Fakultät **Gestaltung** Hochschule für
Technik und Wirtschaft
Dresden

University of
Applied Sciences

PGB06 / Systematische Zusammenhänge der Gestaltung

Zweidimensionale Grundlagen der Gestaltung
Monochrome Systeme in zwei Dimensionen

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Semesterstufe: 2
Sommersemester 2013

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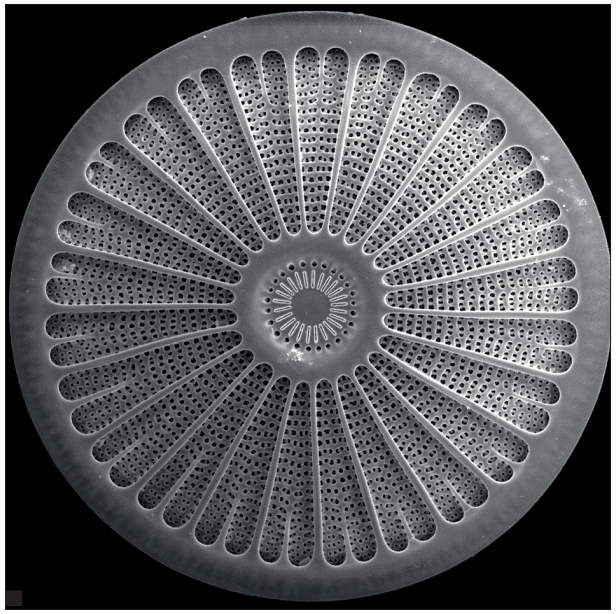
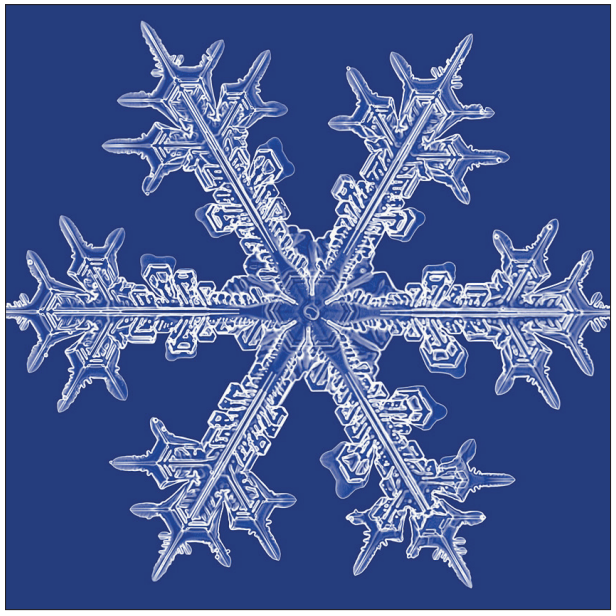
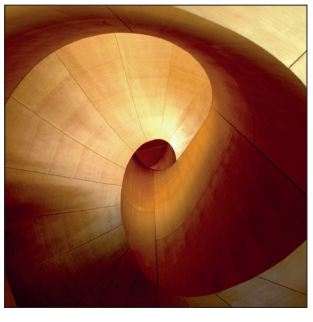
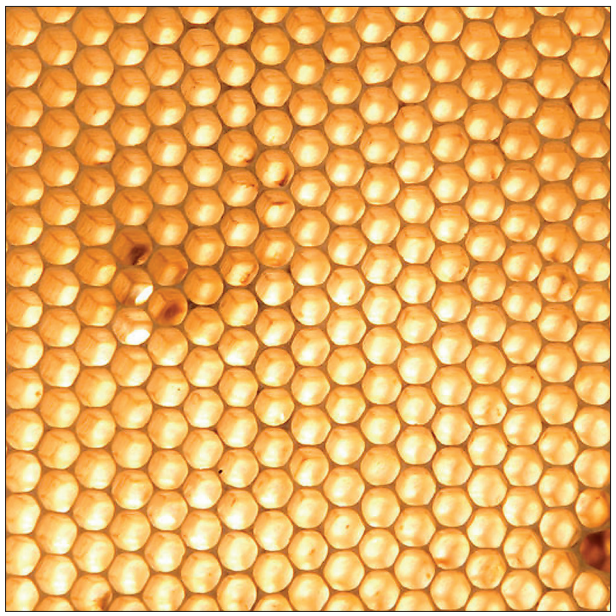
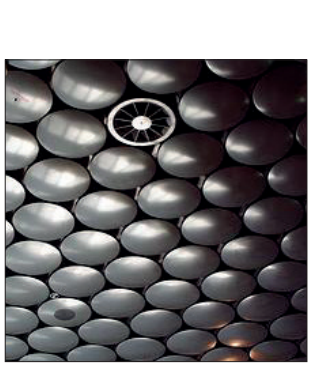


