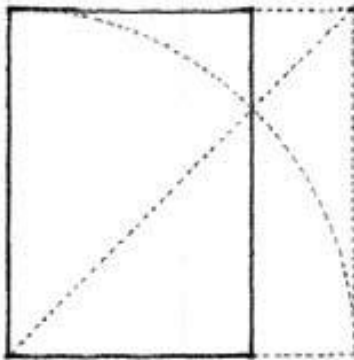
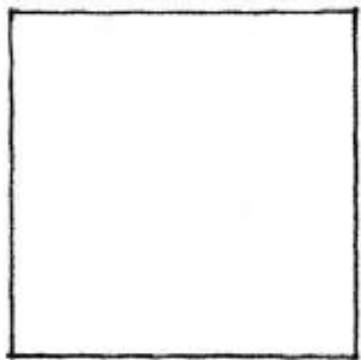
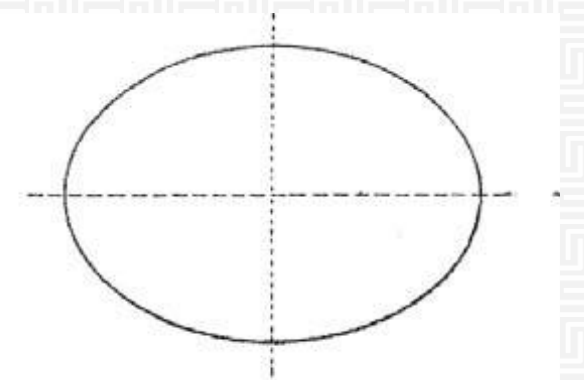
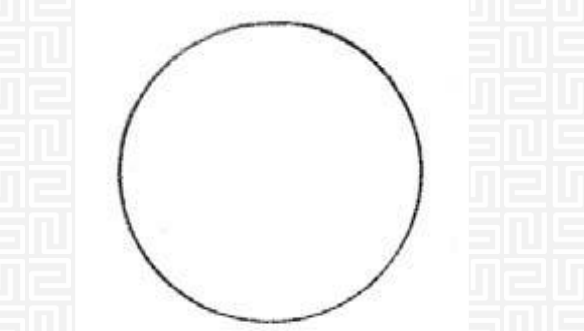
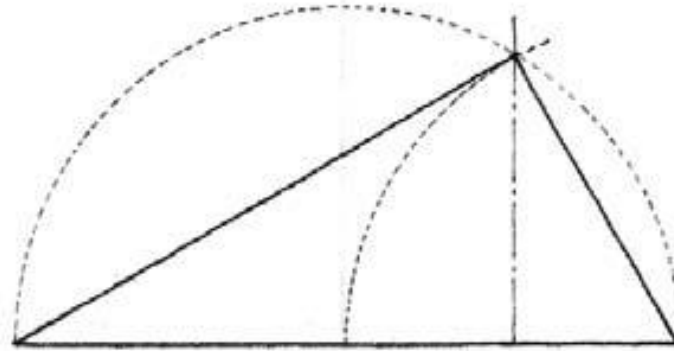
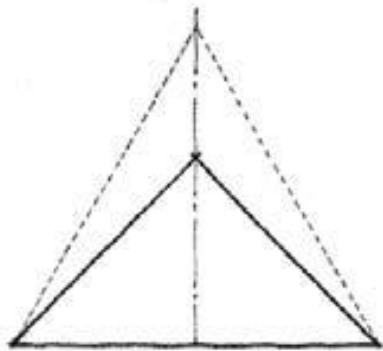
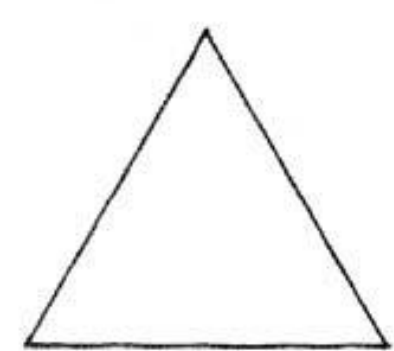
- a. Dimensional transformation
- b. Subtractive transformation
- c. Additive transformation

DIMENSIONAL TRANSFORMATION

by altering one or more of its dimensions and still retain its family identify.



