4.500 Introduction to Design Computing
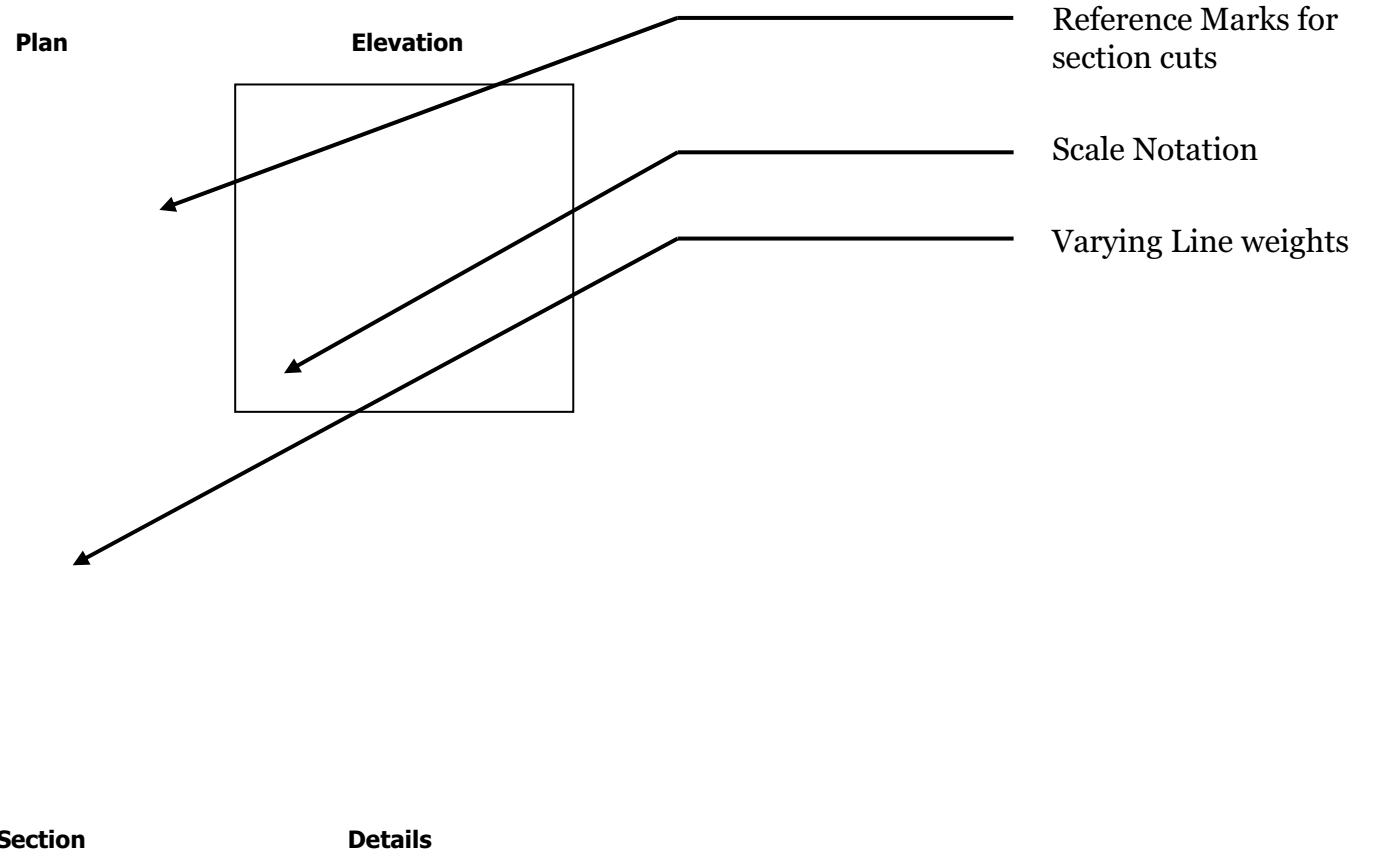Fall 2008

ANDREA PALLADIO
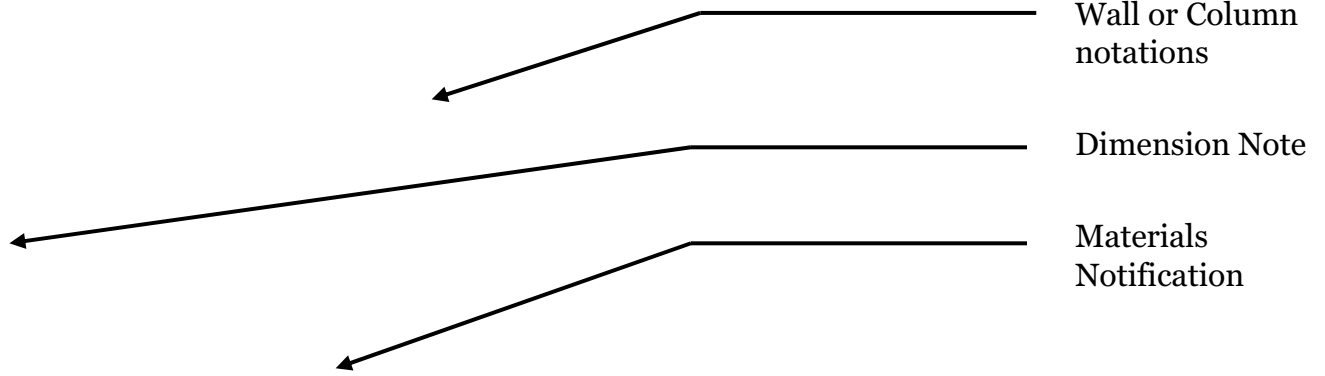
Palladio was a stone mason

