Proportion + Ordering Systems
PROPORTIONING systems
PROPORTION:
This term refers to the proper or harmonious relation of one part to another or to the whole
The Golden Section is also known as:

Golden Mean
Golden Ratio
Golden Rectangle
Devine Proportion

It is a ratio defined by the number
\( \text{Phi} \ ( = 1.618033988749895... ) \)
GOLDEN SECTION

\[ \frac{a + b}{a} = \frac{a}{b} \equiv \varphi. \]

PROPORTIONING systems
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\[
\frac{a+b}{a} = \frac{a}{b} = \varphi \approx 1.61803
\]

PROPORTIONING systems
GOLDEN SECTION

PROPORTIONING systems
GOLDEN SECTION nature

PROPORTIONING systems
GOLDEN SECTION nature

PROPORTIONING systems
GOLDEN SECTION  fibonacci numbers

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, ...

Finonacci numbers are closely related to the GOLDEN SECTION and also appear in nature.

PROPORTIONING systems
GOLDEN SECTION fibonacci numbers

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, ...
GOLDEN SECTION  fibonacci numbers in nature

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, ...

The spirals of a pine consist of 5 and 8 arms, or 8 and 13, depending on the size

PROPORTIONING systems
GOLDEN SECTION fibonacci numbers in nature

0, 1, 1, 2, 3, 5, 8, 13, **21**, **34**, 55, 89, 144, ...

The spirals of a daisy and sunflower grow in two spirals extending from the center. One spiral have 21 arms, while the other has 34.
What is the intent of using proportions?
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Through the use of proportions the intent is to create a sense of order and harmony among all the visual and constructive elements, establishing a consistent relationship between the parts and the whole.
GOLDEN SECTION  classical orders of greek architecture

The Parthenon, Athens, 447-432 B.C.

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PROPORTIONING systems
CLASSICAL ORDERS of greek and roman architecture

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PROPORTIONING systems
LE CORBUSIER modulor

PROPORTIONING systems
Anthropometric Scale based on the height of an English man, developed in an attempt to discover a proportion system based on a human body, which could be used to improved the appearance and function of architecture.
LE CORBUSIER modulor

Unité d'Habitation in Marseilles

PROPORTIONING systems
JAPANESE Tatami

PROPORTIONING systems
PARAMETRICISM
This style values form over function, and unlike Le Corbusier’s Modulor, this system does not take into consideration any proportioning system.

This form rejects firm tectonic geometry forms such as circles, cubes, rectangles and pyramids, all of which are used in classical architecture to create proportioned systems. This style rejects any rigid forms, such as the ones created by Le Corbusier.
PARAMETRICISM
Ordering systems create order in architecture composition, enabling each part of the whole to be organized in reference to other parts to create a harmonious arrangement.
AXIS

A line established by two points in space, which can be used to arrange a series of objects or spaces in a balanced manner.
AXIS

Itsukushima Shrine

ORDERING systems
AXIS

Itsukushima Shrine

ORDERING systems
Typical Chinese Courtyard House

ORDERING systems
AXIS

St Peter's Square, Rome, Italy

ORDERING systems
SYMMETRY

The arrangement of equivalent spaces or objects on both sides of the dividing line, plane, or axis

ORDERING systems
SYMMETRY

ORDERING systems
SYMMETRY

Villa Capra

ORDERING systems
SYMMETRY

Unity Temple

ORDERING systems
SYMMETRY

ORDERING systems

Unity Temple
SYMMETRY

Santa Cruz Opera House

ORDERING systems
HIERARCHY

The articulation of a significant space or form by its size, shape or placement in relation to other spaces

ORDERING systems
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RHYTHM

A unifying movement characterized by a patterned repetition

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