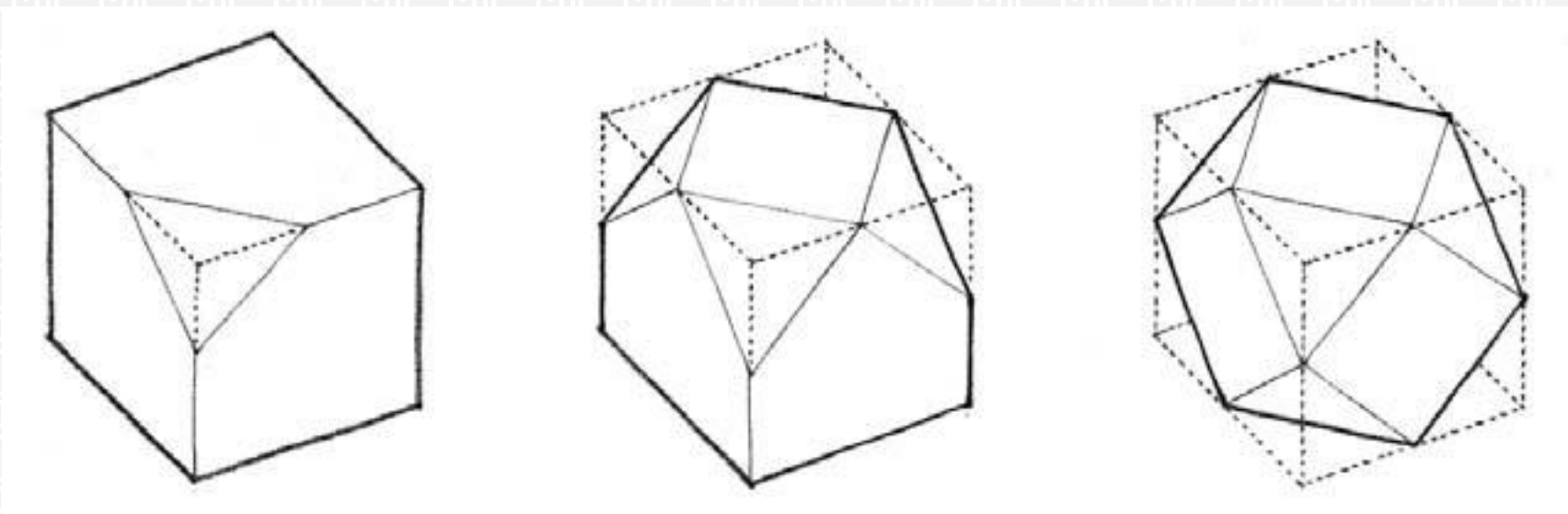
DIMENSIONAL TRANSFORMATION



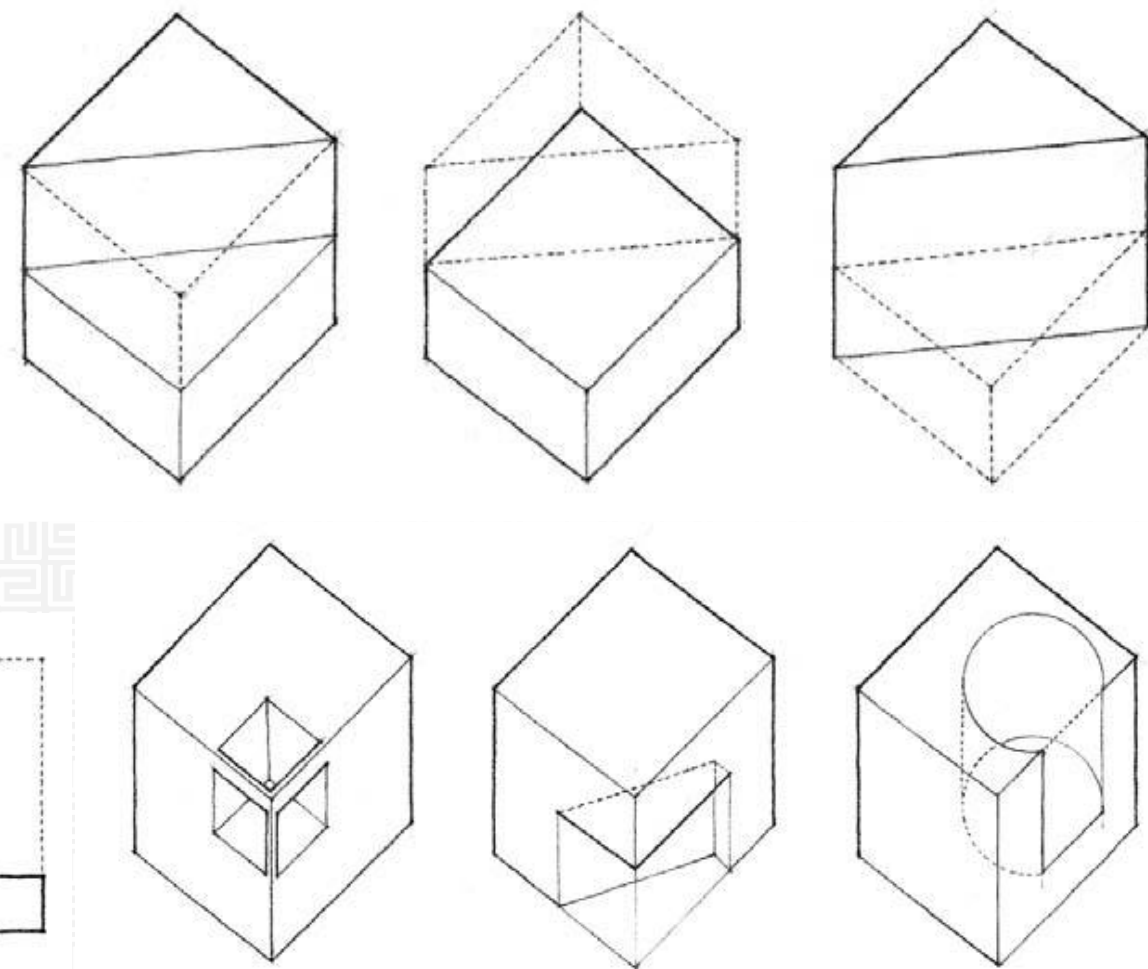
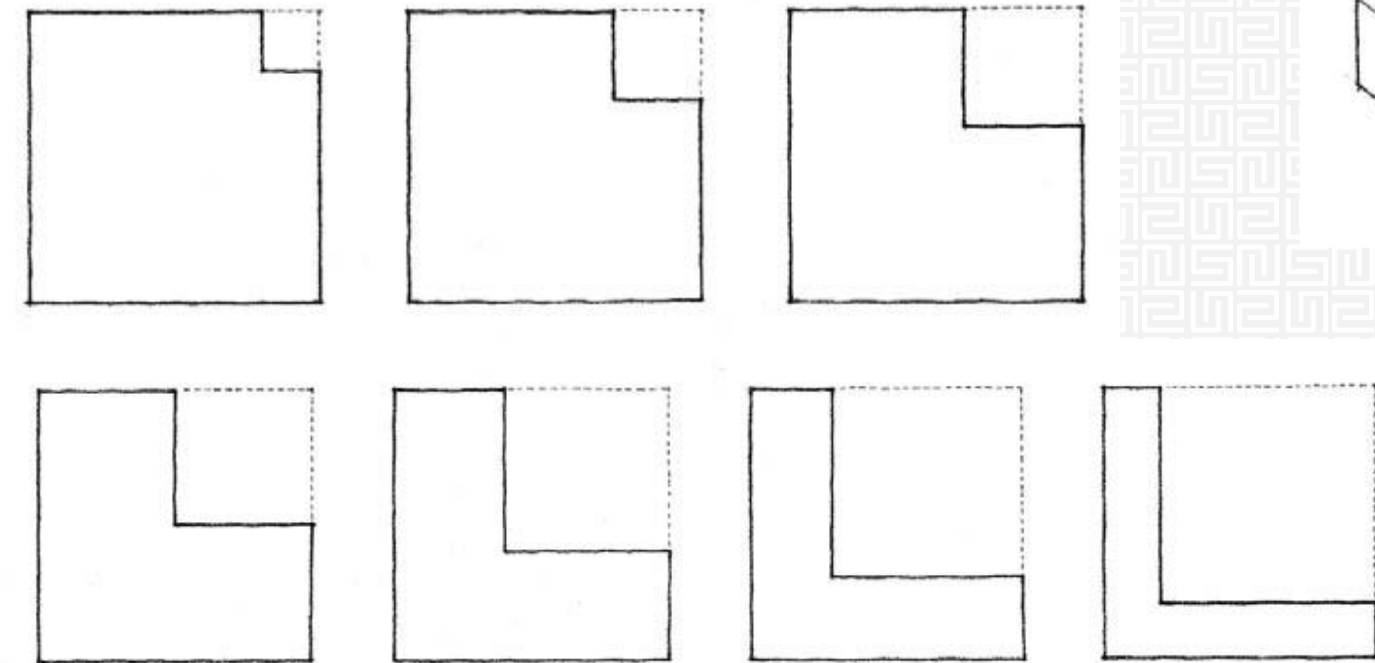
SUBTRACTIVE TRANSFORMATION

by subtracting a portion of its volume.

the form can retain its' identify, or be transformed into a form, of another family.



SUBTRACTIVE FORM





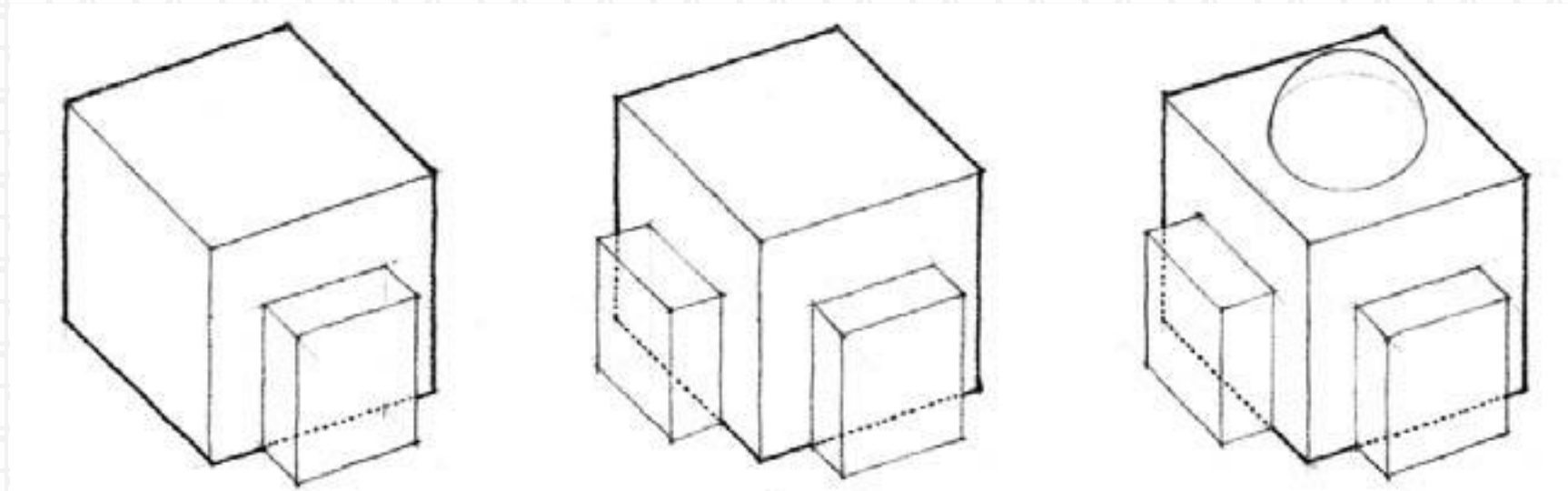
Gwathmey residence , New York
by Ar. Charles Gwathmey -1967



Kanchanjunga Apartments by
Ar. Charles Correa- 1983

ADDITIVE TRANSFORMATION

by the addition of element to its volume.



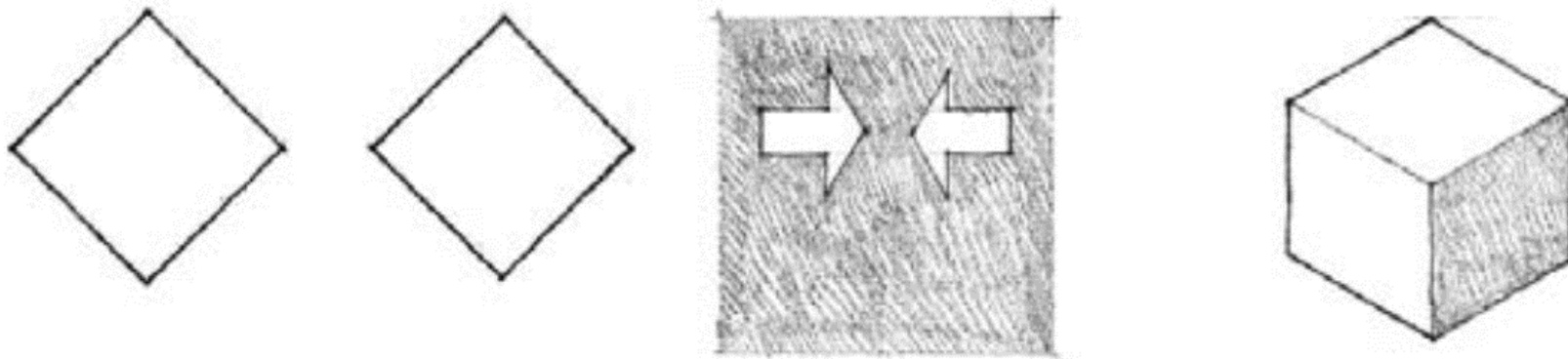
ADDITIVE FORM

The basic possibilities for grouping two or more forms are by:

- Spatial Tension
- Edge-to-edge Contact
- Face-to-face Contact
- Interlocking Volumes

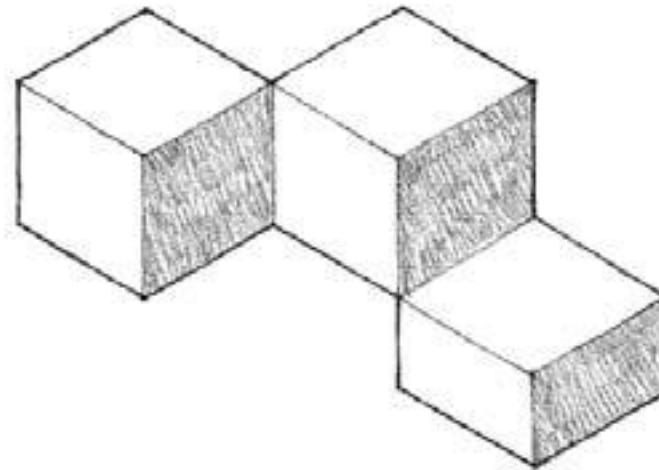
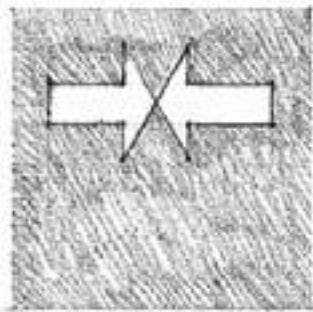
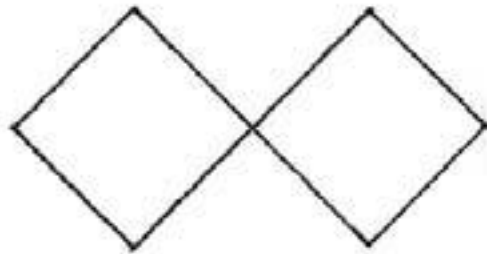
SPATIAL TENSION

the close proximity of the forms or their sharing of a common visual trait, such as shape, color, or material.