Palladio Designed over 30 villas throughout the Veneto only 19 were built 1535 - 1570

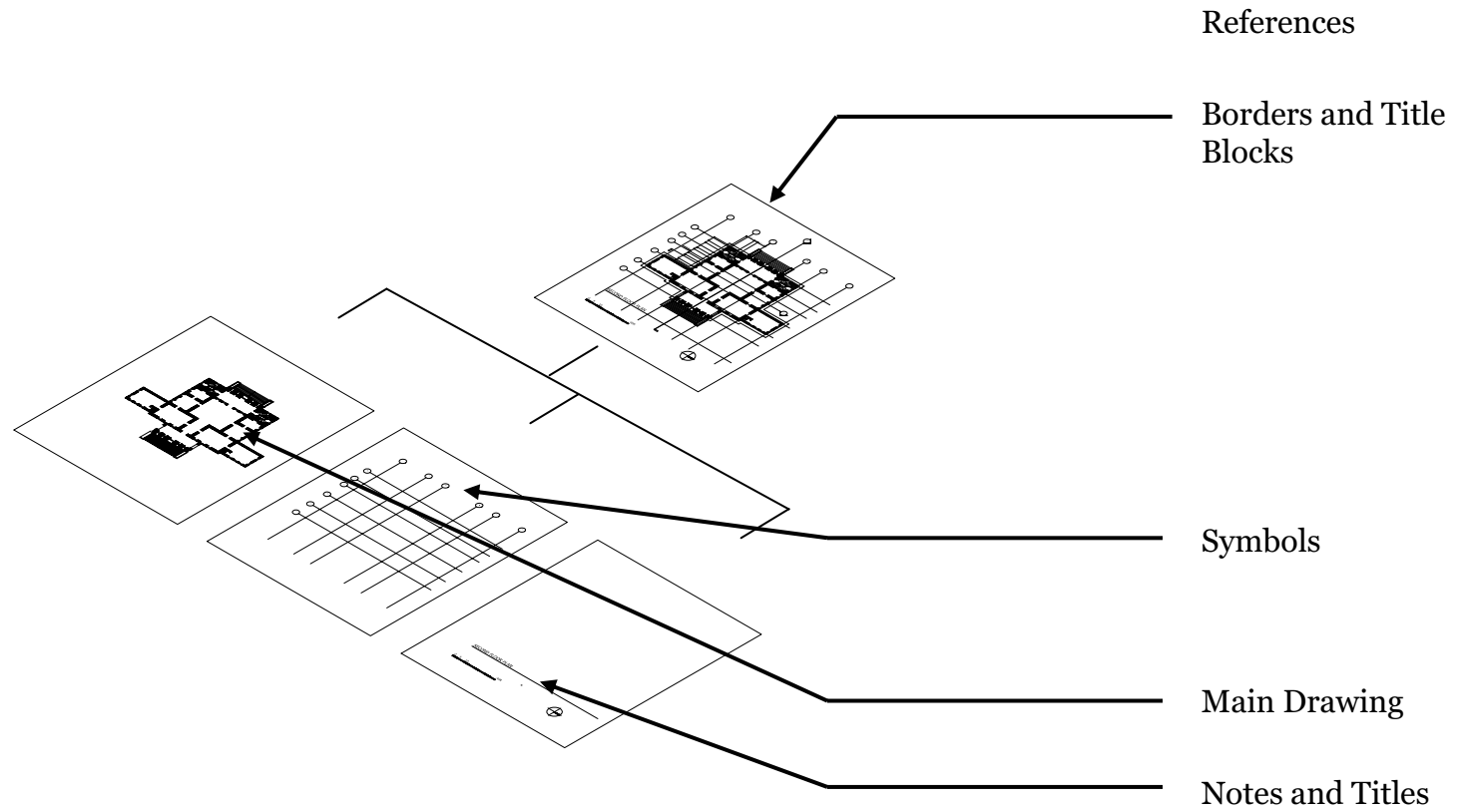Drawings in the Four Books were written after the buildings were constructed