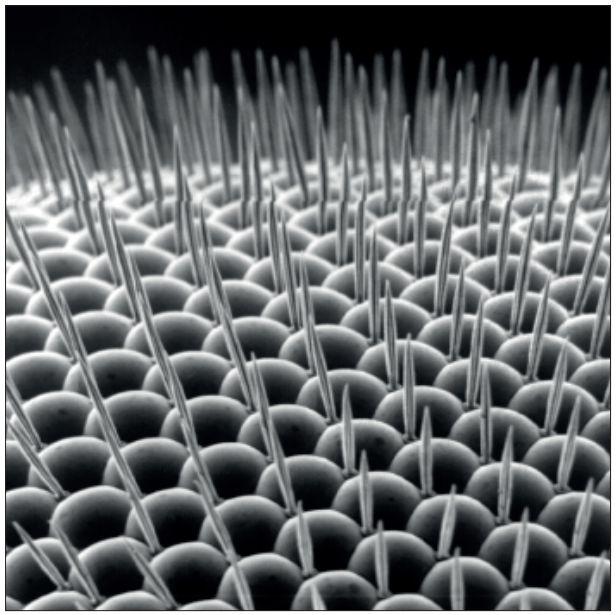




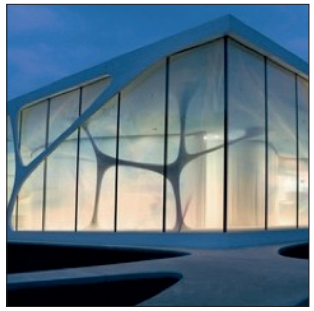
Dezentrale Ordnungssysteme

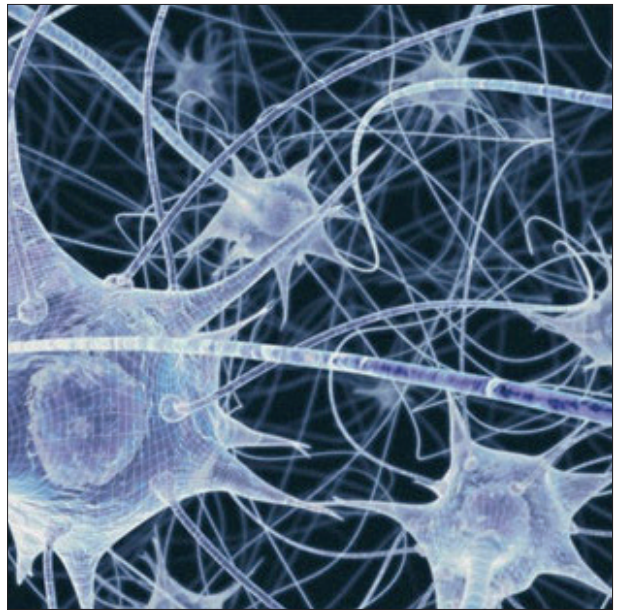


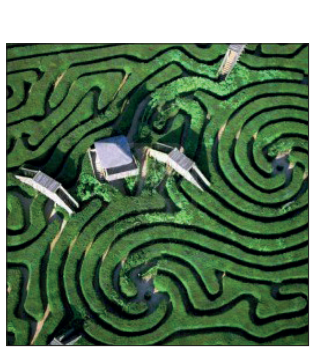


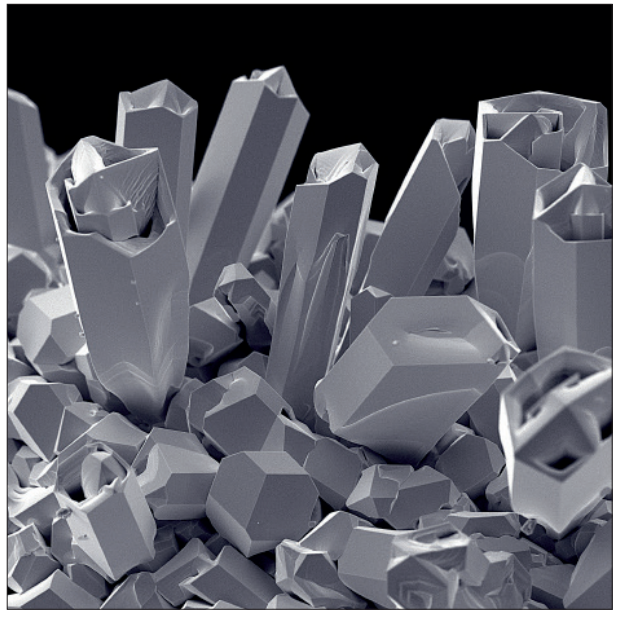


Chaogene Ordnungssysteme









Ordnung
Ordnung ist ein Zustand, in dem Dinge einem bestimmten System folgen. Bei einem Ordnungsvorgang wird ein Ganzes in seiner Vielfalt dargestellt und in ein gewisses Verhältnis zueinander gebracht. Das Wort „Ordnung“ geht auf die Fachsprache der griechischen Weber (bzw. Strumpfwirker) zurück. Es bedeutet dort: „aus verschiedenen Fäden durch kunstgerechte Verknüpfung ein Gewebe anlegen“.

Begriff der Umgangssprache
Disziplin, gutes Benehmen, Folgsamkeit, Gehorsam. „Die öffentliche Ordnung muss erhalten bleiben.“

Bei einem Sandhaufen kann man nicht von Ordnung sprechen, weil trotz der Vielheit die Mannigfaltigkeit fehlt; da jedes Sandkorn austauschbar ist. In diesem Sinne wird Ordnung auch in den Realwissenschaften (Technik: Bau einer Maschine; Wirtschaft: Organisation des Tauschs) verstanden.

Begriff in der Biologie
Die Ordnung ist die Rangstufe der biologischen Systematik. Sie dient zur Einteilung und Benennung der Lebewesen (Taxonomie). Bezüglich der Hauptstufen steht die Ordnung zwischen Klasse und Familie. Zusätzlich kann unmittelbar oberhalb der Ordnung eine Überordnung (superordo) und unmittelbar unterhalb eine Unterordnung (subordo) sowie Teilordnung (infraordo) vorhanden sein.

Begriff der Systemtheorie
Ordnung ist der Organisationsgrad eines Systems. „Der Grad der Ordnung beschreibt die zugelassenen Kopplungen zwischen Elementen eines Systems“.

Begriff der Ethik
Ordnung ist das Idealbild einer wünschenswerten Regelungsform, einer Handlungsanweisung. „Ein sinnvolles Verhalten der Menschen ist die Voraussetzung für eine dauerhafte gesellschaftliche Ordnung auf dieser Welt.“