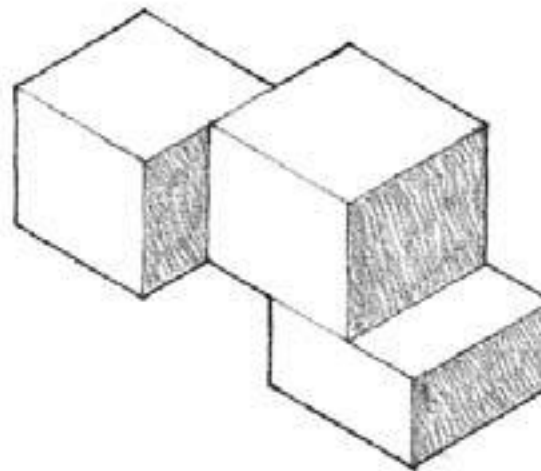
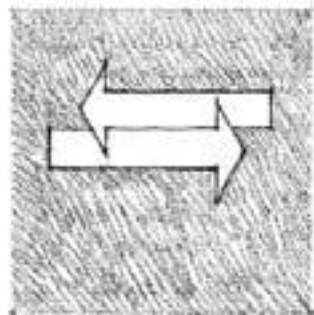
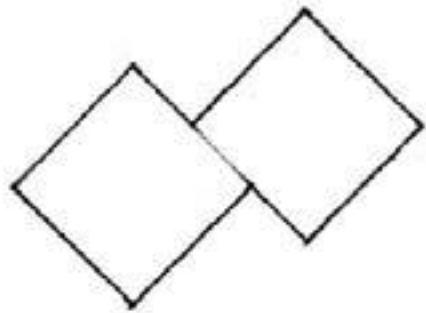
EDGE-TO-EDGE CONTACT

the forms share a common edge and can pivot about that edge.



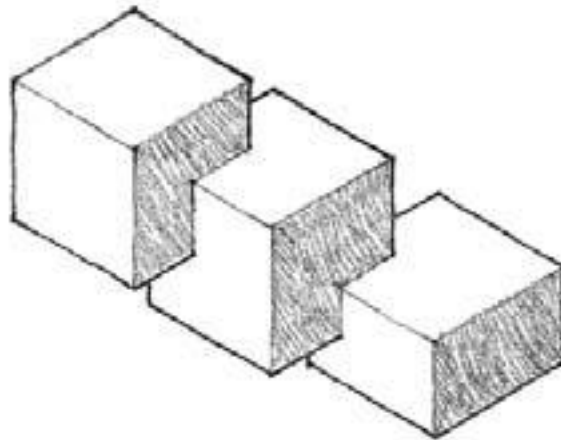
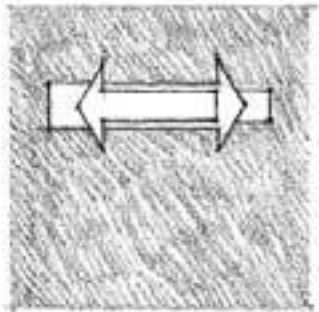
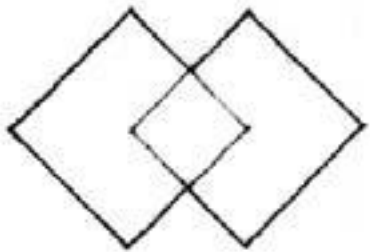
FACE-TO-FACE CONTACT

forms have corresponding planar surfaces which are parallel to each other.



INTERLOCKING VOLUMES

the forms interpenetrate each other's space. The forms need not share any visual traits.



ORGANIZATION OF FORMS

Structure in a composition is used to **define the interrelationship** between the elements of design.

The **use of structure** in a composition is particularly important as it **defines and communicates the purpose, meaning or effect** the elements of the composition must **produce together**.

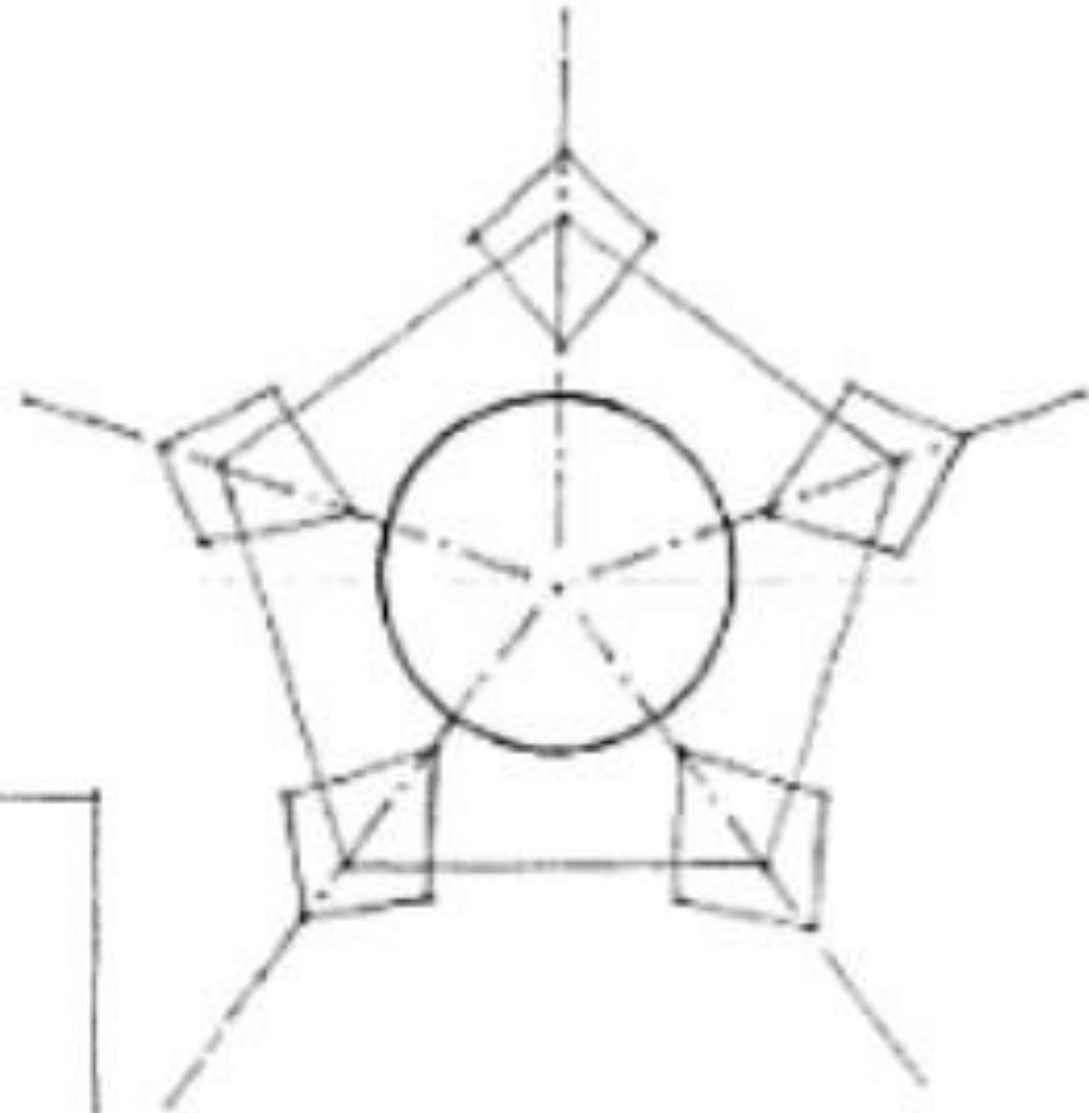
ORGANIZATION OF FORMS

Forms therefore can be categorized **based on the existing relationships** between component forms, as well as the **resulting overall configuration**.

- Centralized form
- Linear form
- Radial form
- Clustered form
- Grid form

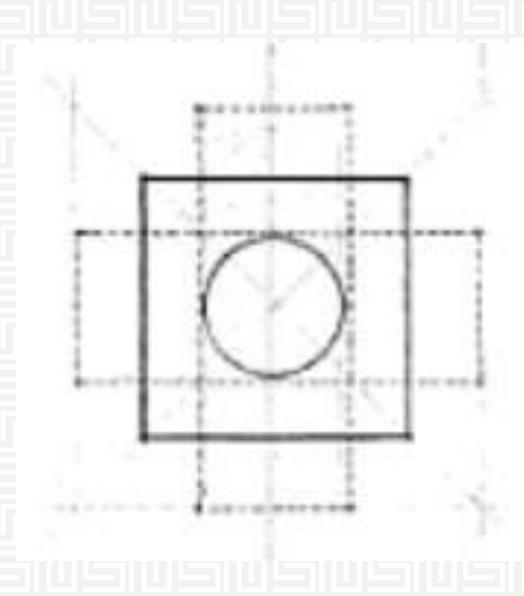
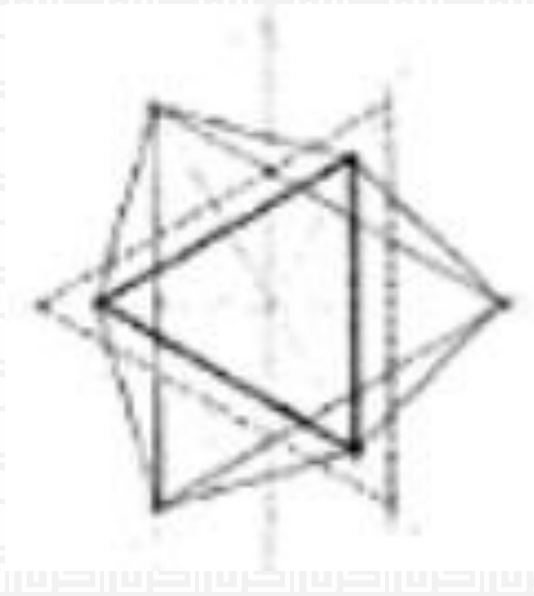
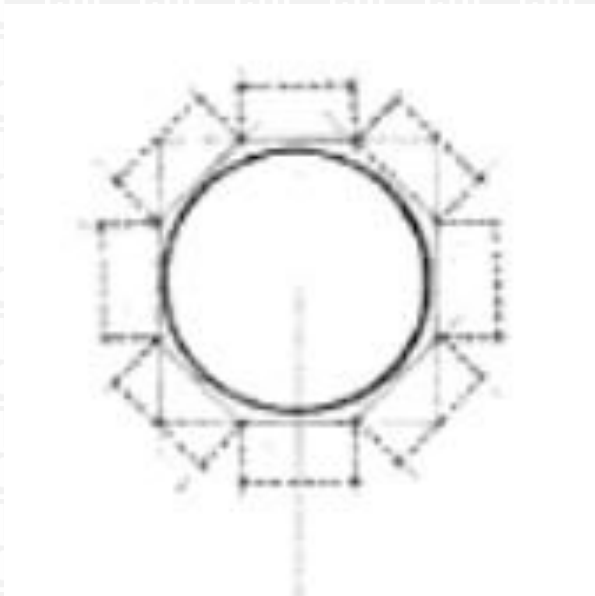
CENTRALIZED FORM

