

Geometry encounter, Porto 7-9/5 – 2018

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Design Department

Geometry is part of a course comprising also of form, proportion, colour and ornament for BA first year students in the following programmes:

Bachelor in Interior Architecture and Furniture Design

Bachelor in Fashion and Costume Design

Bachelor in Graphic Design and Illustration

Presentation overview:

1. Geometry background
2. Three student projects
3. Investigative practice
4. Reflection – future developments

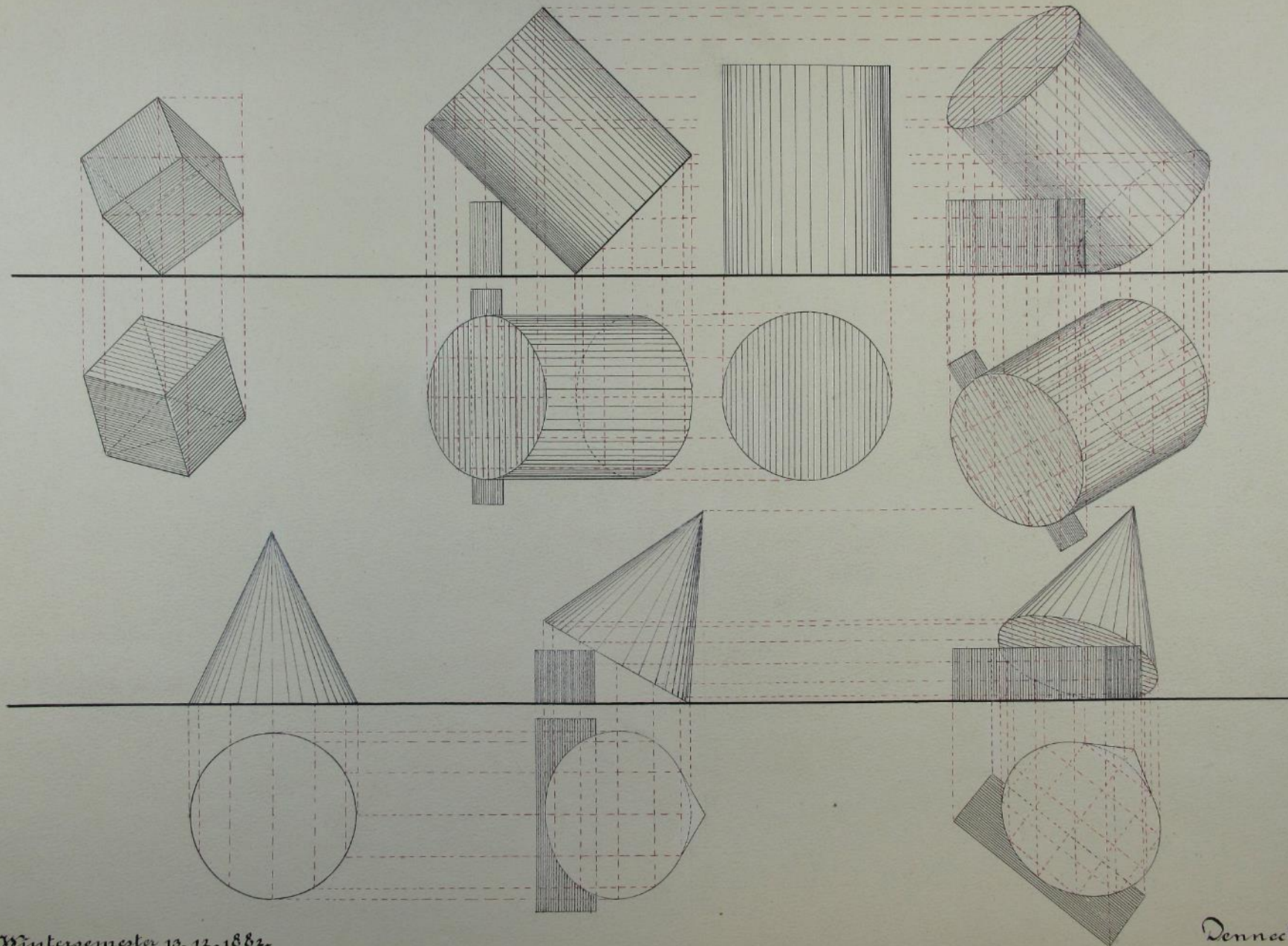
1. Geometry background

- The Academy is celebrating a 200-year jubilee in 2018 and has a strong background and tradition in geometry. Following are two examples from our archive

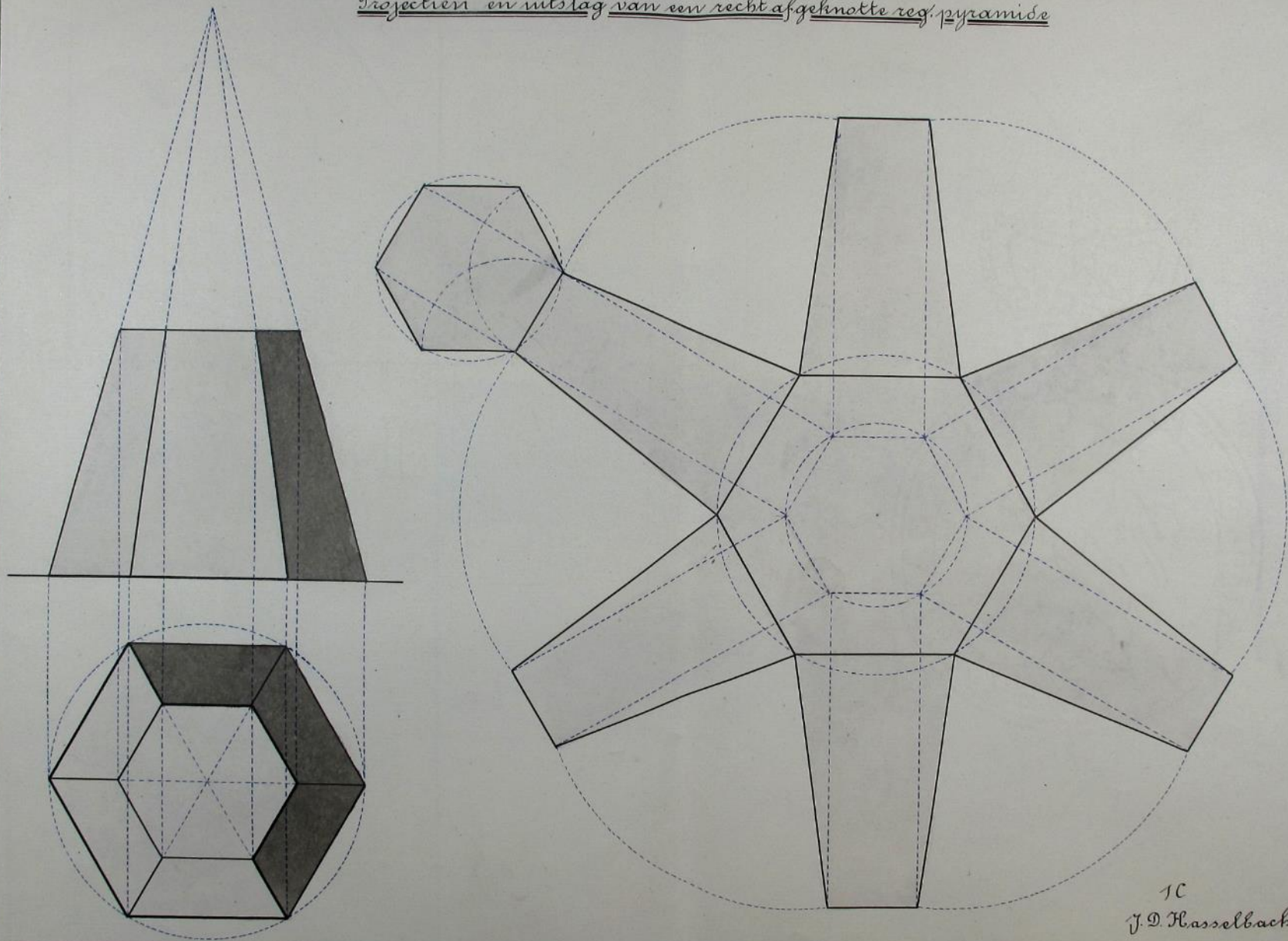
- Example of geometry employed as central element in a traditional designprocessess.