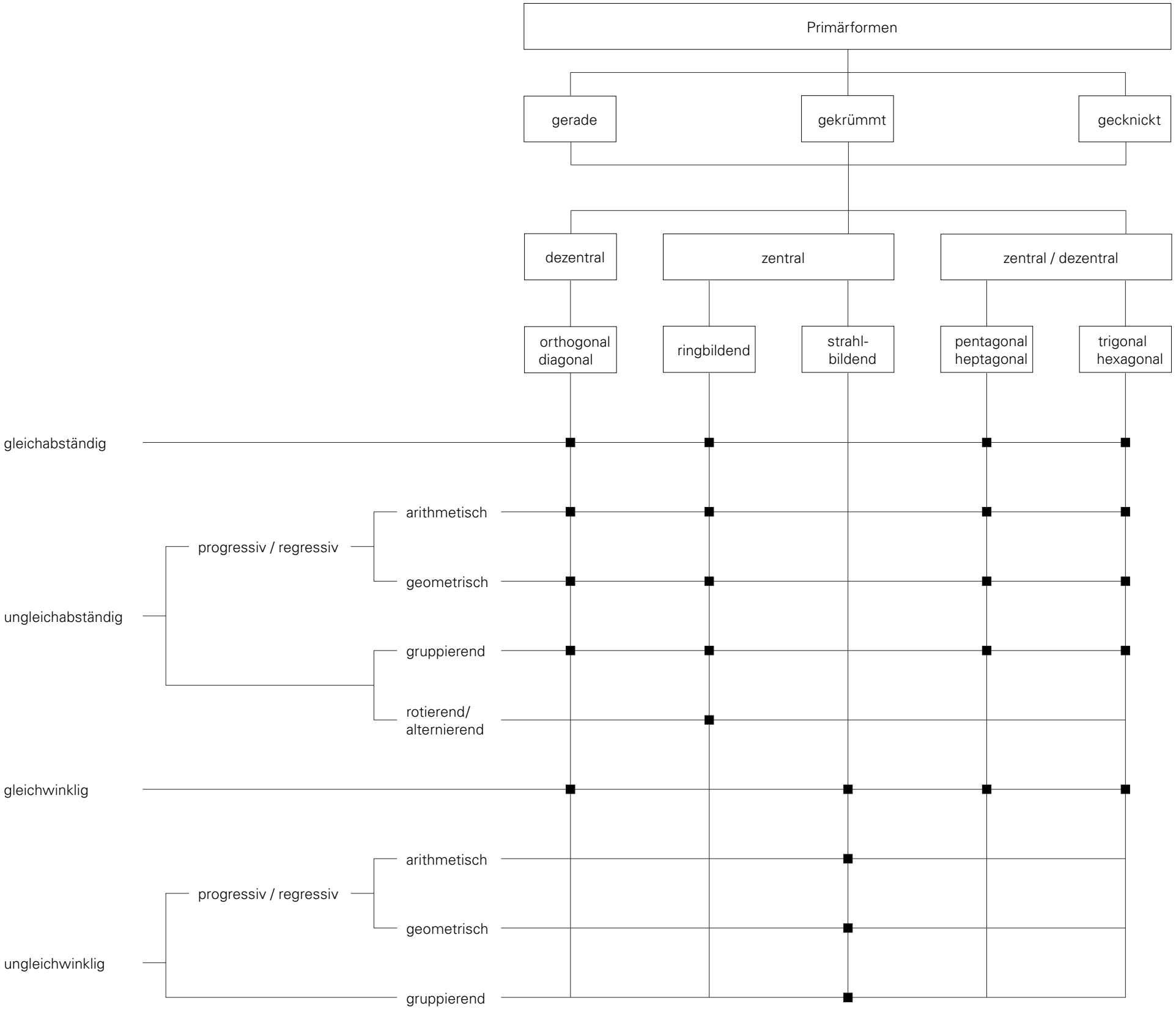
Begriff der Ordnungslehre
Ordnung ist eine Folge zusammenhängender, widerspruchsfreier Regelungen.

Begriff der Organisationslehre
Sammlung von zusammenhängenden, untereinander widerspruchsfreien Regelungen. „Die Arbeitsordnung legt den Ablauf der Arbeit und das Verhalten aller am Fertigungsprozess beteiligten Personen fest“.

Begriff der Philosophie und Wissenschaftstheorie:
Einheit in wohl gegliederter Vielheit und Mannigfaltigkeit. Ordnen (als Tätigkeitswort) meint also allgemein einen Vorgang, bei dem ein Ganzes, das 1. eine Vielheit, aber 2. in Mannigfaltigkeit darstellt, nach bestimmten Regeln ins Verhältnis des Miteinander, Nebeneinander, Zueinander und Nacheinander gebracht wird.

Begriff der Theologie
Sie besteht aus fest eingerichtete Verhältnisse auf der Welt. „Gott hat durch strenge Einbindung des Menschen in den Naturrhythmus (schlafen, essen, trinken, sterben) für diesen seine Schöpfungs-Ordnung vorgegeben“.

Organigramm zur prinzipiellen Darstellung der synthetischen Ordnungssysteme

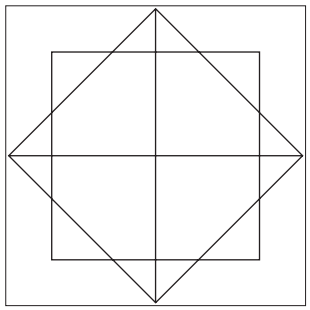


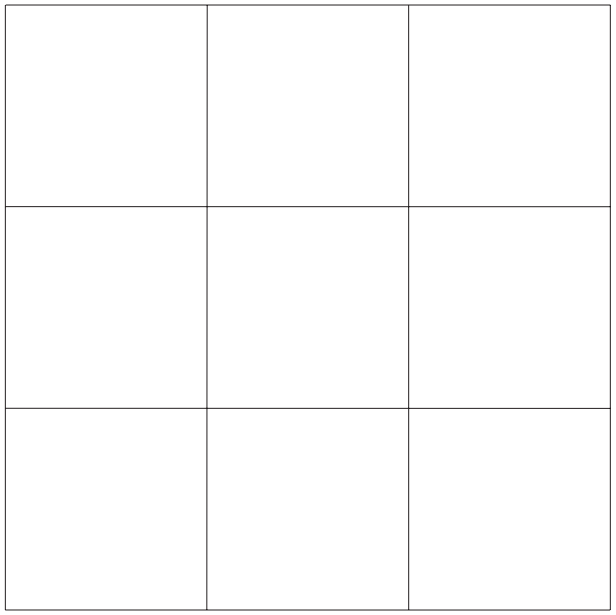
Ordnungphänomene in Natur
Technik/Architektur und Design