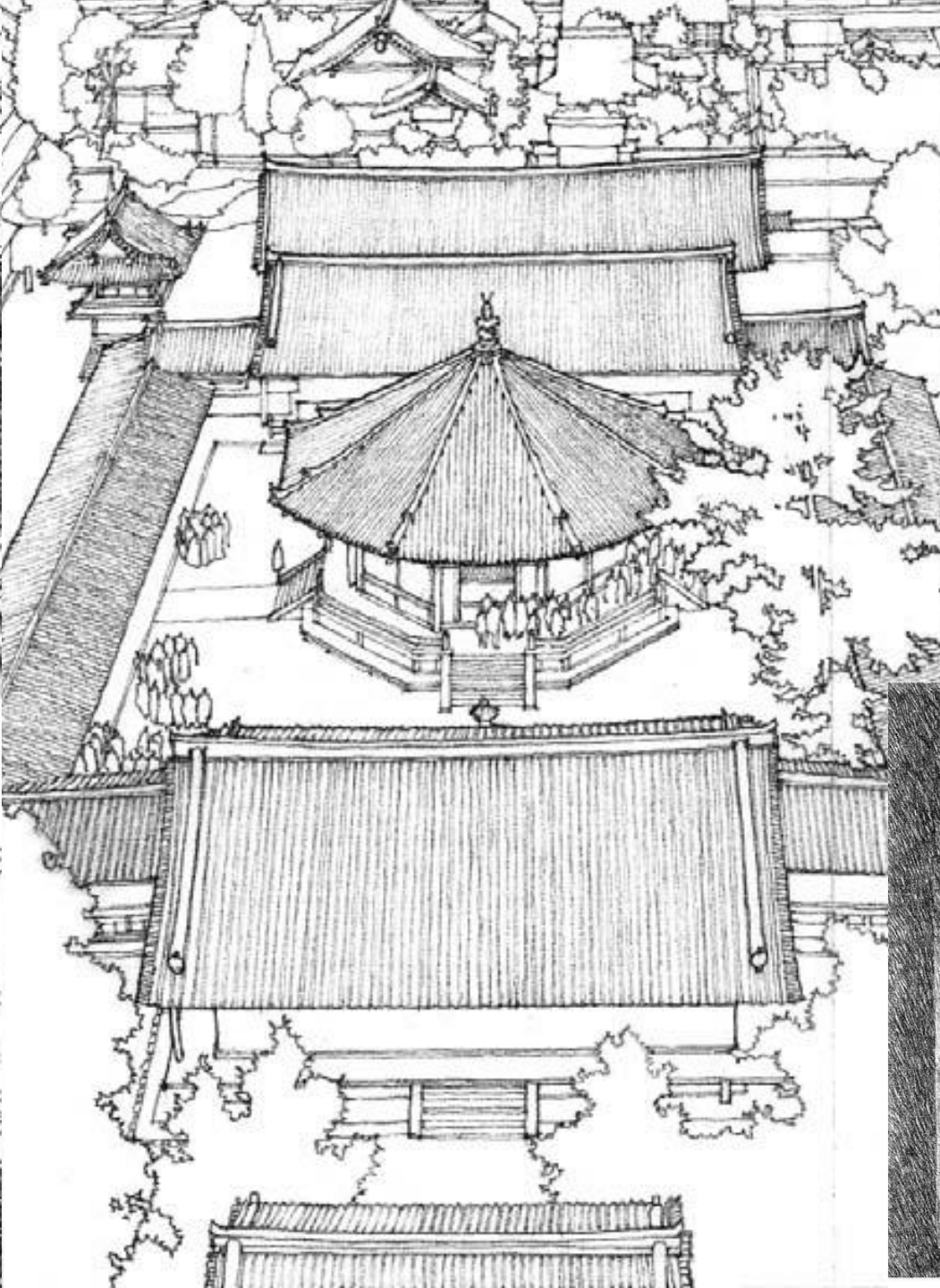
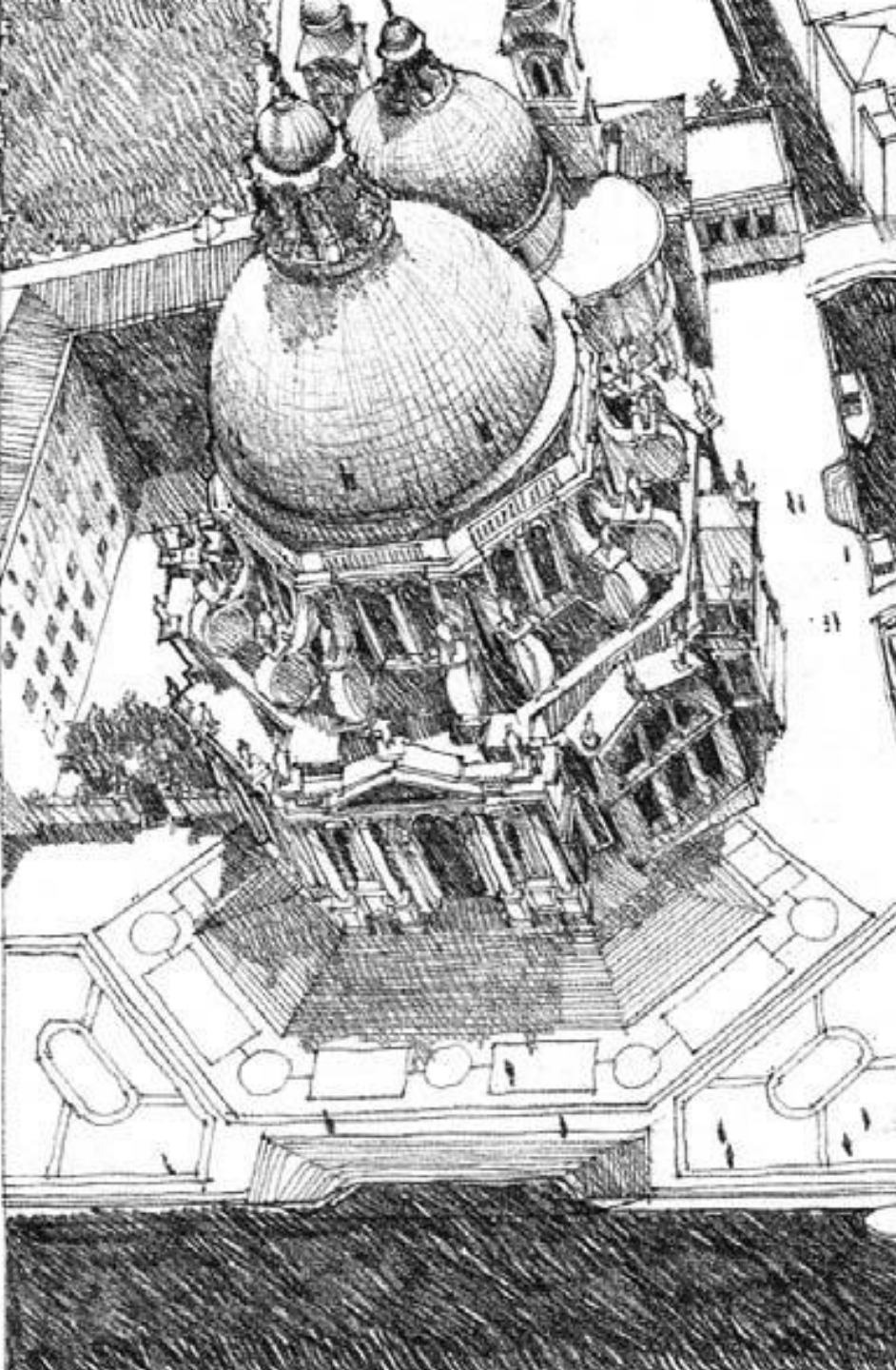
- A number of secondary forms clustered about a dominant, central parent form
- Requires the visual dominance of a geometrically regular and centrally located form



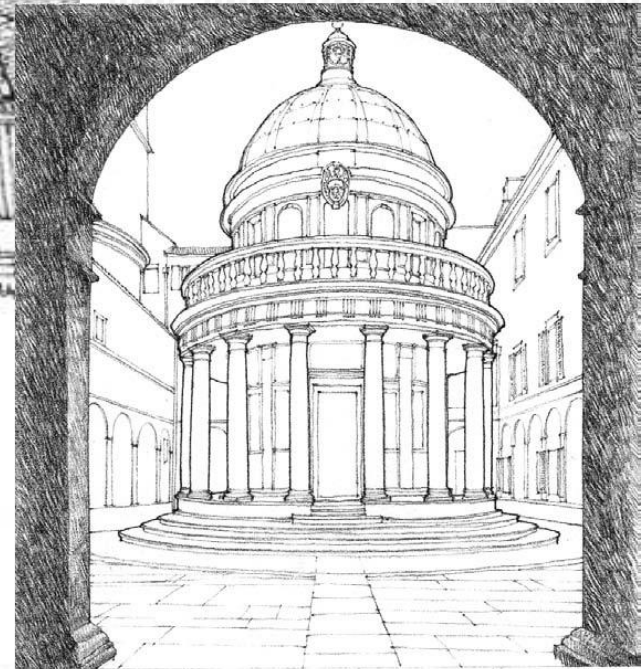
CENTRALIZED FORMS

- Because of their inherent centrality , primary solids share the self centering properties of the point and circle if they located centrally.