Tracing floor at Nidaros Cathedral, Trondheim. Restauration of the King's entrance. Drawing as a central element uniting a process encompassing registration, dismantling, information to all involved (stonemasons), reconstruction

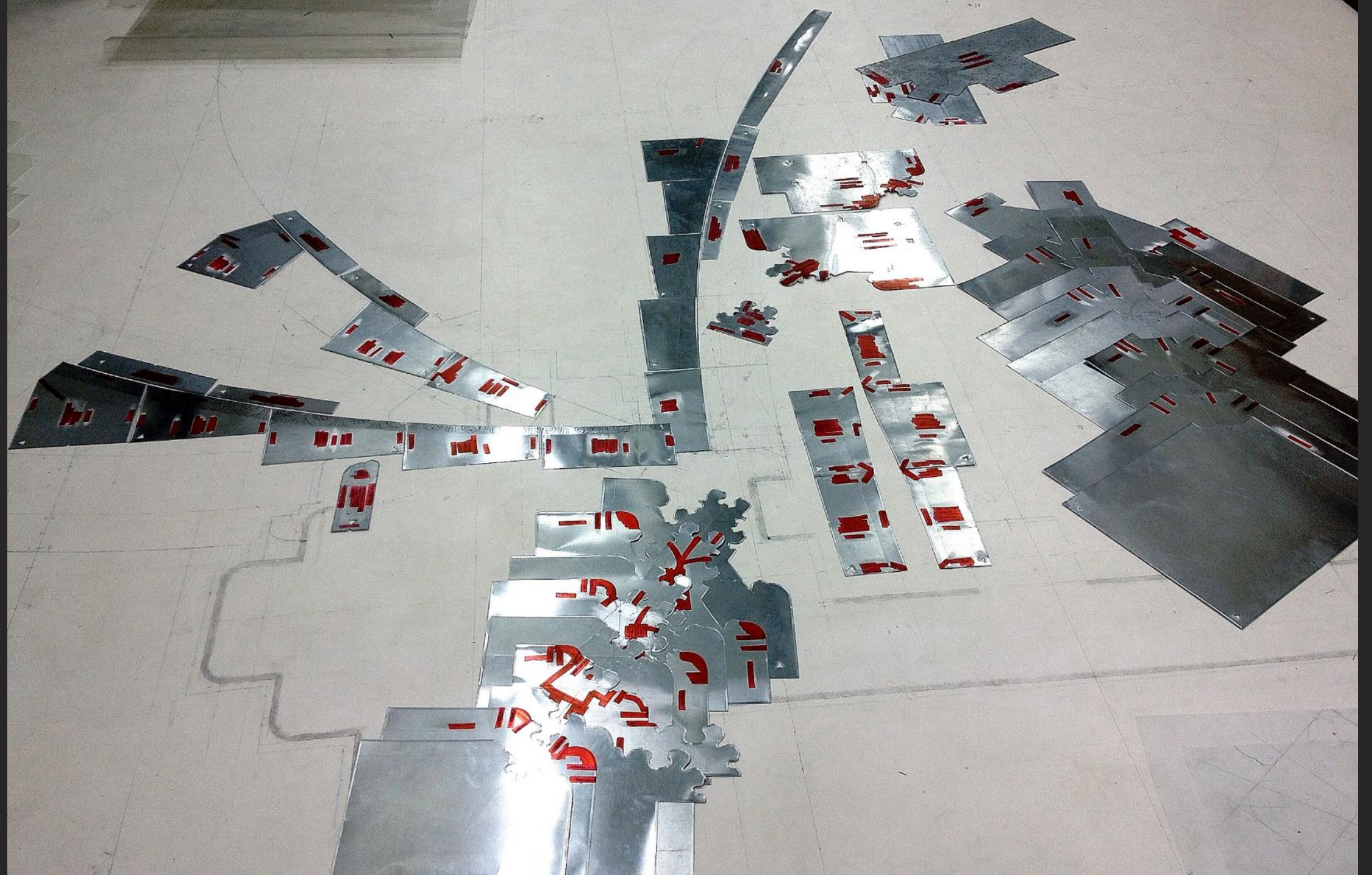
Scale 1:1, ca. 35m²



Projectiën en uitslag van een recht afgeknotte reg. pyramide



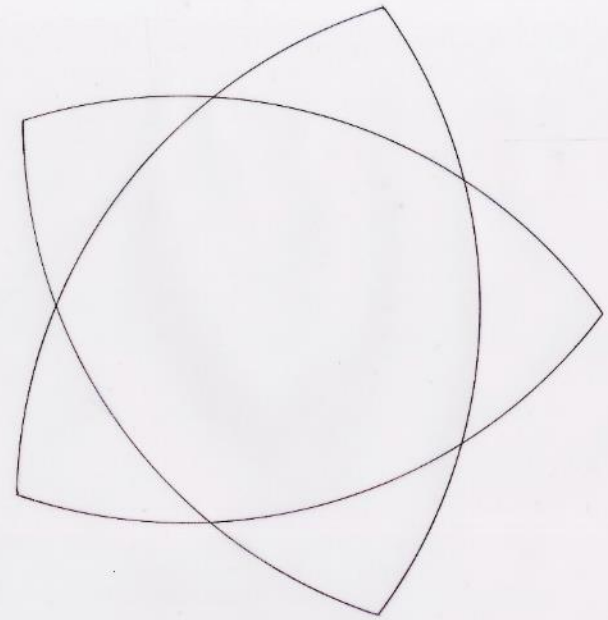
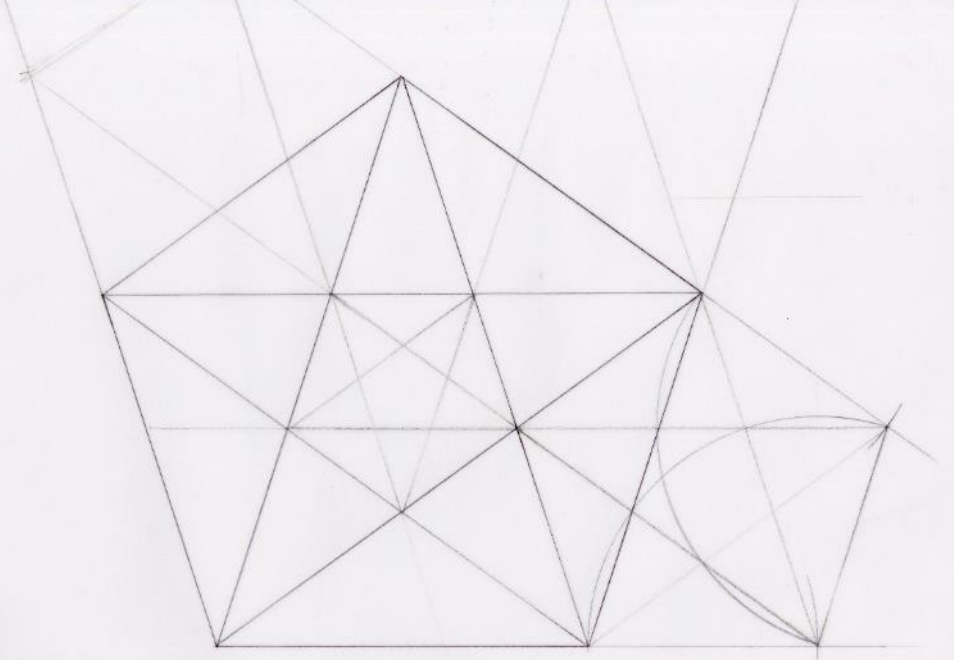
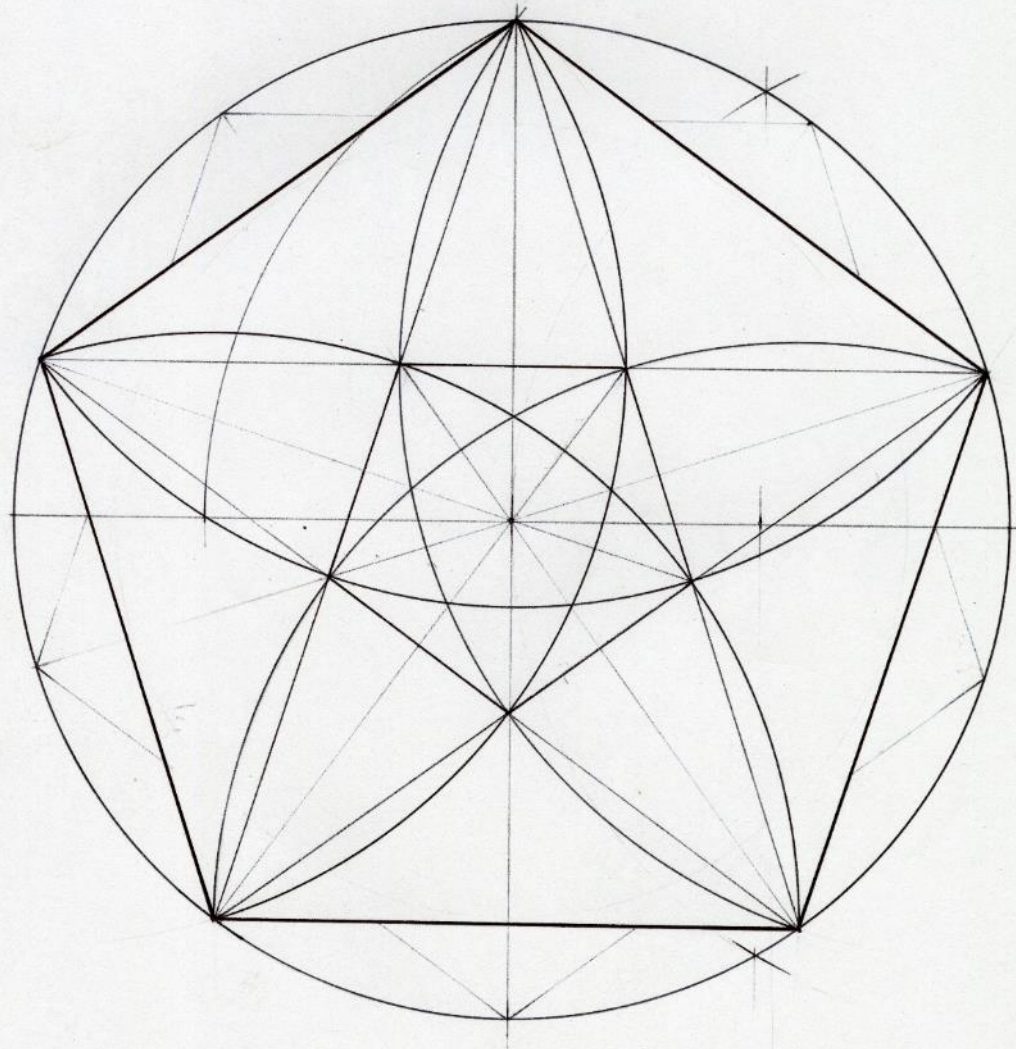