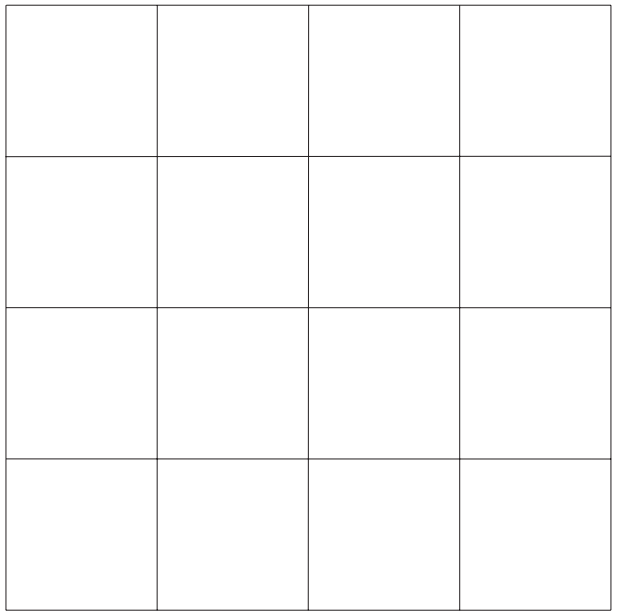
Synthetische Ordnungssyteme

Modulare Systeme über die
Bildung von Interferenzen

Interferenzen im dreidimensionalen
Raum

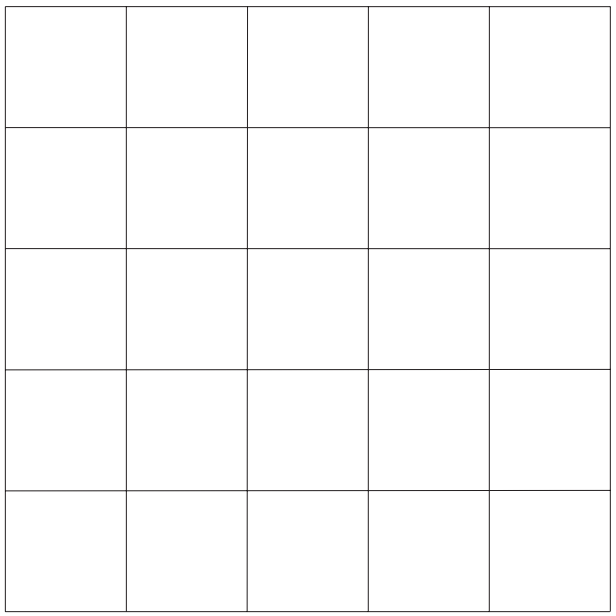


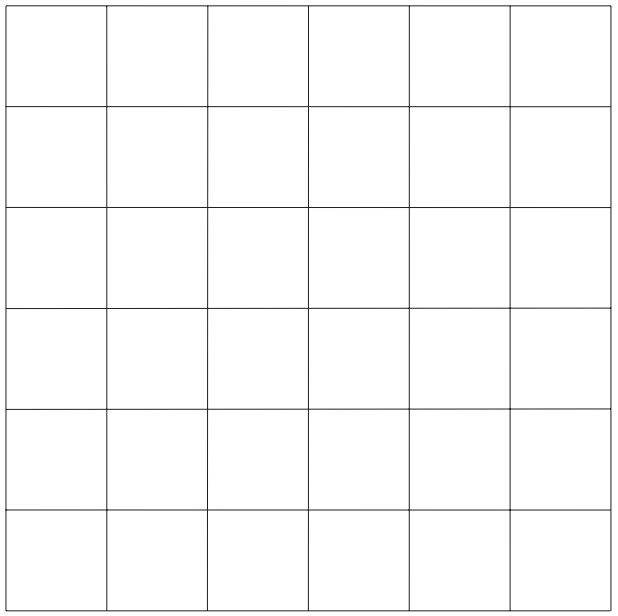


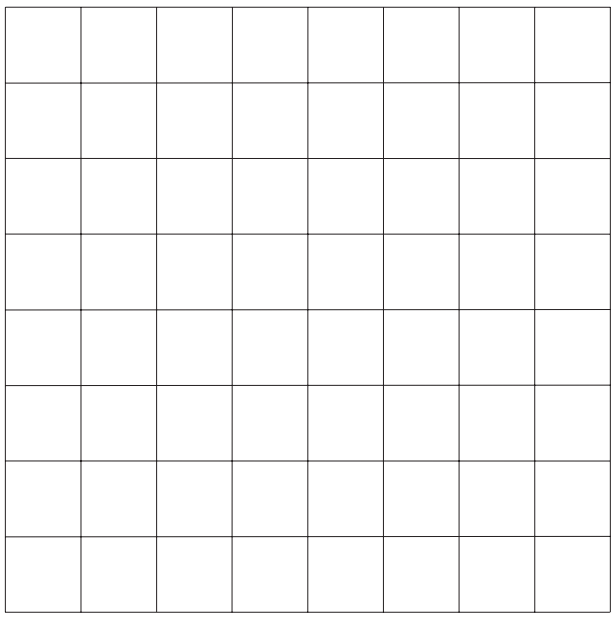