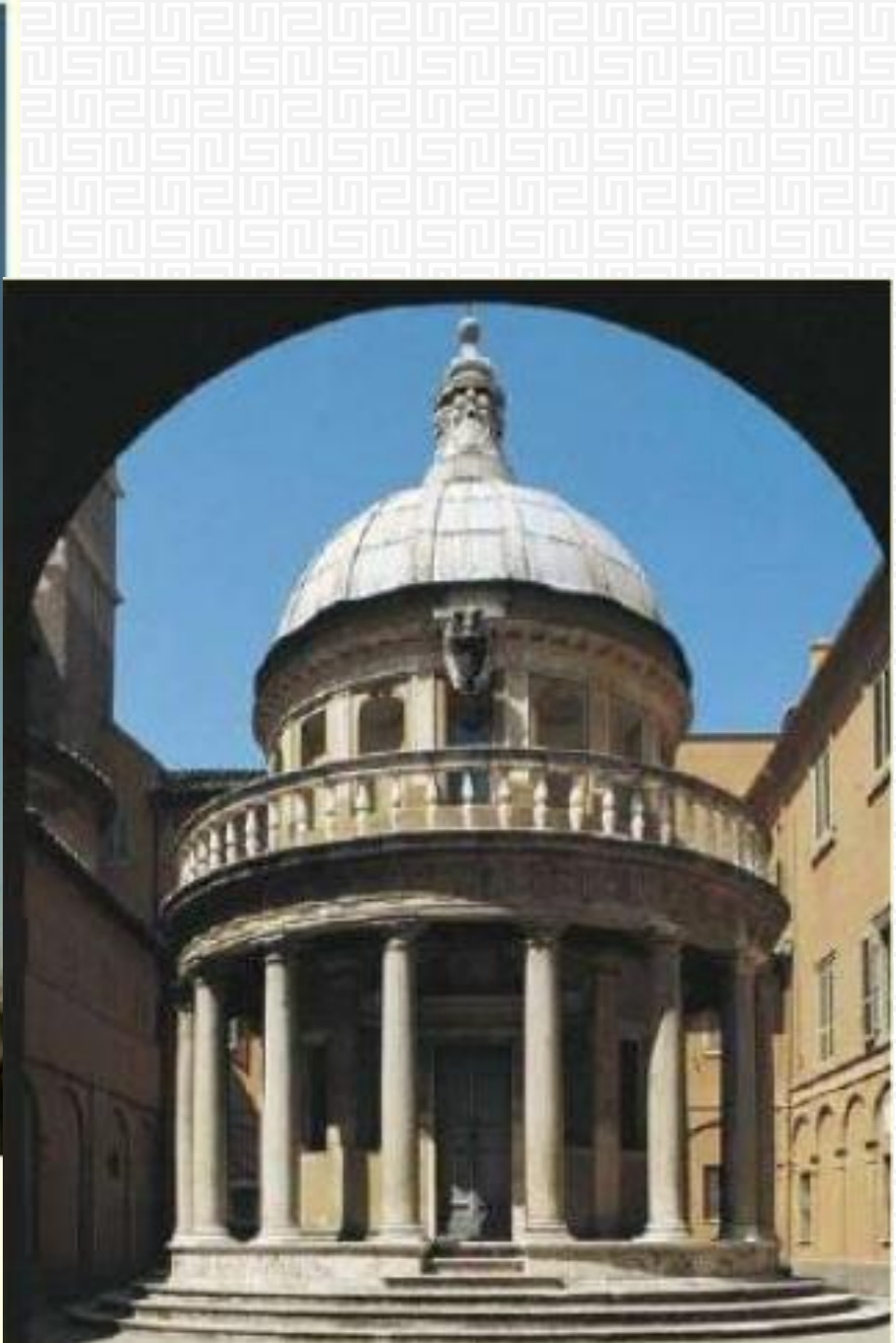


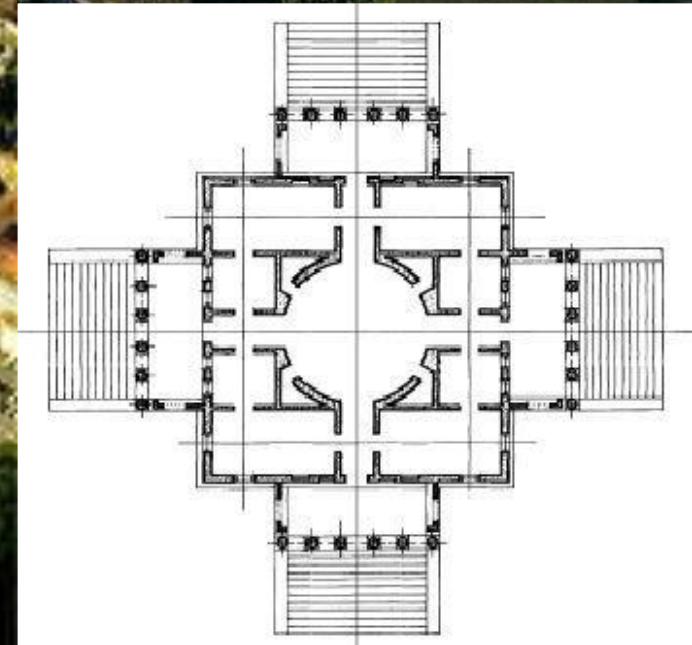
CENTRALIZED FORM





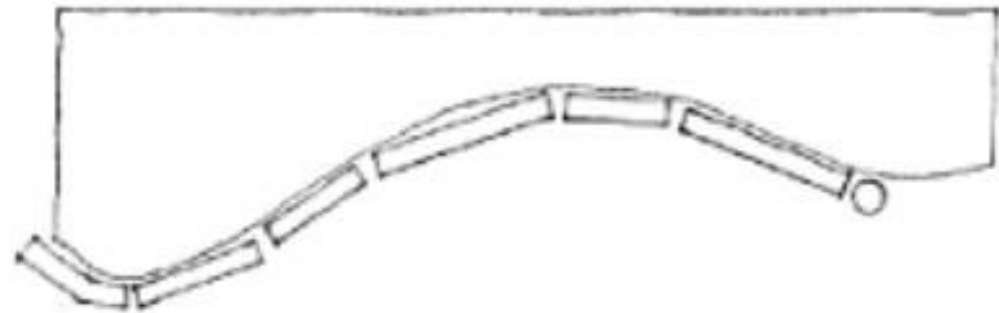
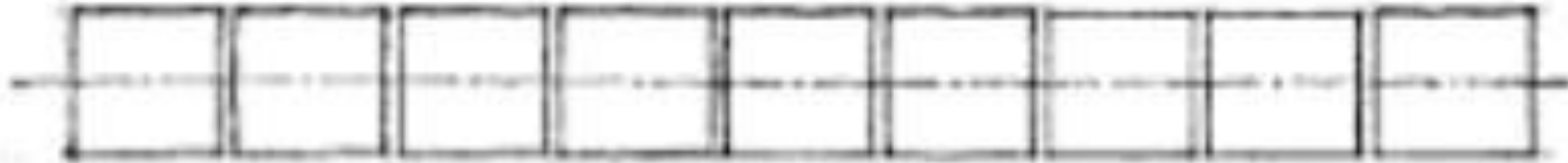
S. MARIA DELLA SALUTE : Venice 1931-82 ,
Baldessare Longhena





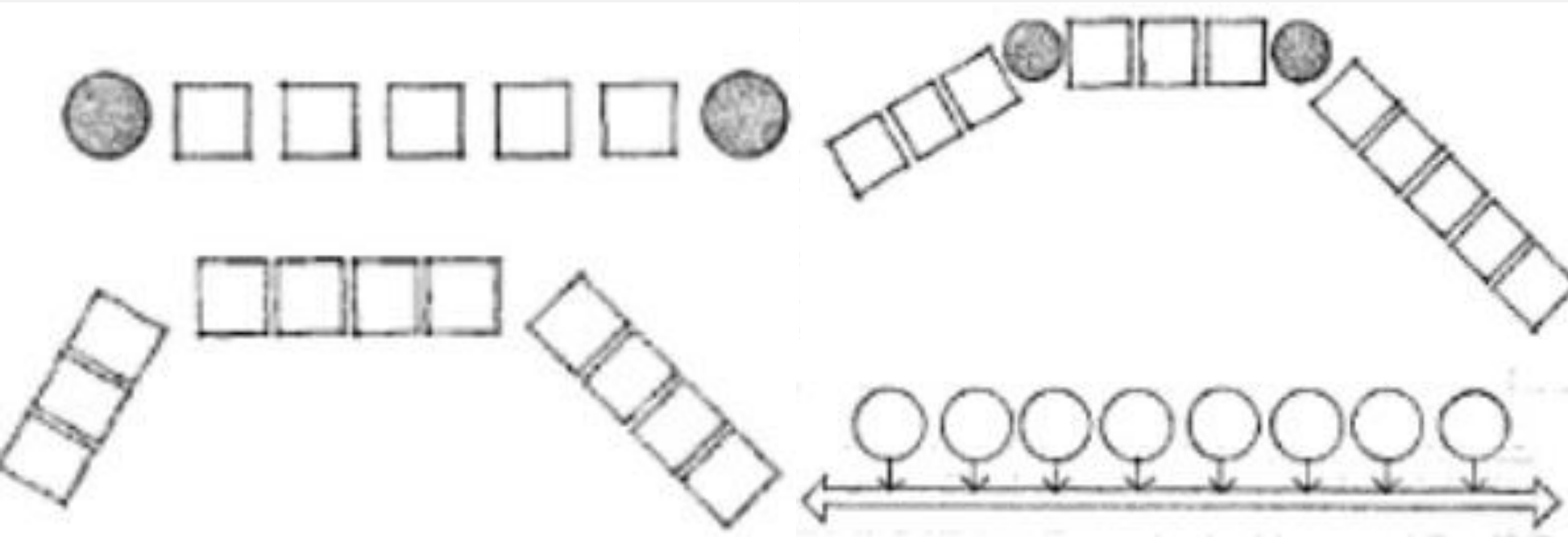
LINEAR FORM

- A series of forms arranged sequentially in a row (along a line)
- A linear forms can be segmented or curvilinear
- Can be oriented vertically as tower
- Usually a repetitive elements