2. Three student projects

Projects are a combination of theory lectures and practical assignments.

- Regular polygons as proportion, relationship between sum and parts, with increasing emphasis on symmetry axes. Relationship to natural, growth forms
- Assignment based on dynamic rectangles and principles of proportional division, as proportion, as structure. Two-dimensional sheet employed as object, with reference to implied forces, chladni effect
- Series based on polyedra: proportional variations, transition from 2D to 3D, from open plane to closed volume to open volume, surface treatment, varying materials and scale





Dag 1
07.11

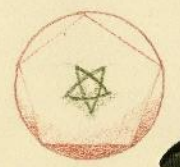
Sirkler



- "Circulus" av "circus" (lat.) betyr "ring".
- Den eneste plant-kvise med like krumning 360 gr.
- Symbolisk: Solen, månen, dag/kvartidhet (ring), feminine og maskuline krefter, komos.

Harchesj ↑

Karakteristisk for sin sirkelrunde form.

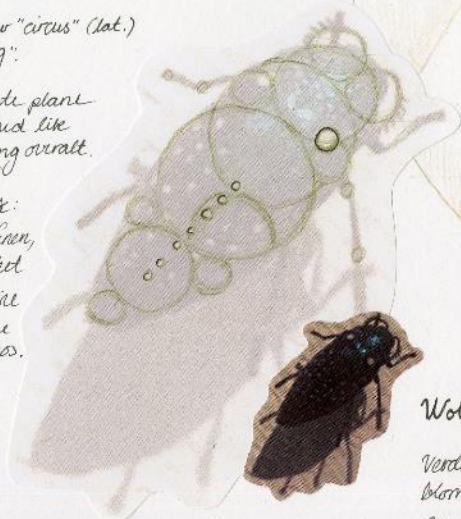


Arkonsertic bunn er femkantet.

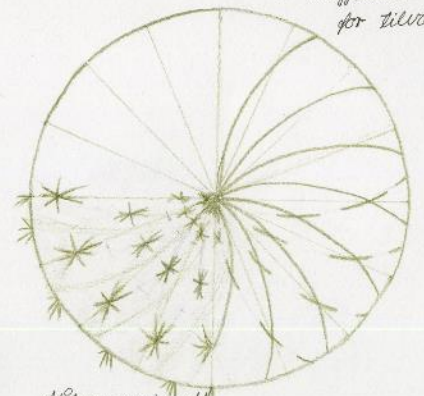


Amerikahagbomusk →

SB



↳ Bille med sirkler på skallet. Sirkler i dyre- og insektverdenen imiterer dyne. Dyne og årvaktheit er avgjørende i kampen for tilværelse.



Nåler proporsjonalt fordelt i spiraler fra senter.

Kaktus →



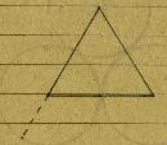
Wolffia arrhiza →

Verdens minste blomsterplante. Ca. 1mm i diameter. Mangler røtter. Opprinnelig fra Europa, Asia og Afrika.



Sirkler og midtpunktet dem imellom dannet utgangspunkt for konstruksjon av geometriske grunnformer.