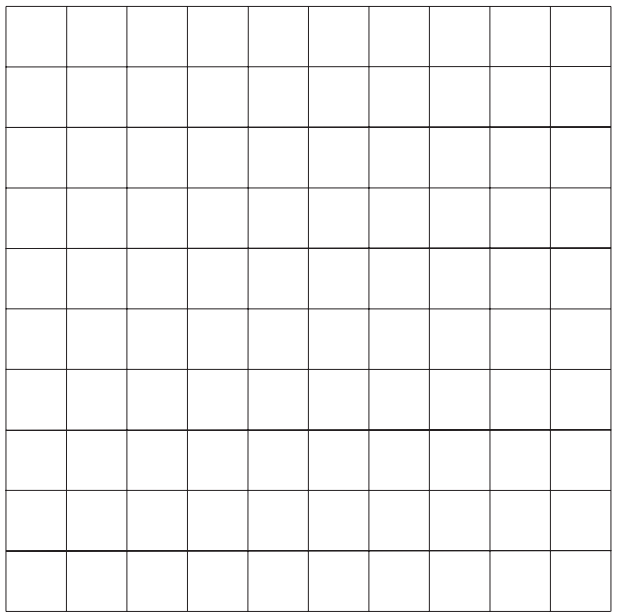
Orthogonal

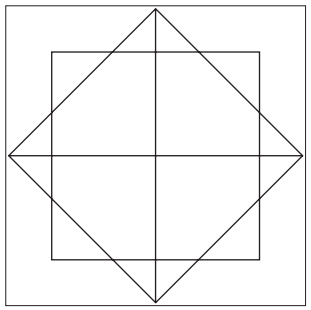
parallel
Rasterweite

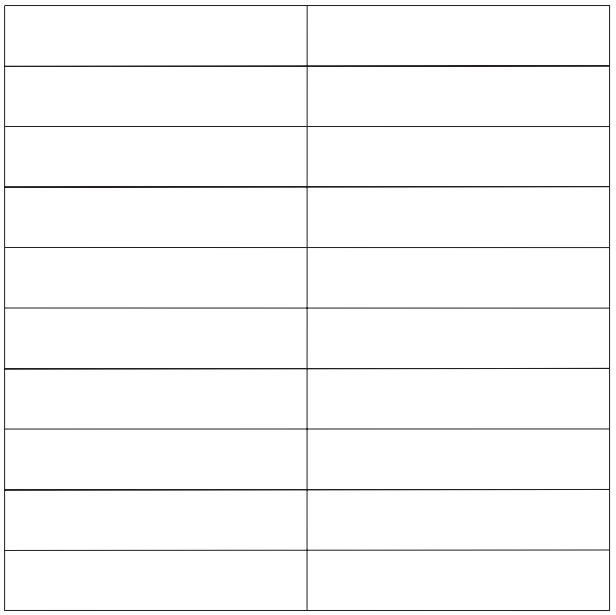


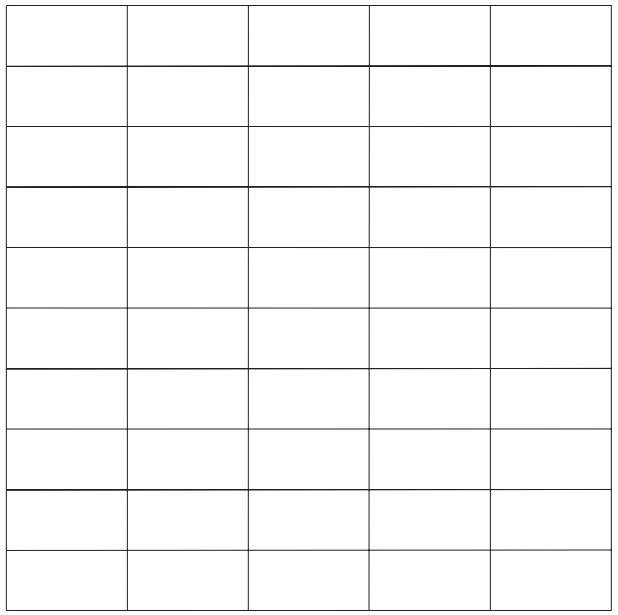






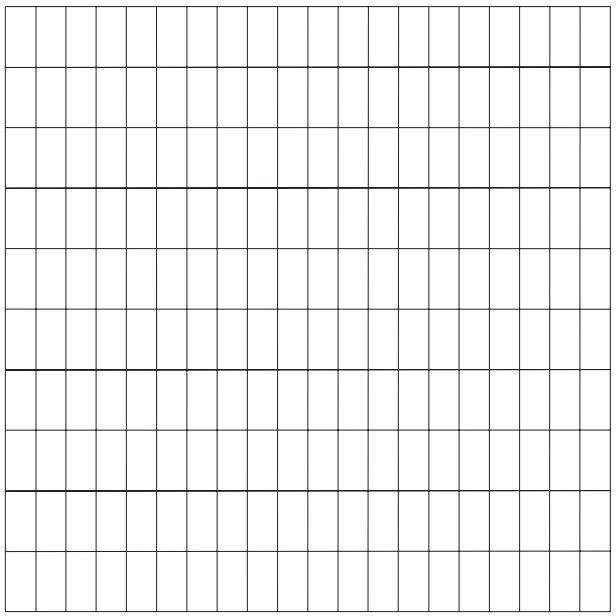


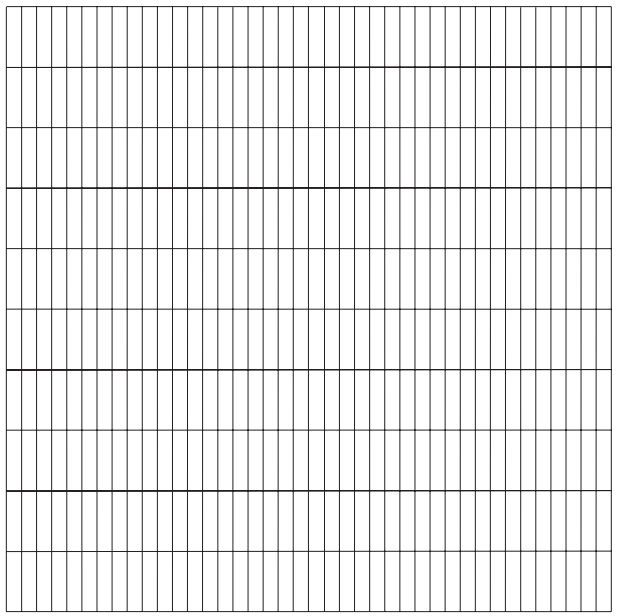


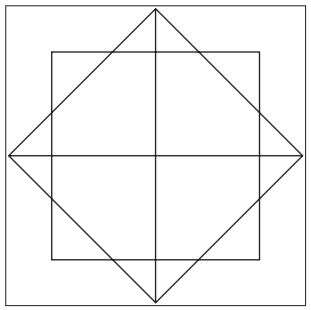