LINEAR FORM

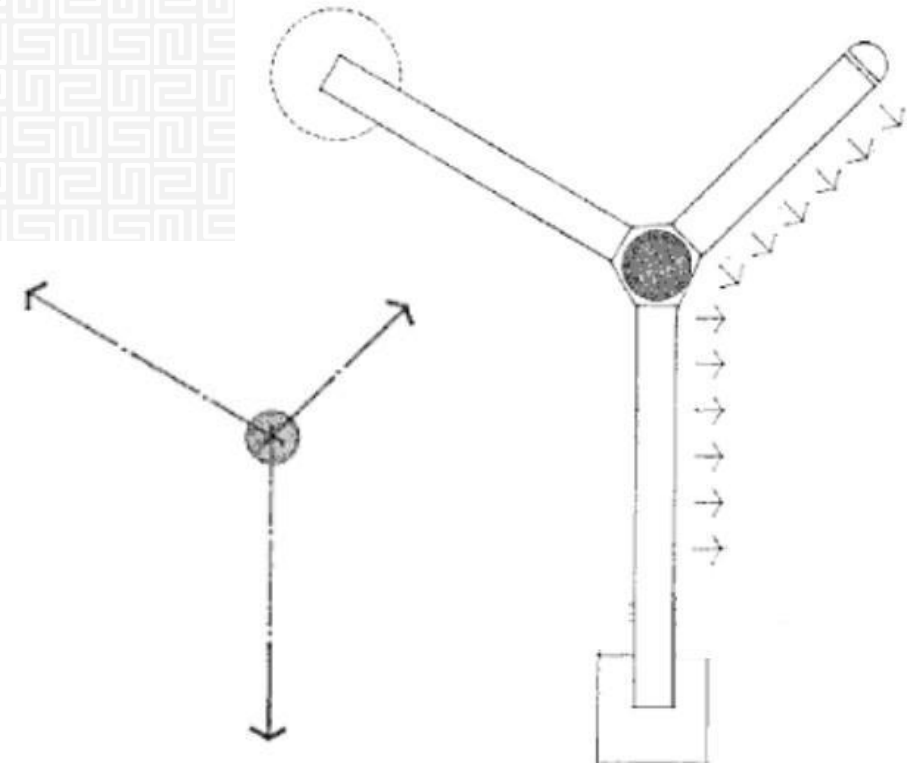
- Forms that are significant to the organization can occur anywhere along the linear sequence .





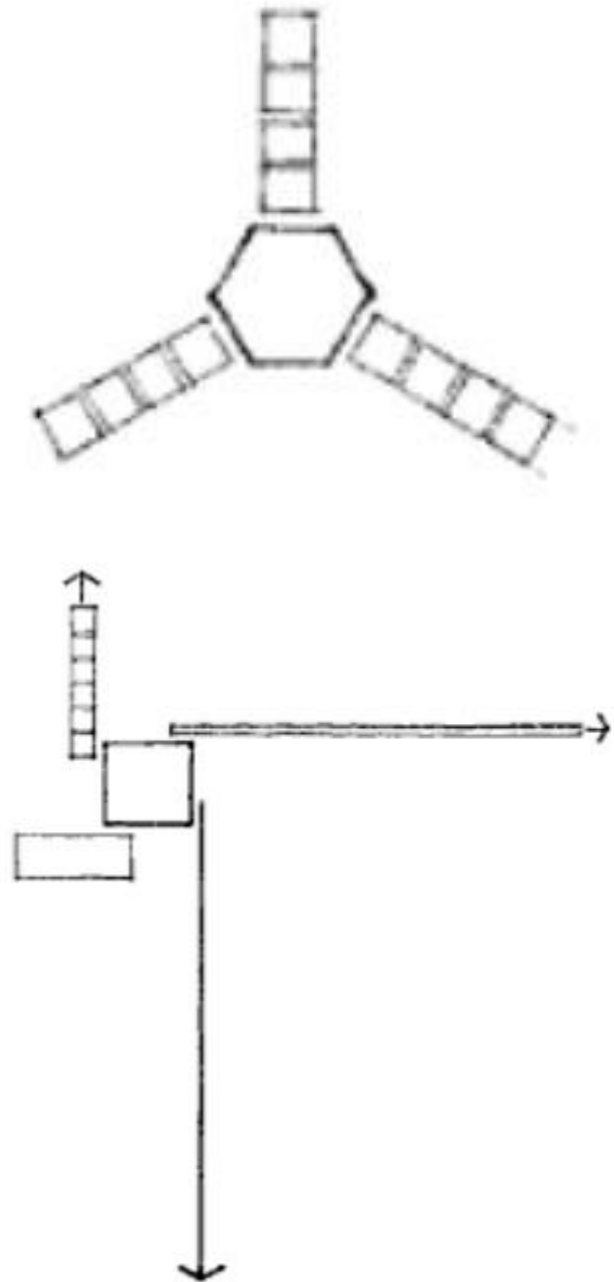
RADIAL FORMS

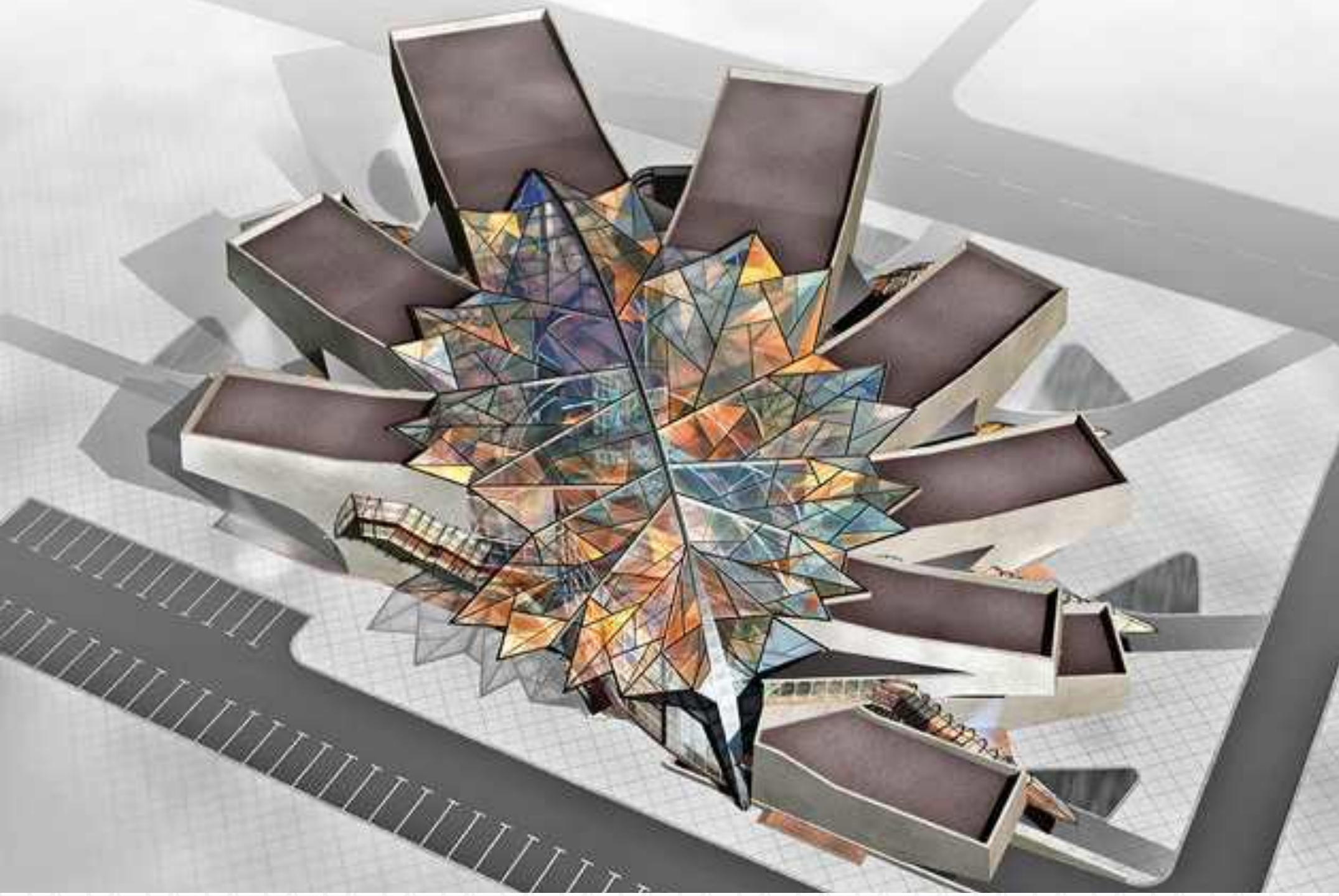
- A composition of a linear forms extending outwards from a central form in a radial manner
- It consist of a linear organization that extends outward from a centrally located core element in a radiating manner