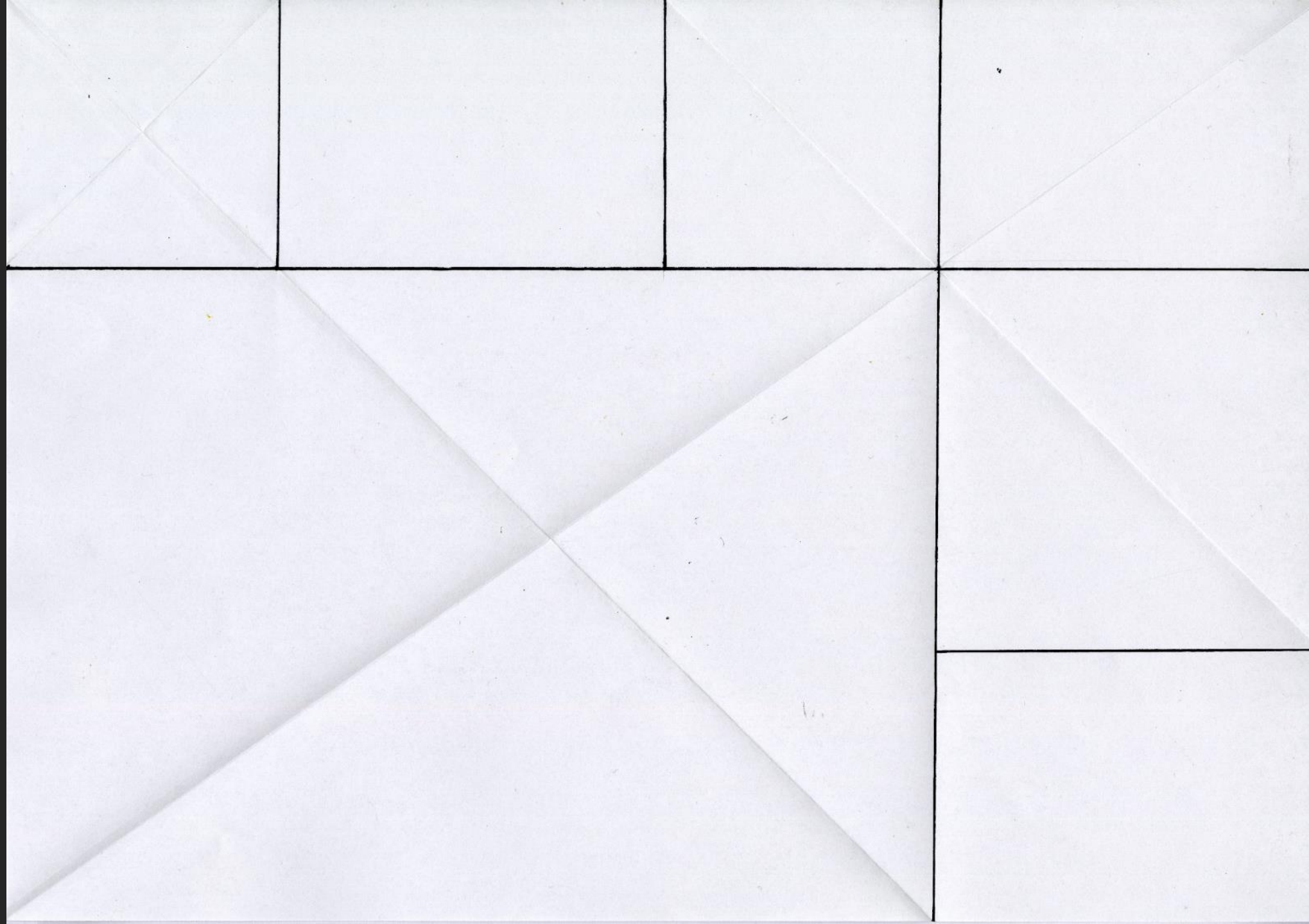
Vesica Pisces

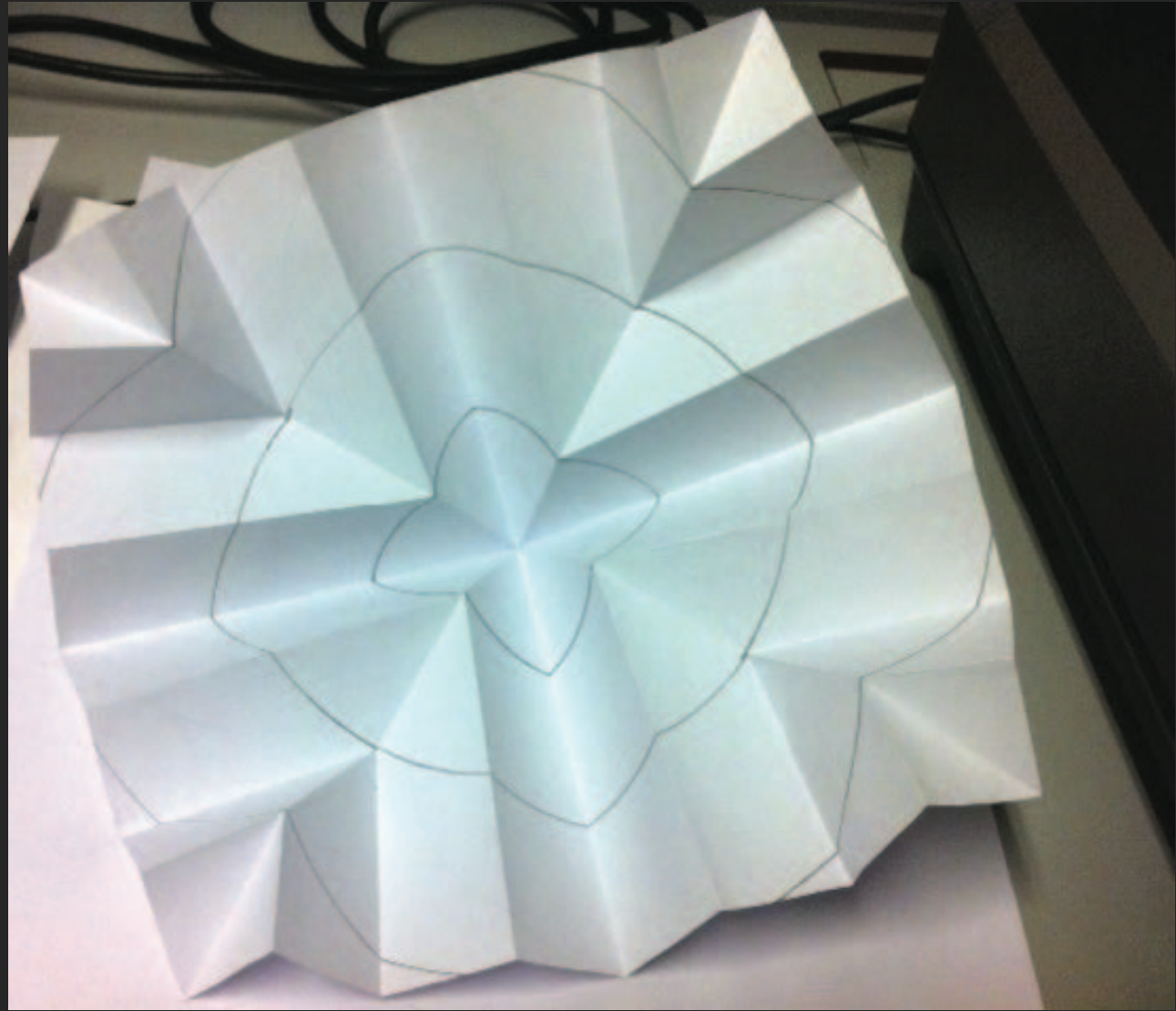


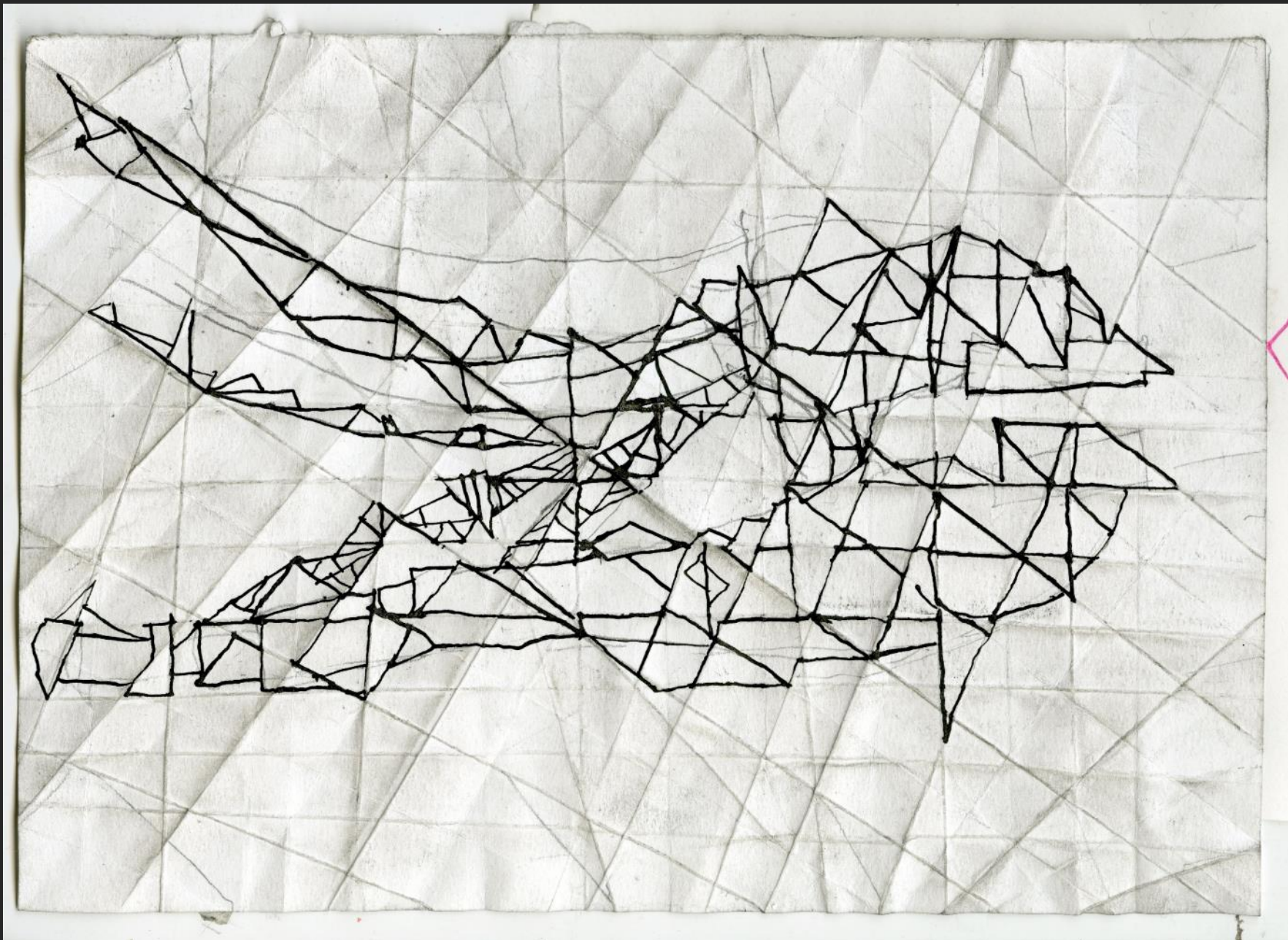
→ Korall