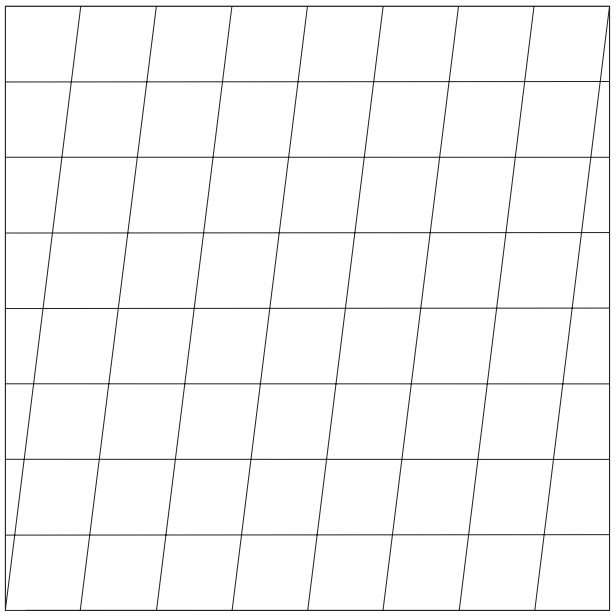
Orthogonal

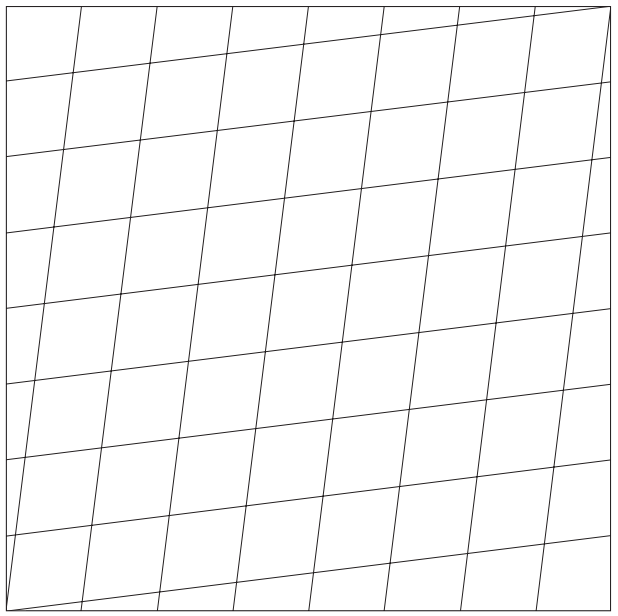
progressiv
Rasterweite





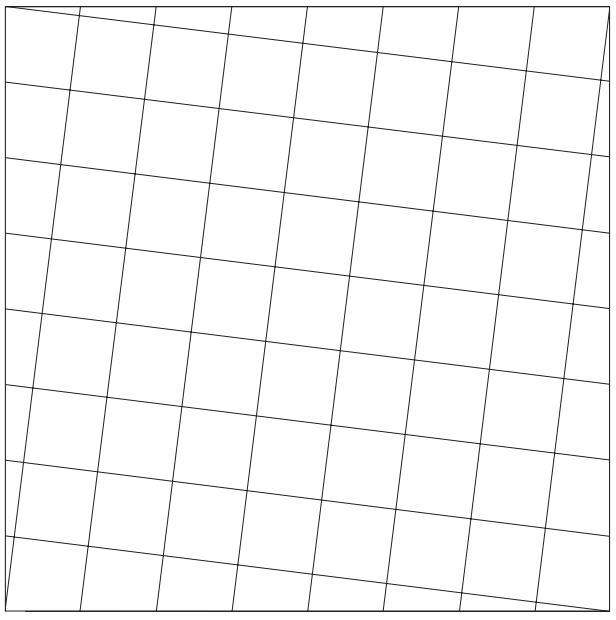


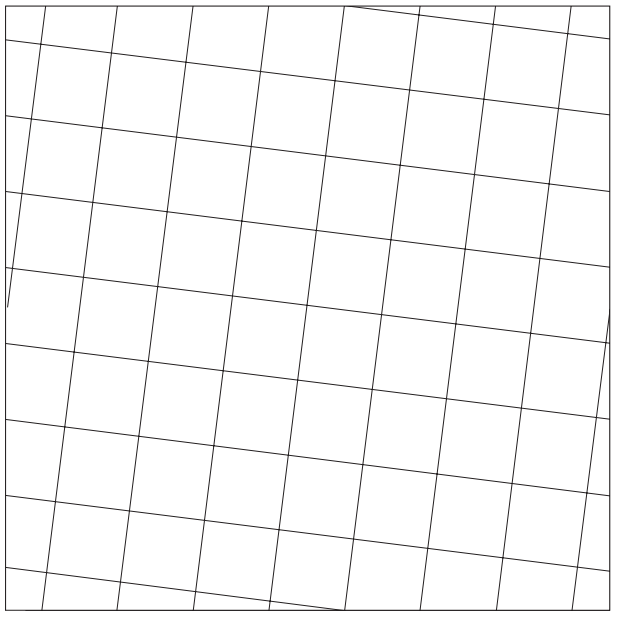


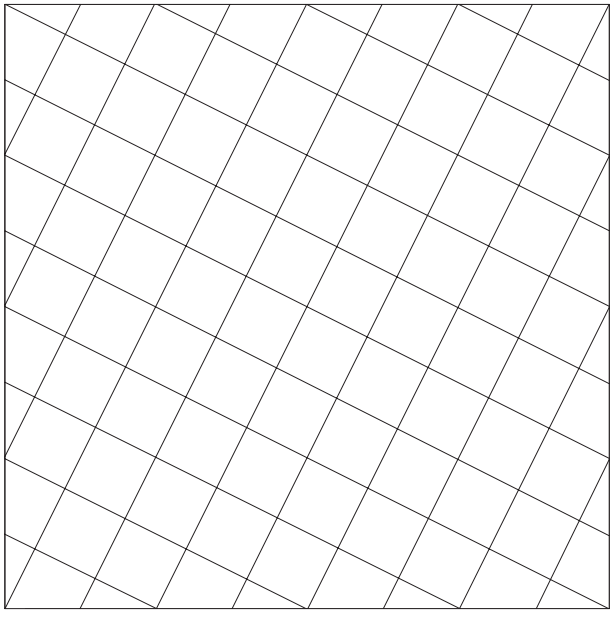


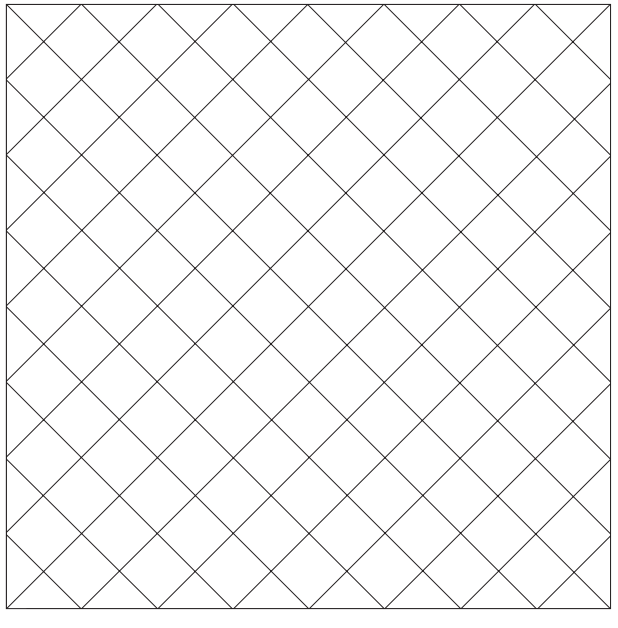
Orthogonal/diagonal