The first book contained the rules
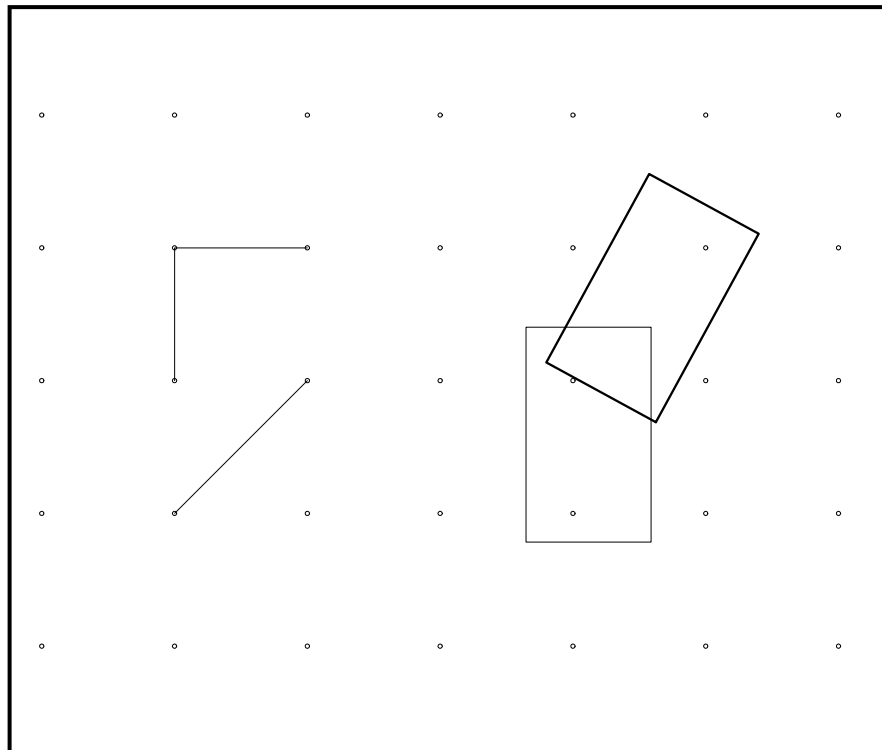
Second Book contained drawings of the villas

Plan   **Elevation**   Reference Marks for
section cuts

Scale Notation

Varying Line weights

Section   **Details**

4.500 – MIT
Prof. Larry Sass

Wall or Column
notations

Dimension Note

Materials
Notification

STRUCTURING DOCUMENTS

References

Borders and Title Blocks

Symbols

Main Drawing

Notes and Titles

4.500 – MIT
Prof. Larry Sass

LINES AND VECTORS

CAD SYSTEMS

Lines

Coordinate Systems

Transformations

Operations

POINTS, LINES AND MANIPULATION

Geometric Entities

Lines are based on the Coordinates not the scale

(x3.5, y4)

(x1,y1)

Radius

(x, y)

4.500 – MIT
Prof. Larry Sass

POINTS, LINES AND MANIPULATION

(x0,y0)   (x1,y2000)