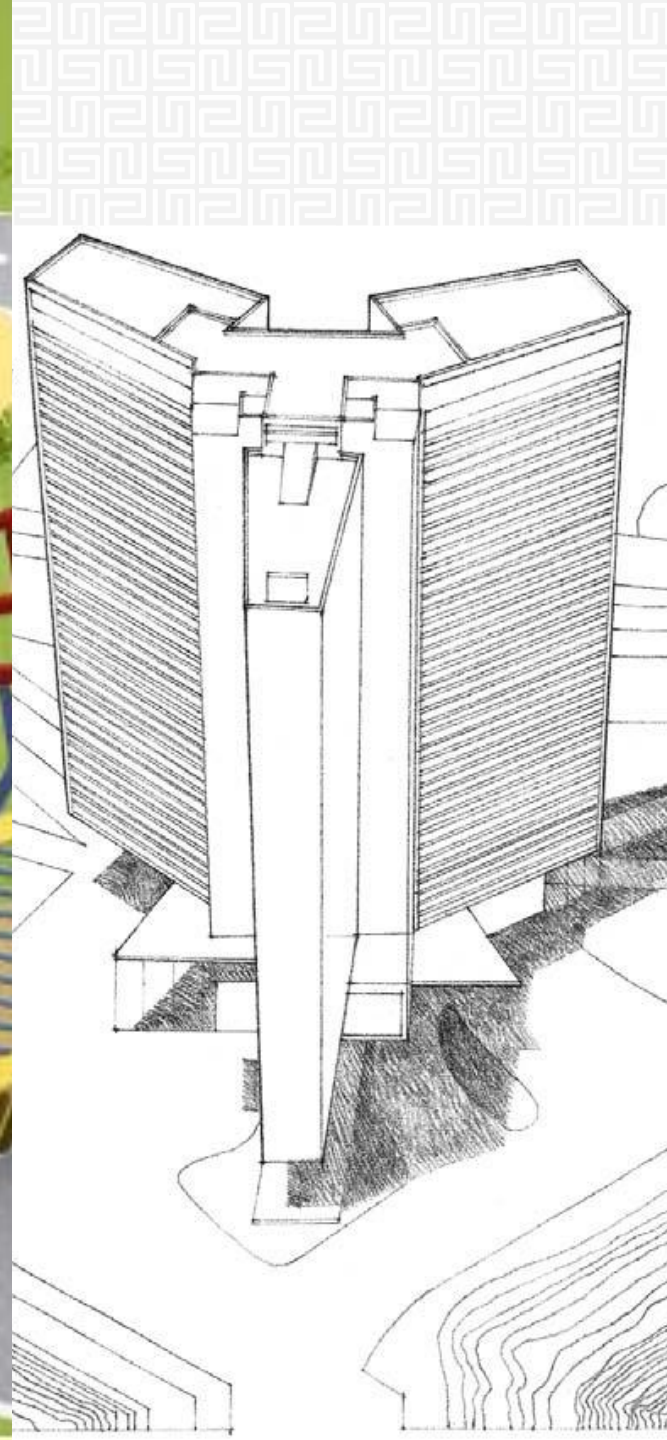


RADIAL FORM

- The central element can be visually dominant form , or it can merge with and become a subservient to the radiating arm .
- The radiating arms (which have a similar properties to those of linear) give a radial organization extroverted nature .









UNESCO HEADQUARTERS

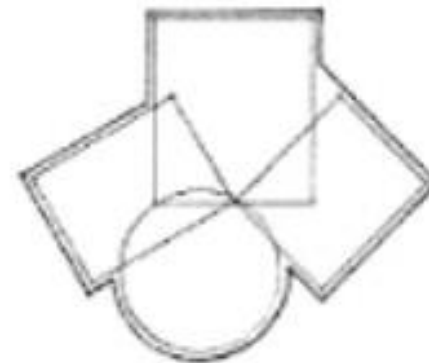
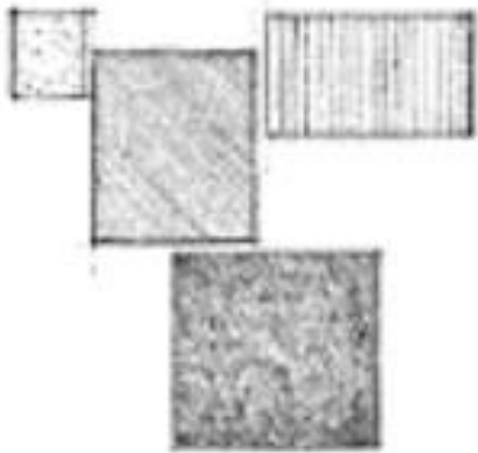






CLUSTERED FORM

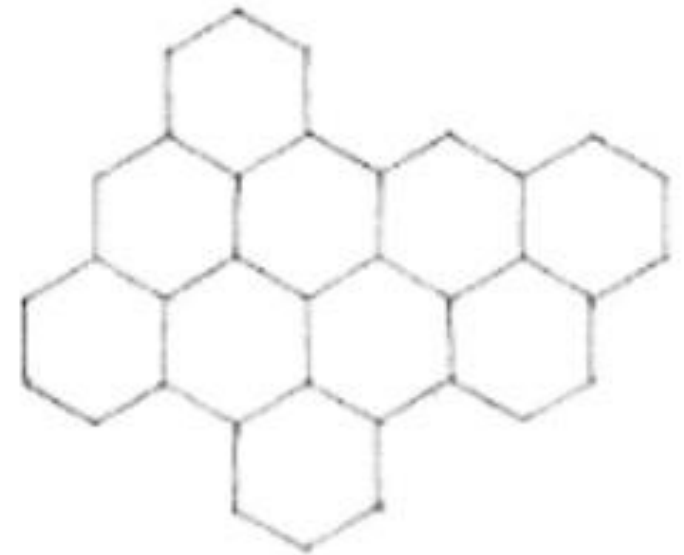
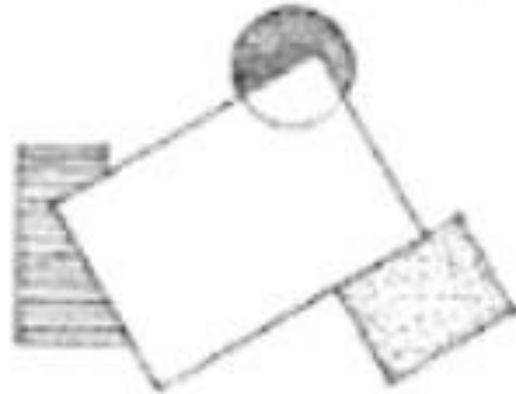
- A collection of forms grouped together by proximity or the sharing of a common visual trait.
- Can also consists of forms with equivalent size ,shape



CLUSTERED FORM

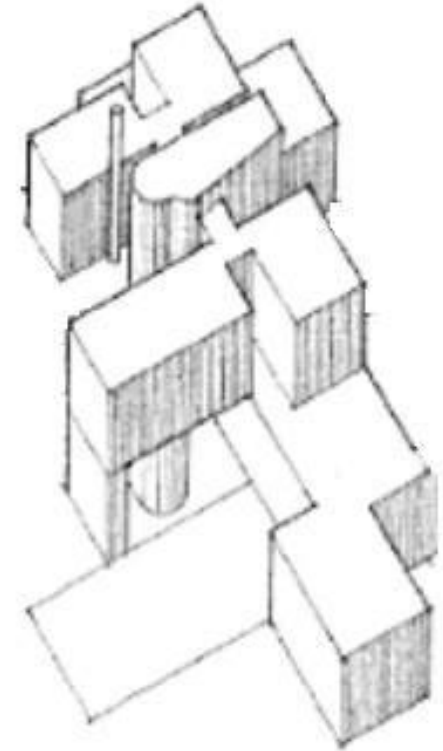
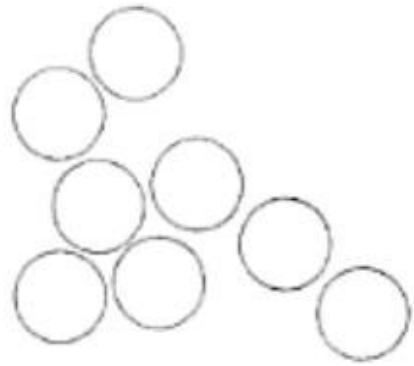
Considering their flexibility , clustered organization of forms may be organized in the following way

- Can be attached as appendages to a large parent form

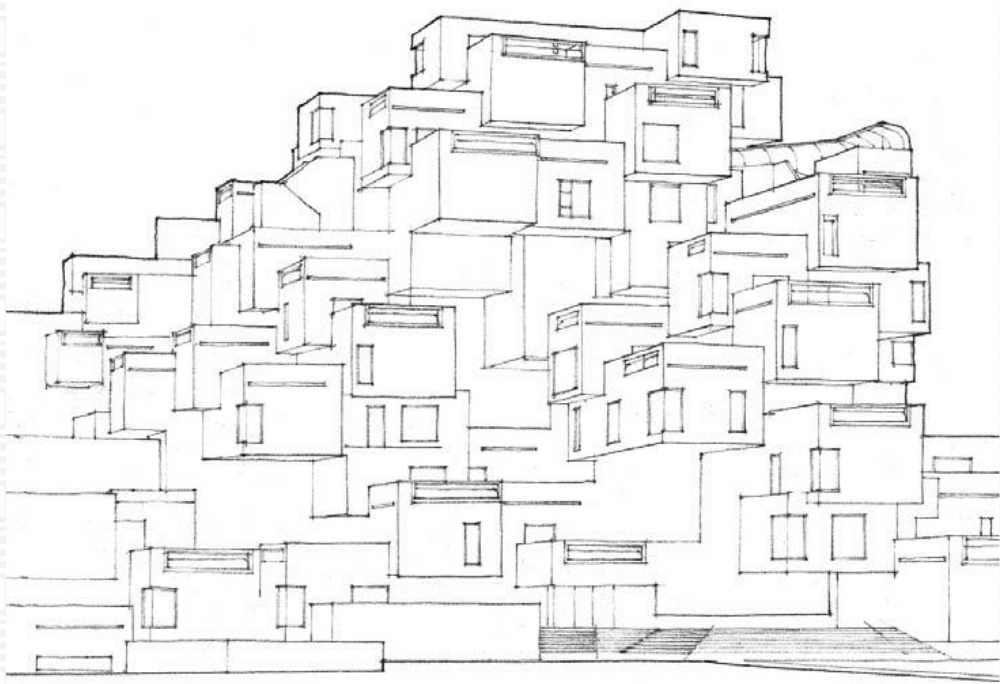


CLUSTERED FORMS

- Can be related by proximity
- Can interlock their volumes and merge in to a single form having a variety of faces