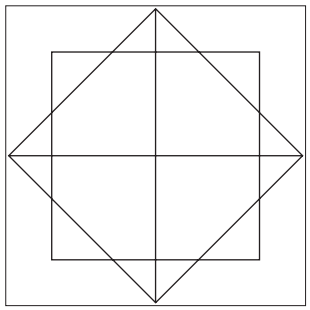
parallel und antiparallel

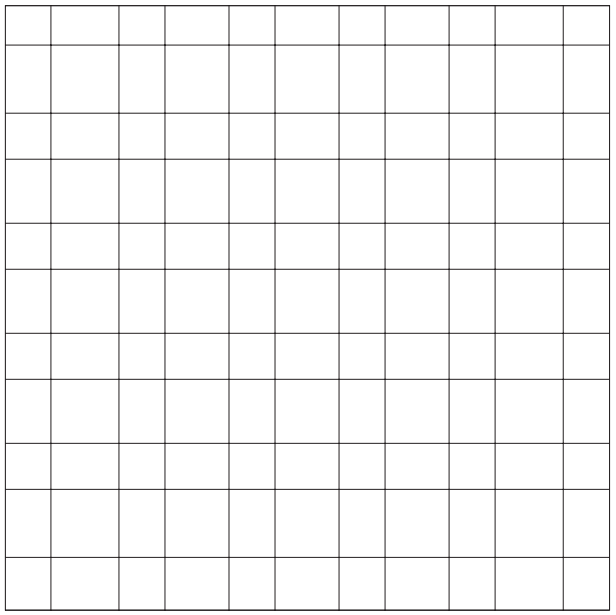


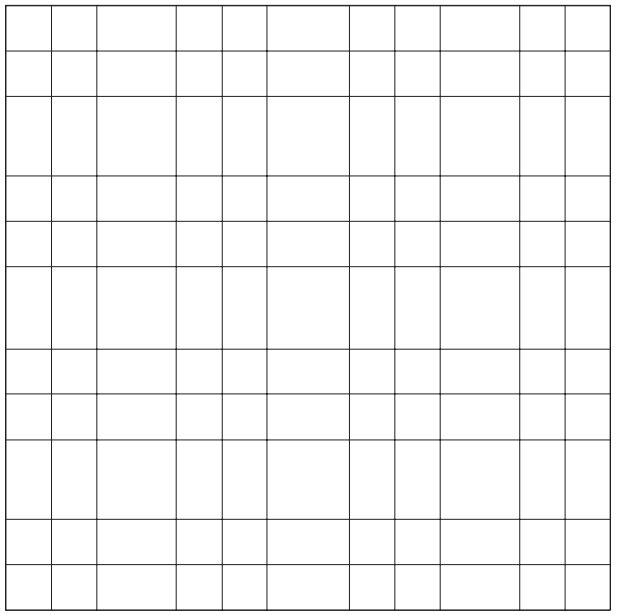






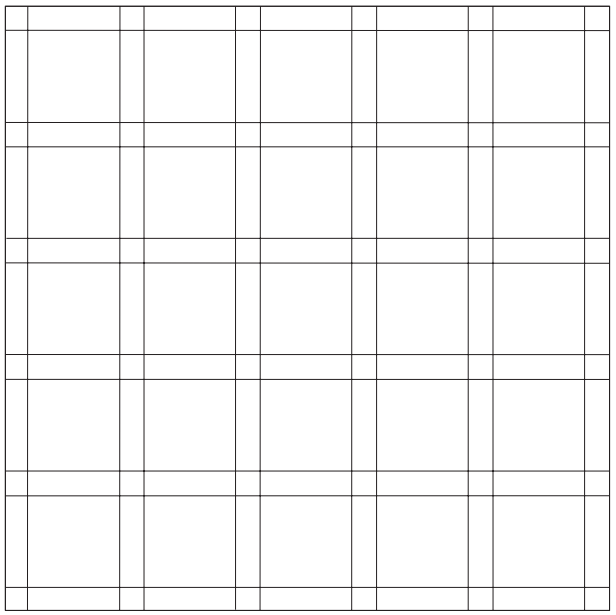


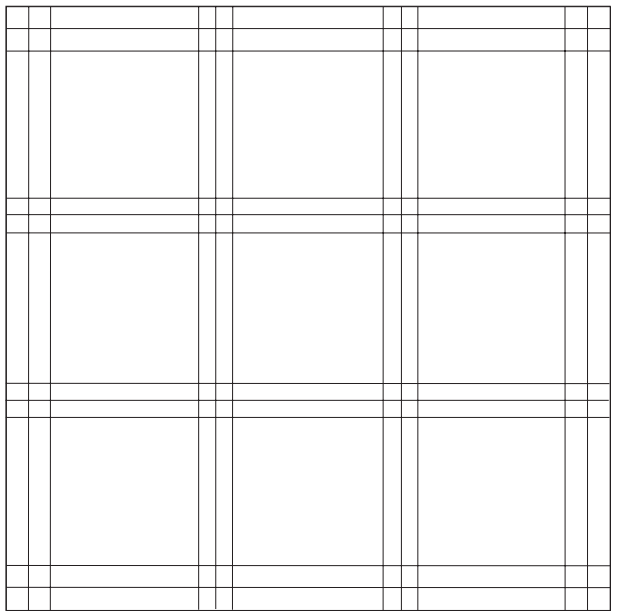


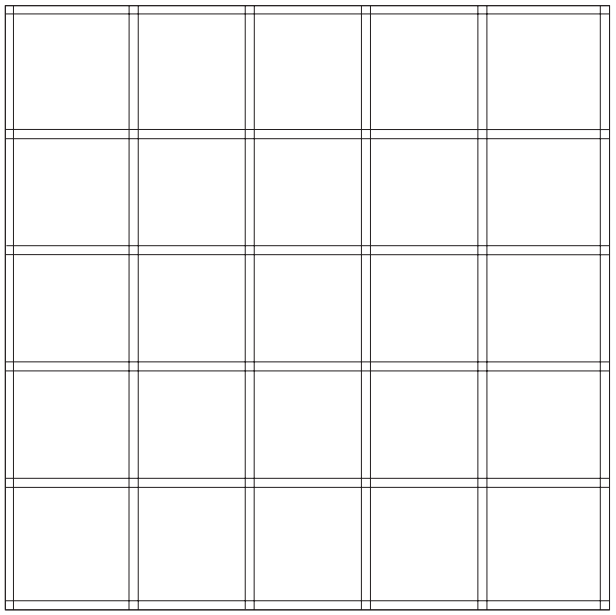


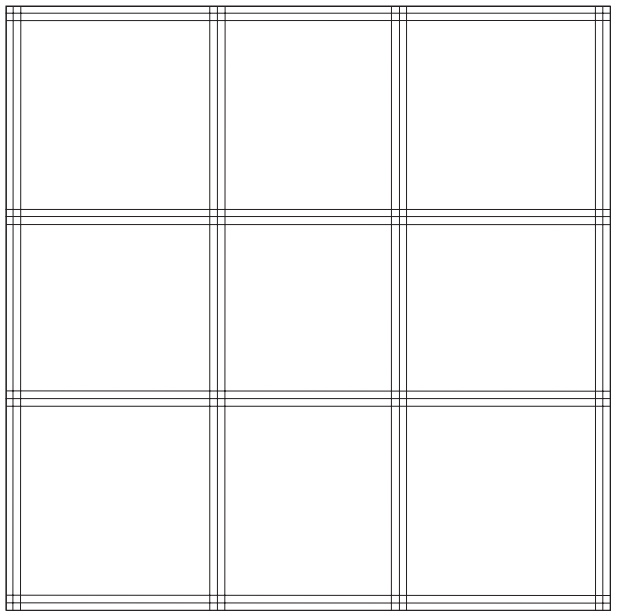