(k = ?')
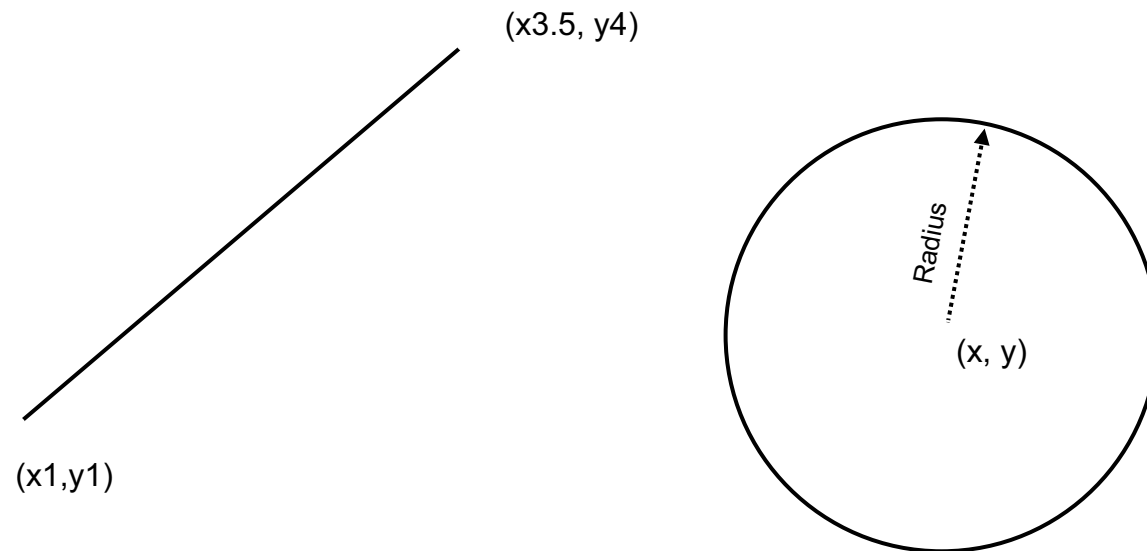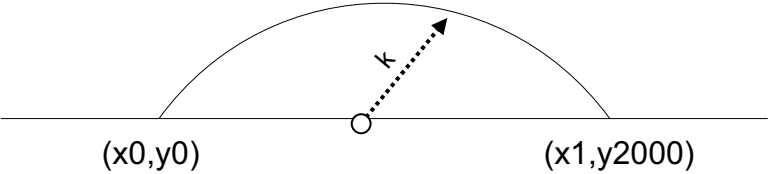
COORDINATE SYSTEMS

Grid System

Lines Can Snap to Modules

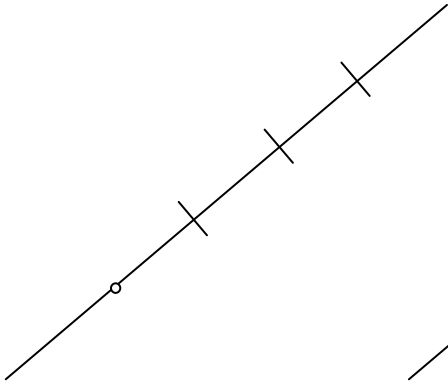Lines Can Snap to Orthogonal Axes
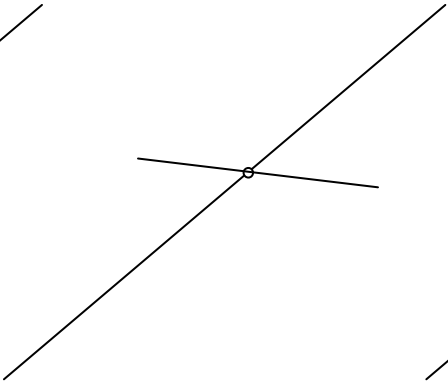
Lines Can Snap to Objects