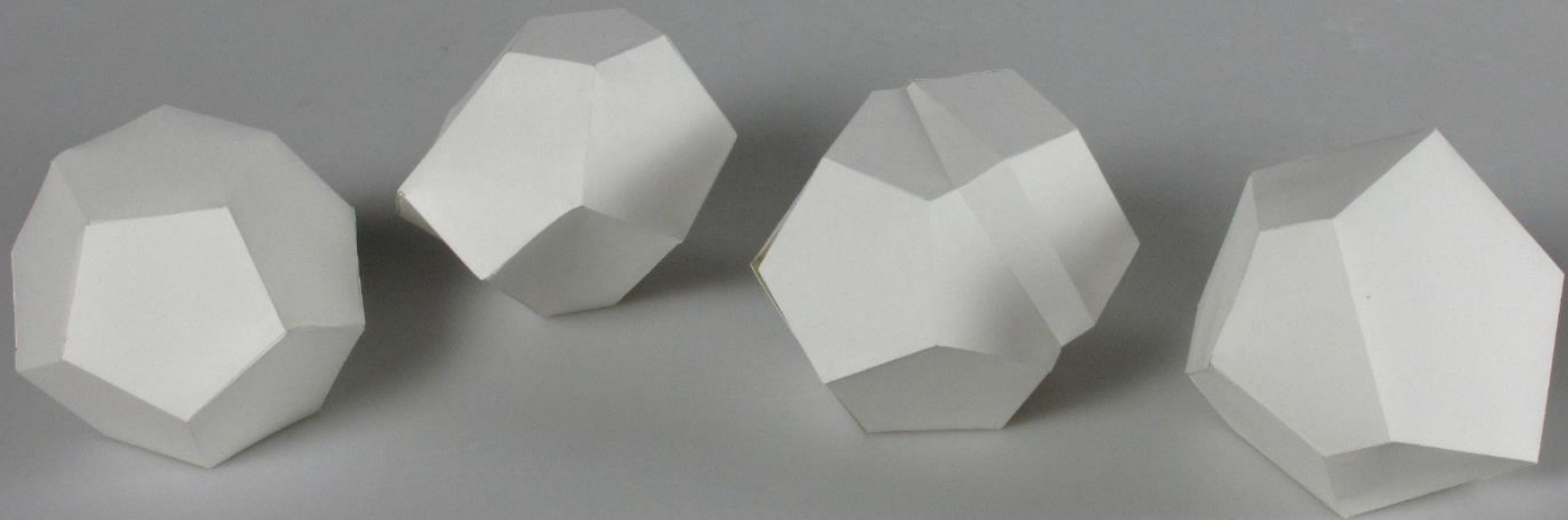


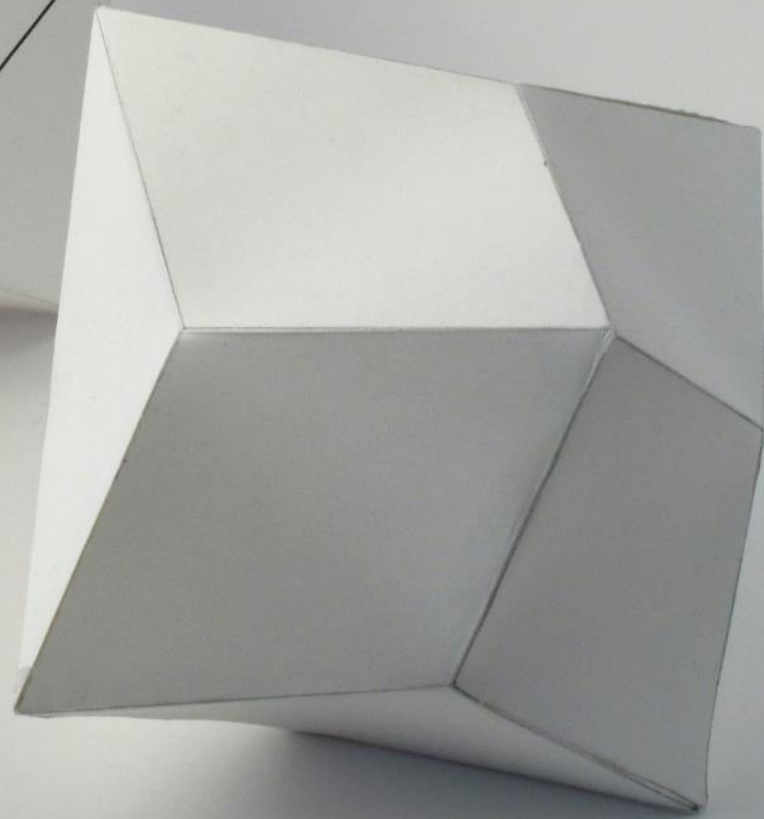
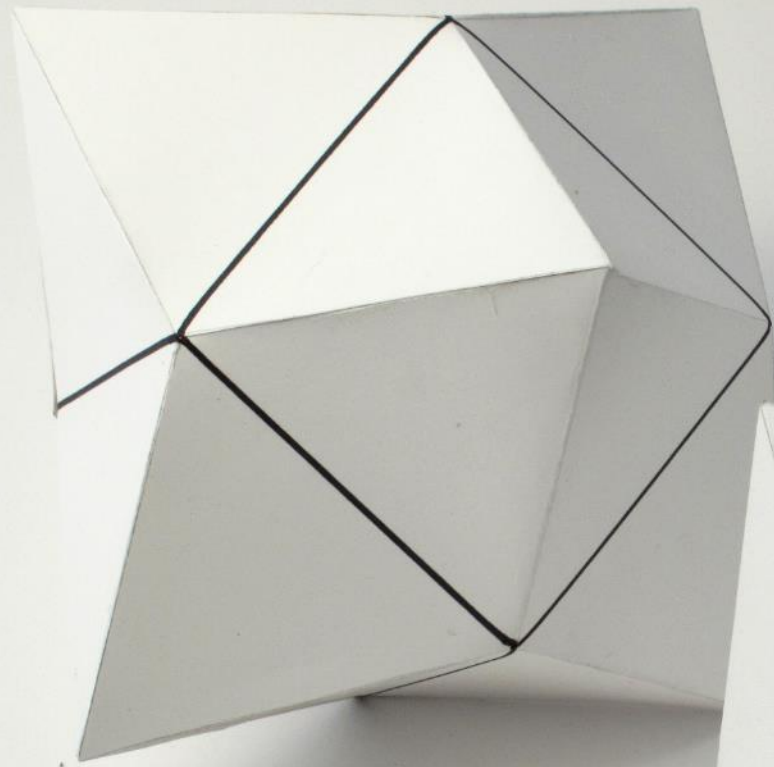
Kalkstein (542-470 mill år) →