CLUSTERED FORM



Habitat Montreal, 1967, Moshe Safdie

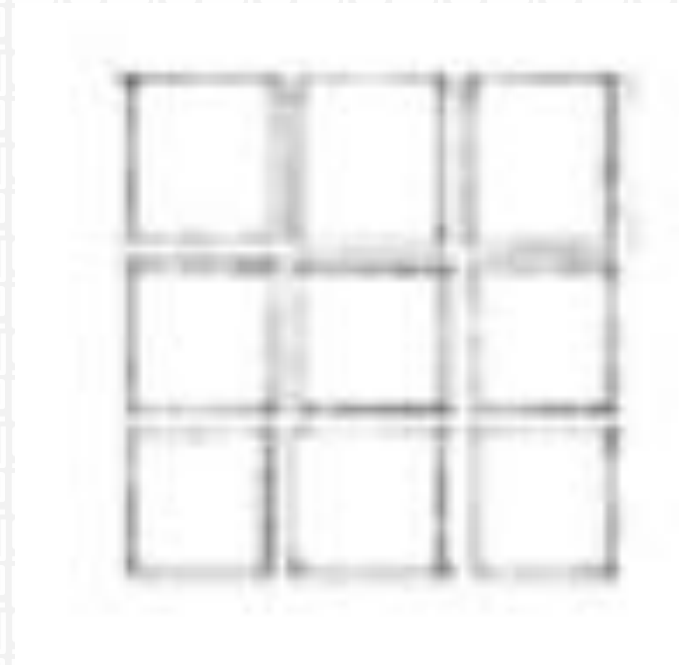
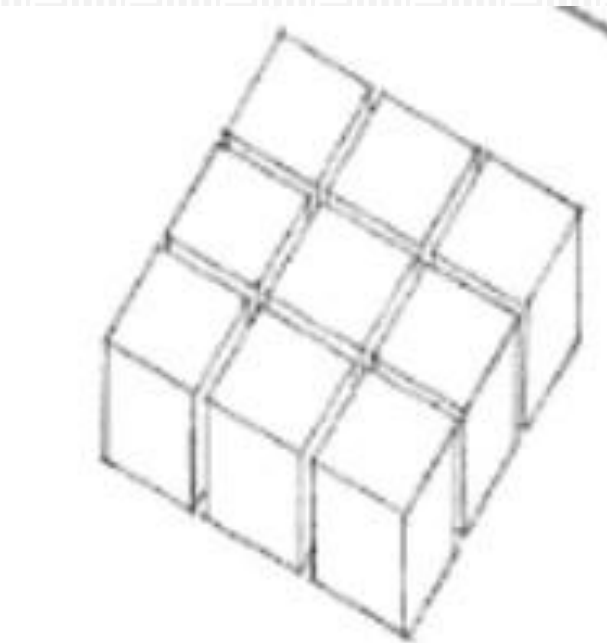


Taos Pueblo :
Valley of the Rio Grande in Taos,
New Mexico



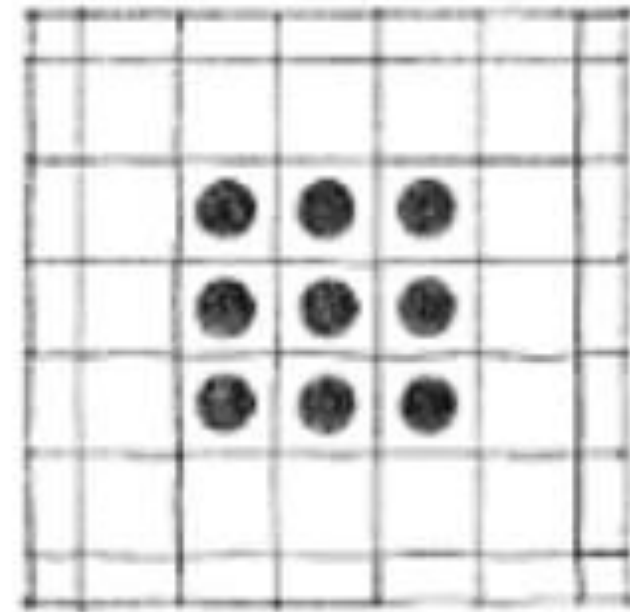
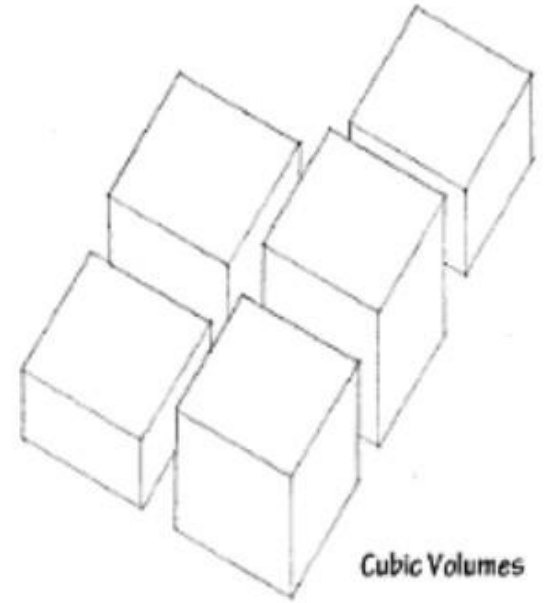
GRID FORM

- A set of modular forms related and regulated by a three dimensional grid



GRID FORM

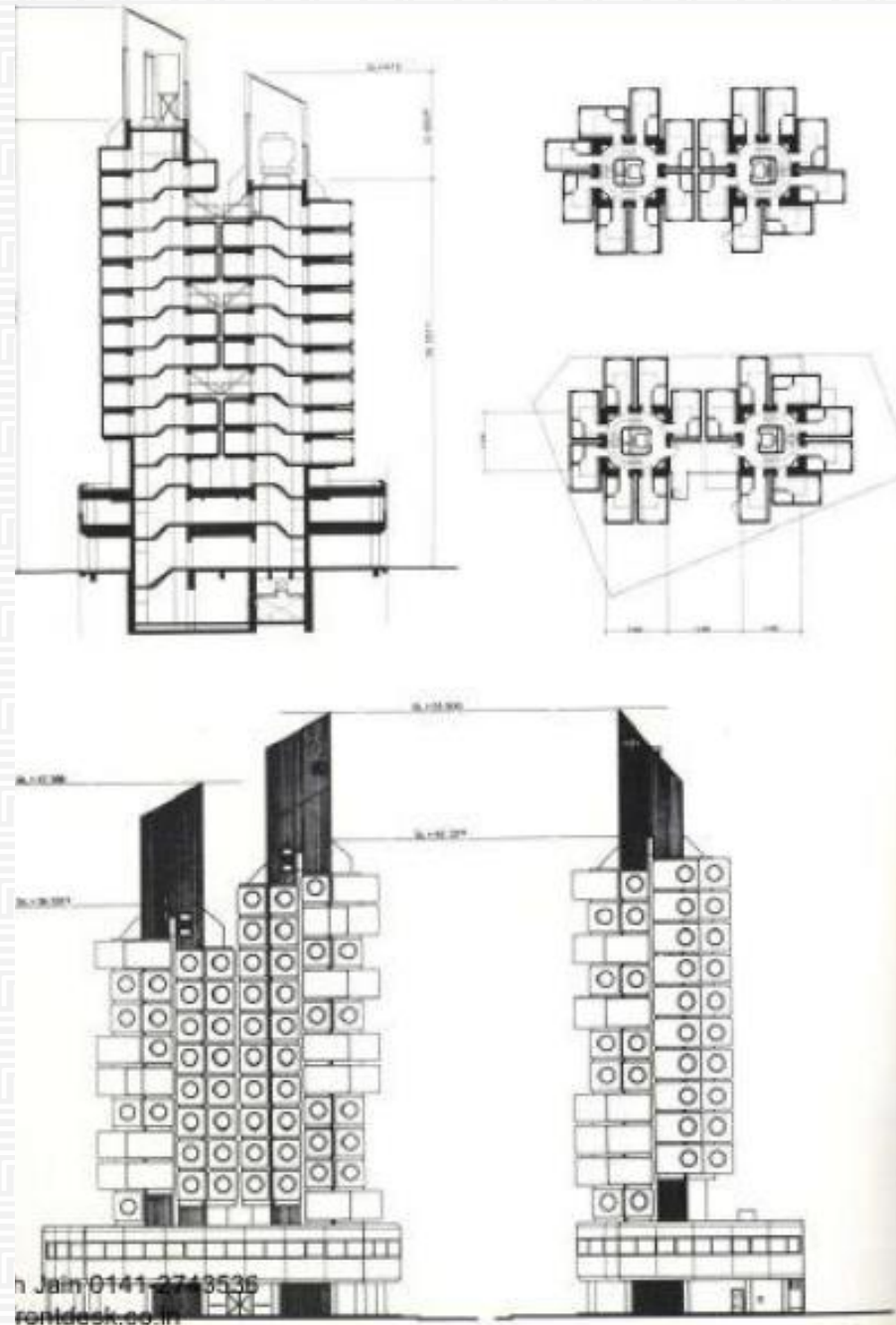
- The organizing power of a grid results from the regularity and continuity of its pattern .
- Since a 3D grid consists of repetitive , modular units ,it can be subtracted from ,added to, or layered , and still maintaining its identity as a grid







Nakagin capsule building : tokyo1972,
Kisho kurokawa





THANK YOU!!!