COORDINATE SYSTEMS

Points on Lines

Nearest   Endpoint   Midpoint
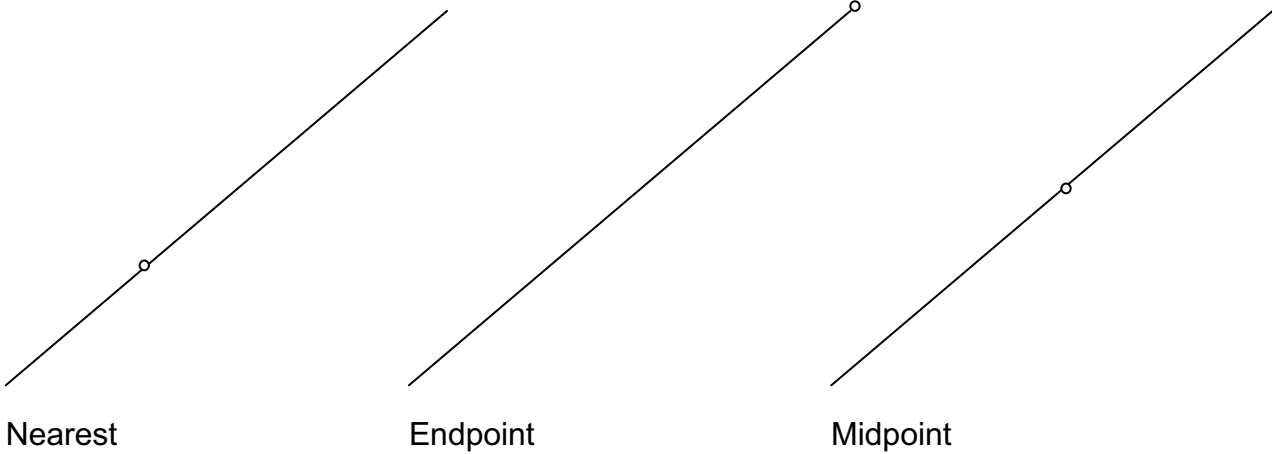
COORDINATE SYSTEMS
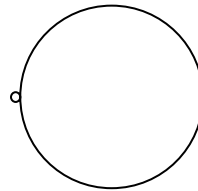
Points on Lines

Equal Divisions   Intersections   Perpendicular
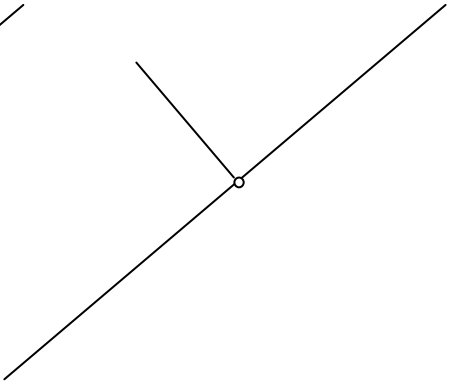
COORDINATE SYSTEMS

Points on Lines
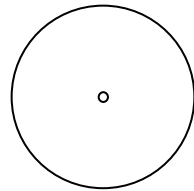
Center Point   Quadrant   Tangent
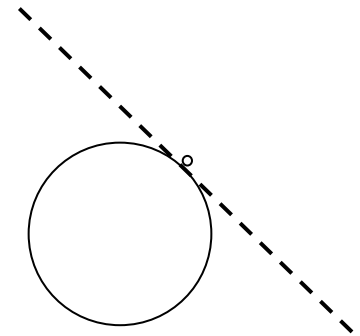
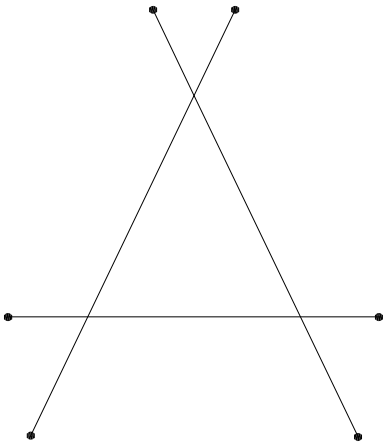   (to last point)
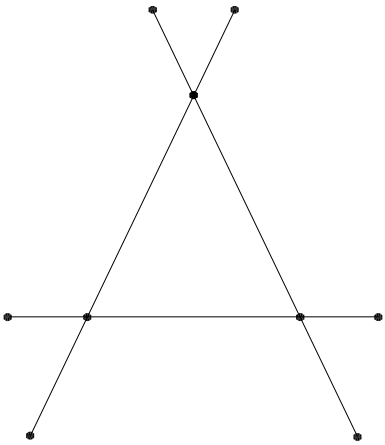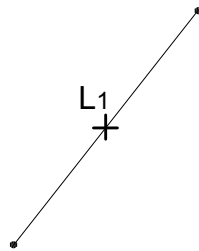
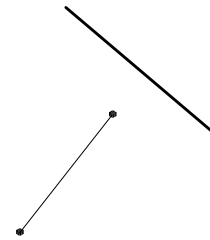# LINE TYPES
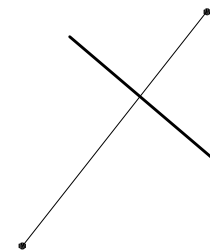
Straight