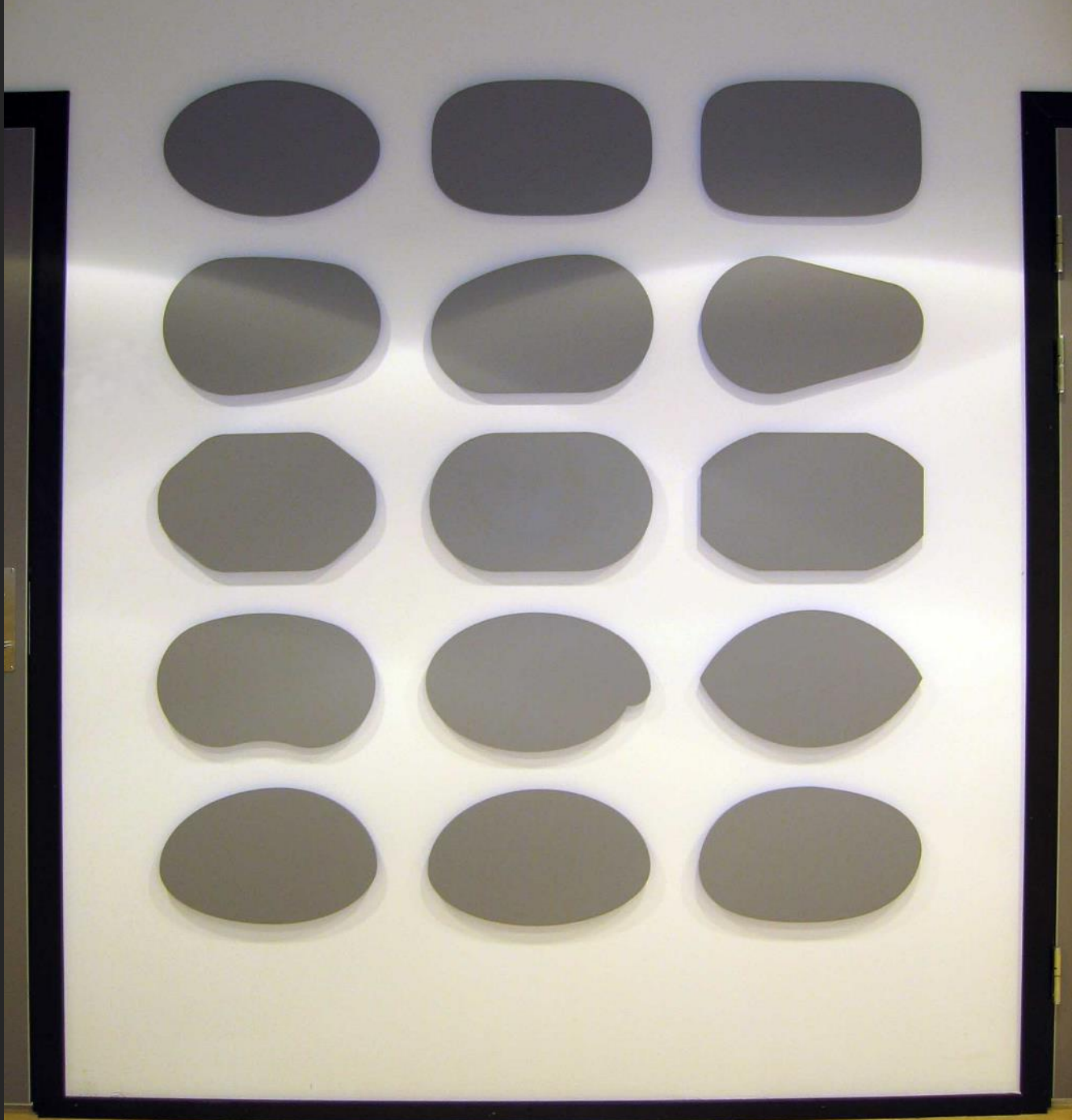




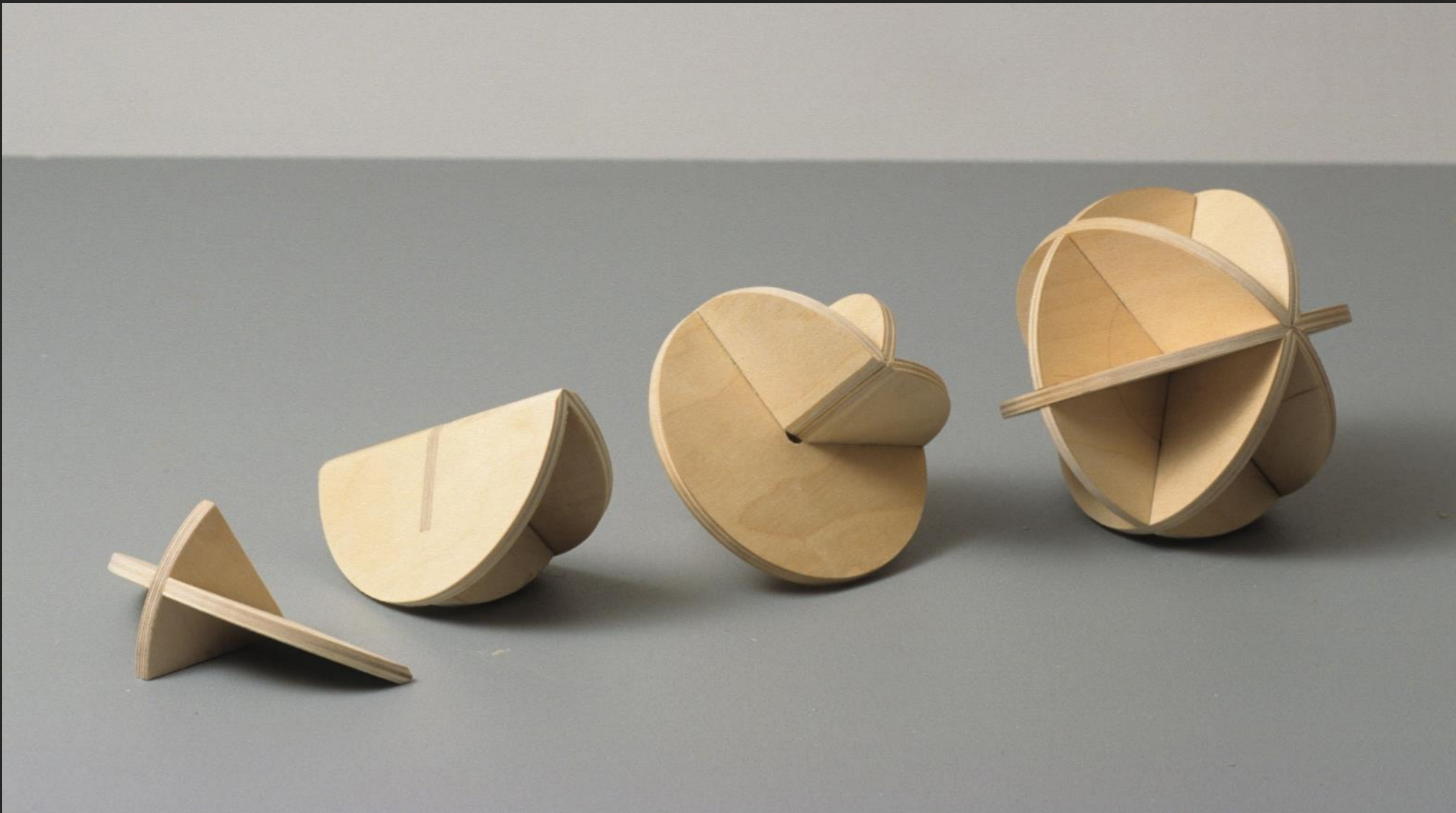
3. Investigative practice

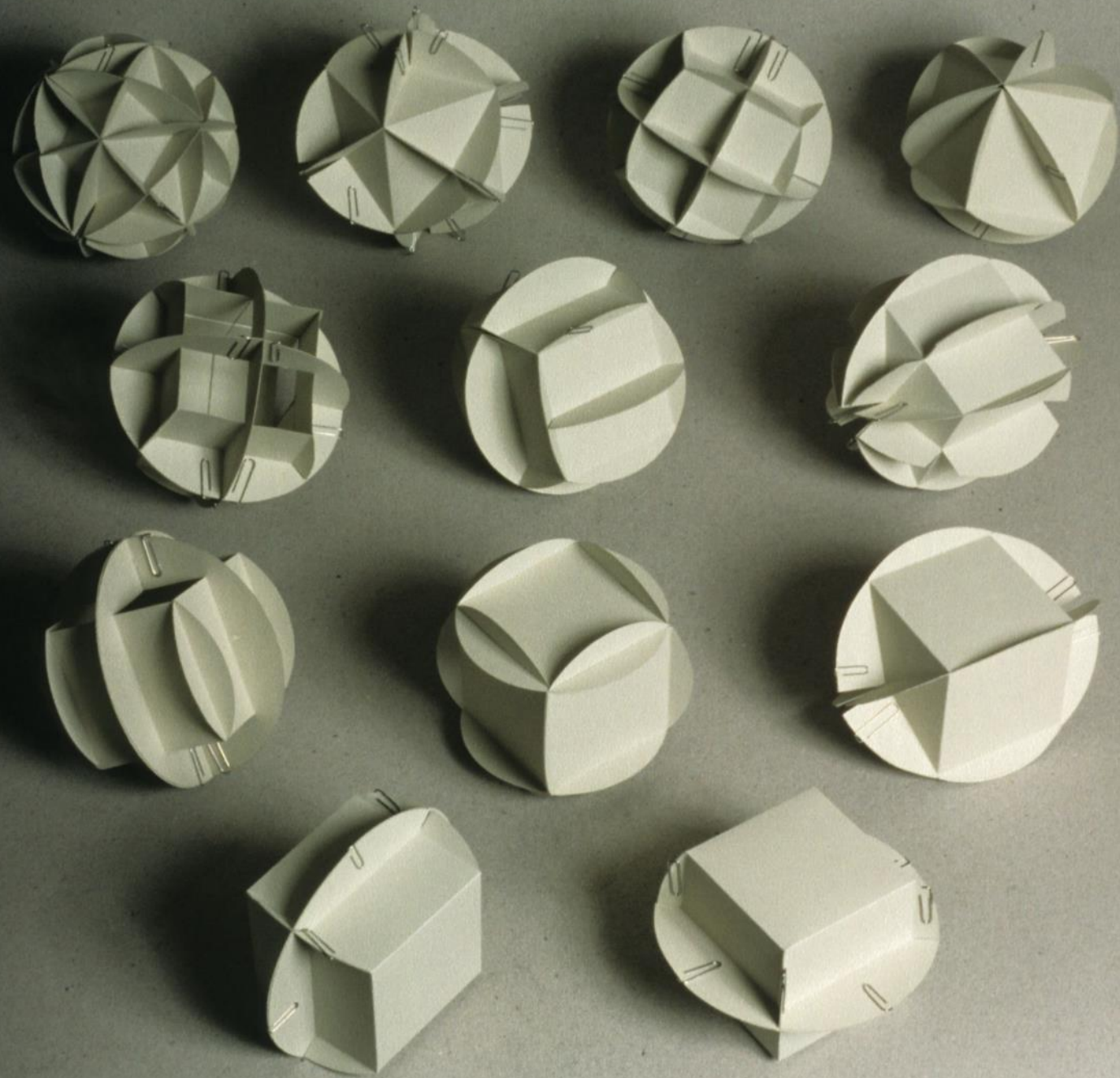
Series of models mainly related to assignments demonstrating two- and three-dimensional formal principles

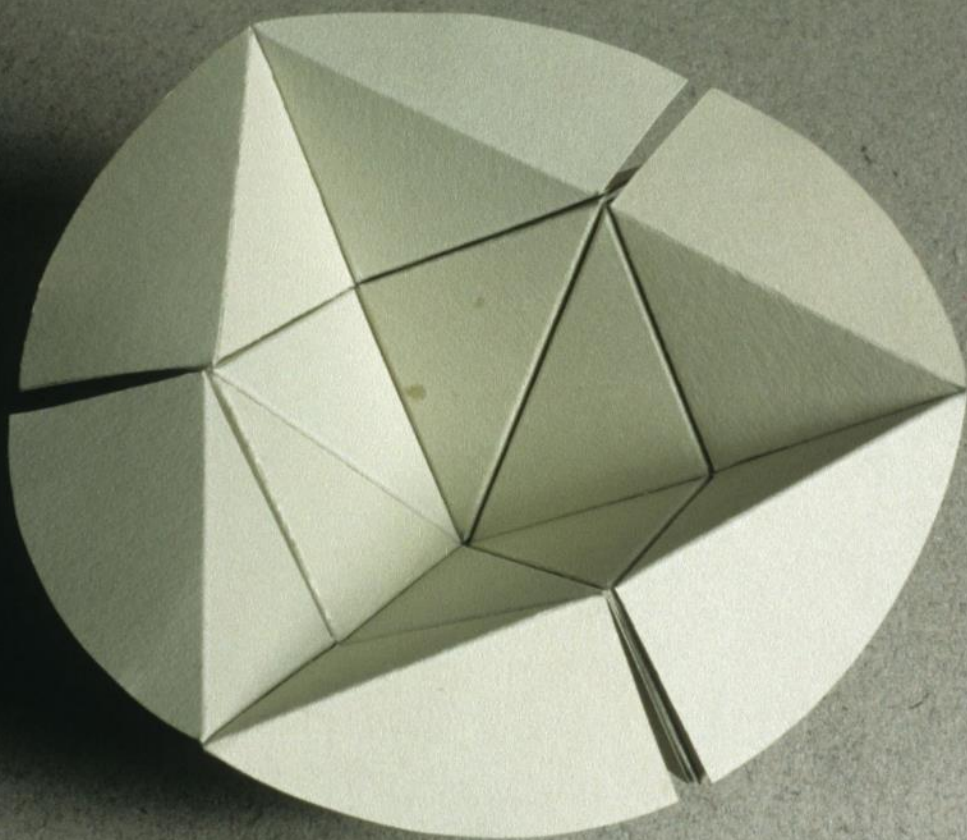
- Elipse family