Arcs
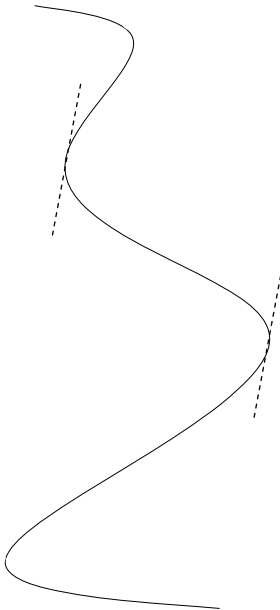
Splines
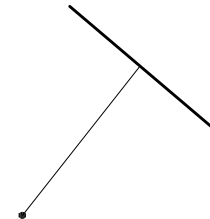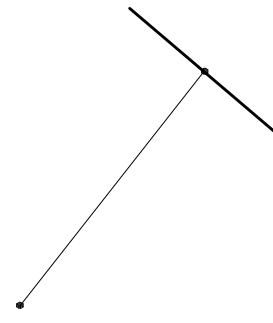
LINE SEGMENTS

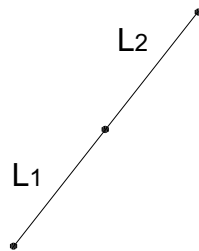Three Segment   Nine Segments

LINE OPERATIONS

L₁

L₂
L₁

Break Operation   Extend Operation   Trim Operation
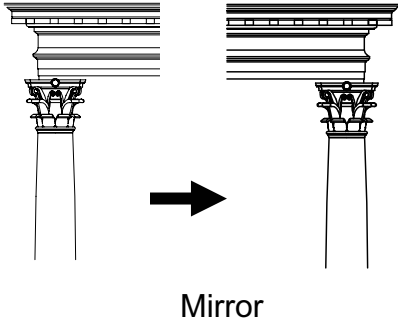
GEOMETRIC CONSTRUCTS

Offsets

Polar

a

Parallel

a

Offsets

X & Y

Arrays

TRANSFORMATIONS

Grab Point

Move

Rotation Point

Rotate

Grab Point

Z

Base Point

Scale

Grab Point

Z

Base Point

Mirror
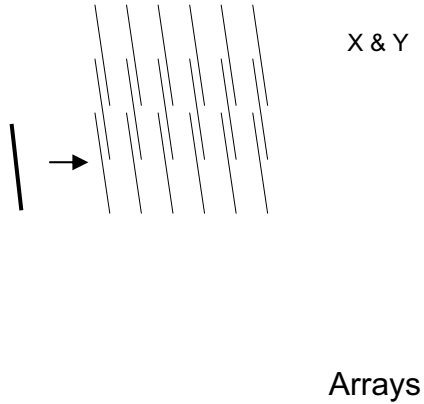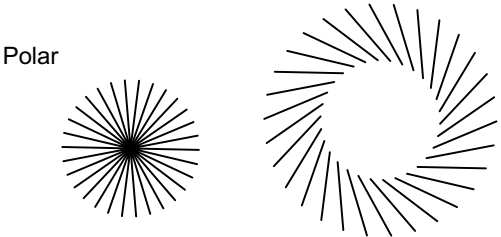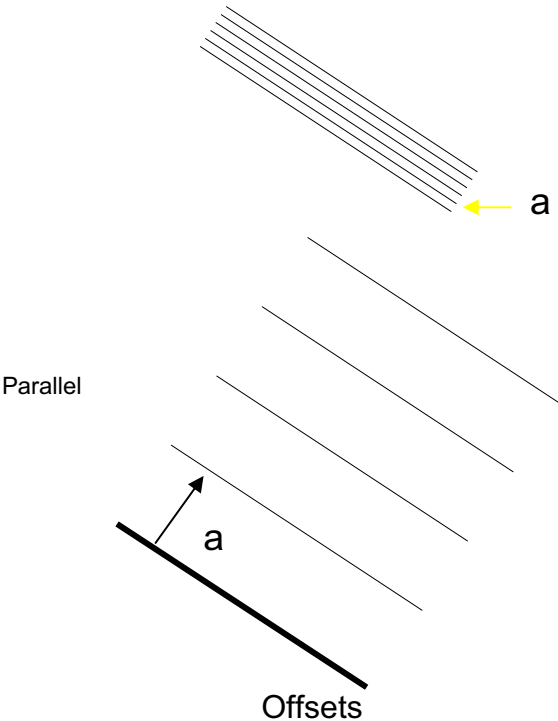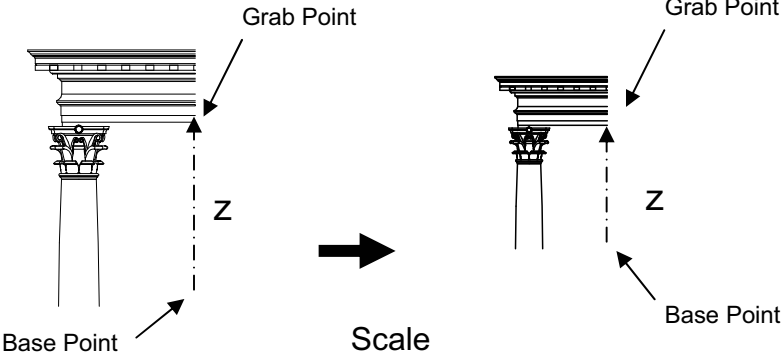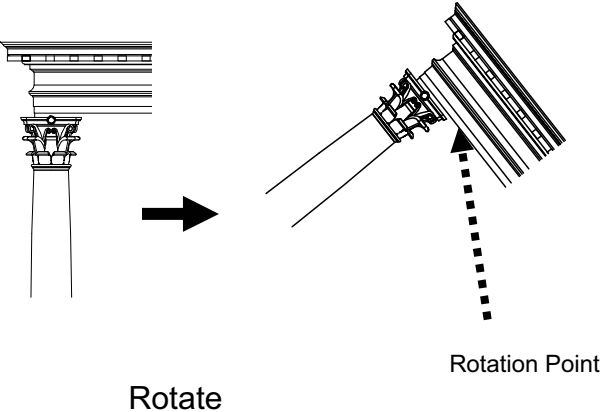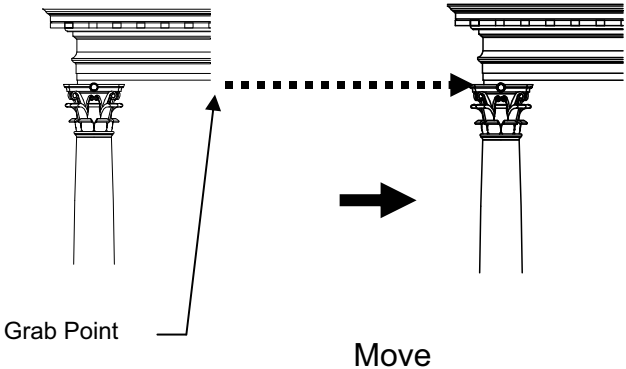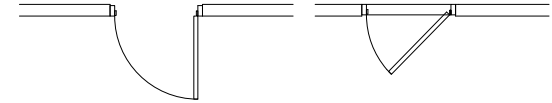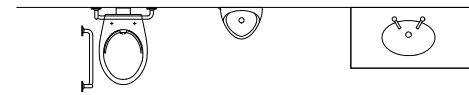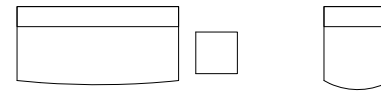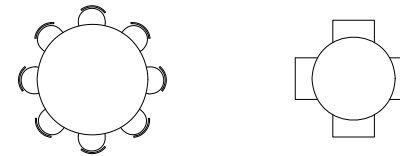
PRE-DEFINED OBJECTS

Doors

Bathroom

Furniture

Chairs & Tables

Office Furniture