- Series of models based on the structures of ground forms
- Relationship between cube and sphere employing regular templates
- Constructional and structural variations based on modules employing dynamic rectangles and arc between diagonals

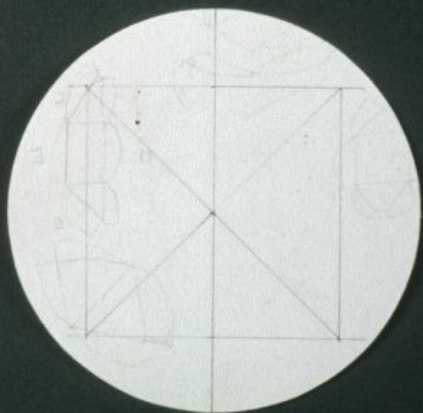
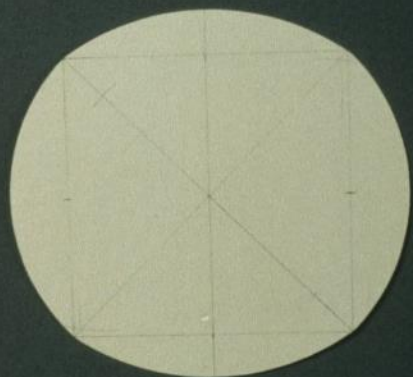
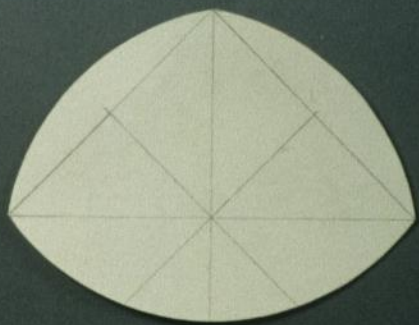




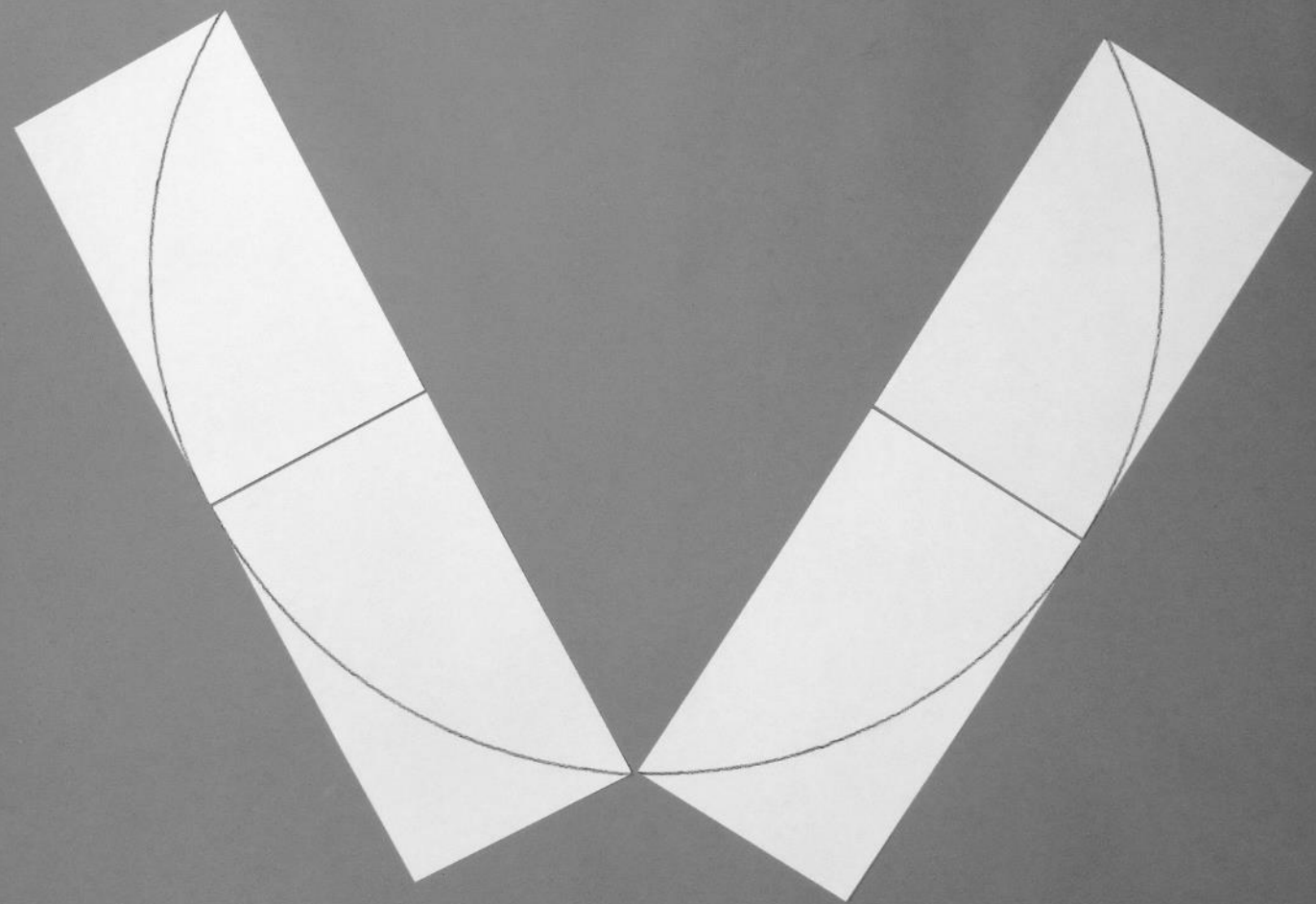


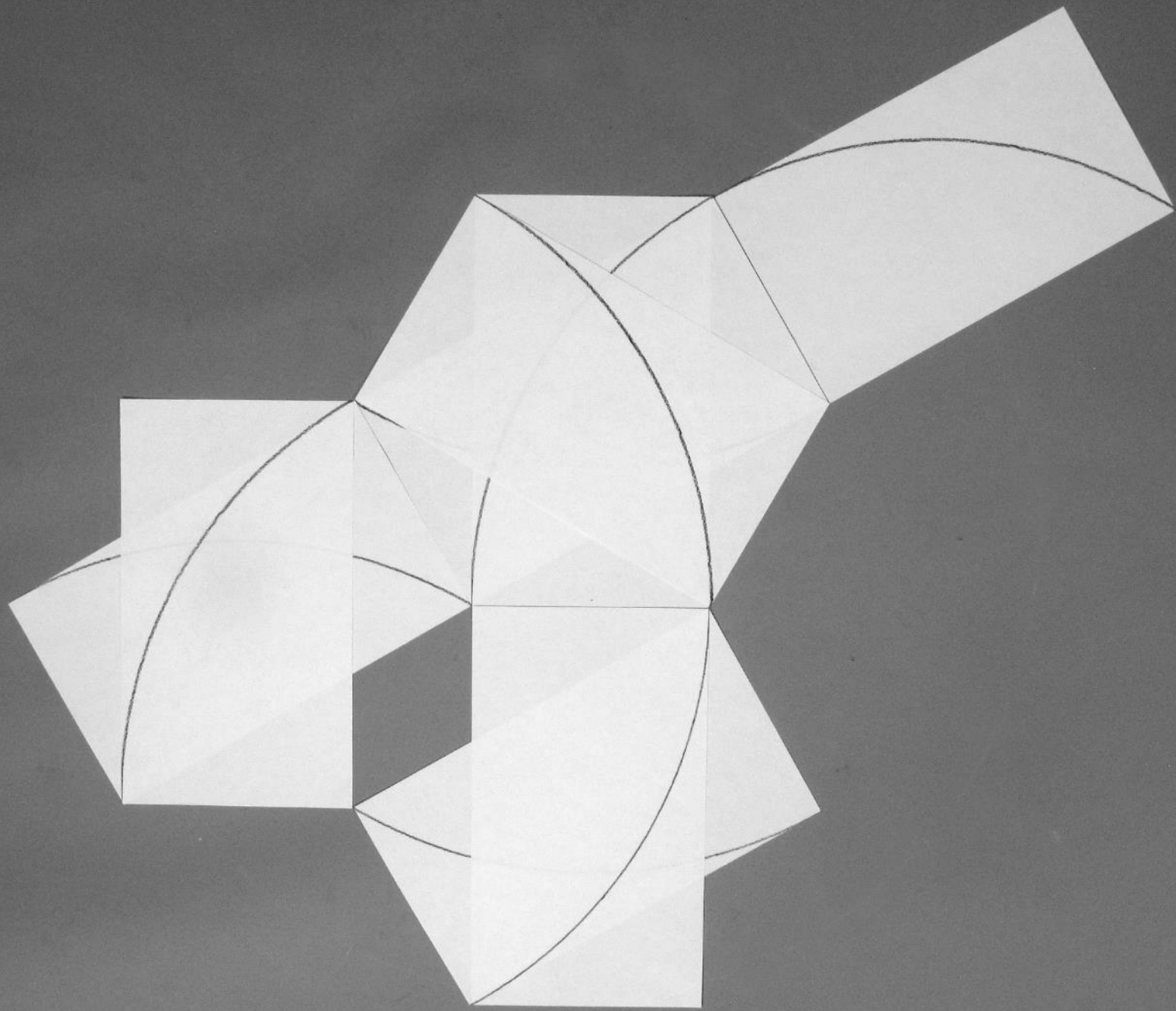












4. Reflection – future developments

- Geometry: developing new awarenesses of form or new forms?
- An attempt to map an overview of areas encompassing geometry in our field
- Imminent challenges



Geometry related to Form

– Rhythm, symmetry, frozen music, basic form, proportion, harmony, unity, structure volume. Basic Design. As base for other form variation, systems

Visual language

– earth measurement, plan, 2D/3D, projection, working drawing, drawing systems (isometric), construction, folding, communication

Perception

- aims to develop students' awareness of form, and the interplay and relationships between elements, analysis, and abstraction.

Practice

- Geometry as practice motoric skills, accuracy, use of materials 2D/3D techniques. Analog/digital

Method

Working methods and methods for analysis, experimentation and development. Questioning

Theory

– Formal language, symbol., concept, Euclidian

Future possible challenges and developments

- Focus, what's most important between areas on previous page
- Relation to time, number of hours
- Size, working format
- Media: analogue – compasses? / digital