Orthogonal

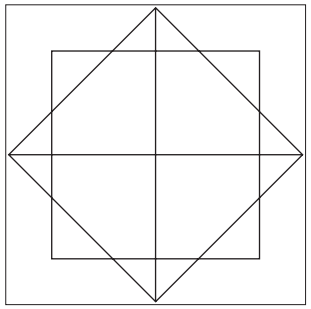
gruppierend von schwach zu eindeutig
Zweier- und Dreierverbände

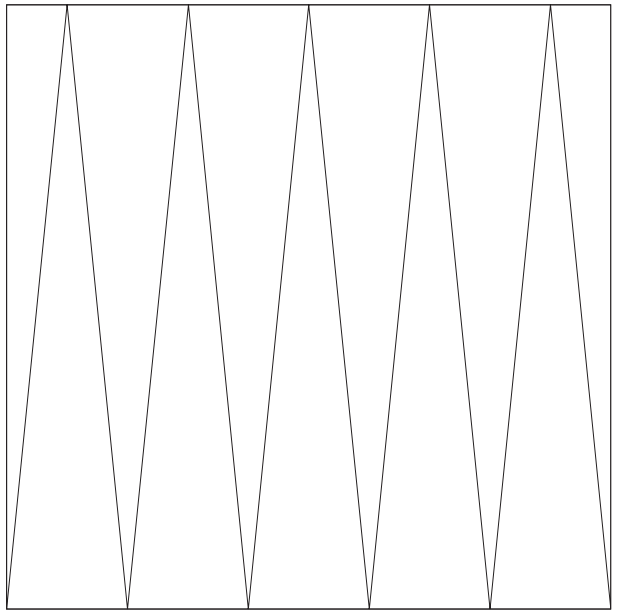


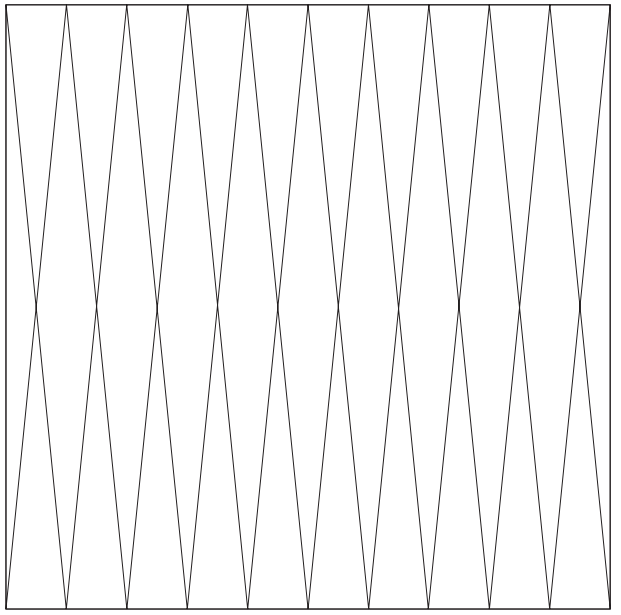






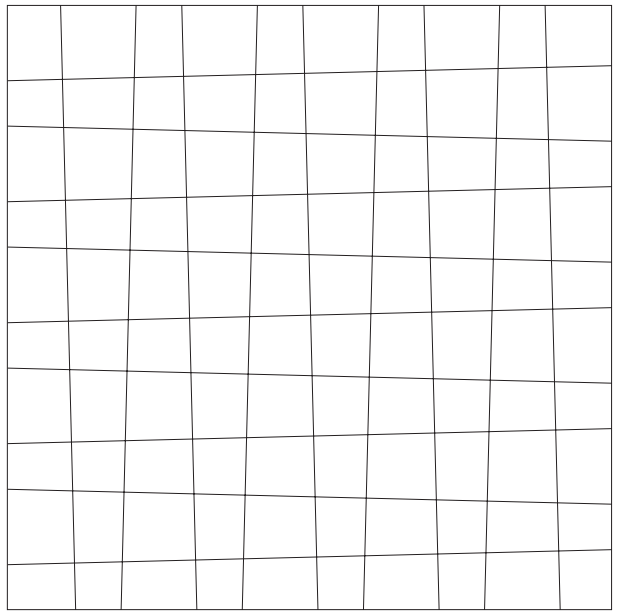


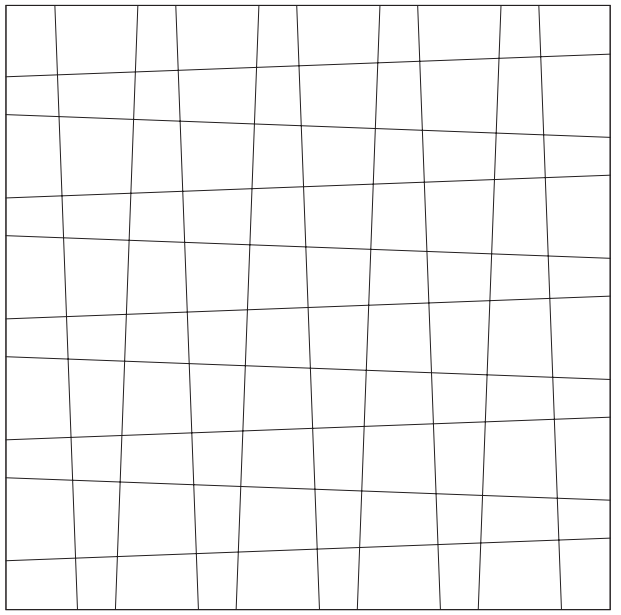


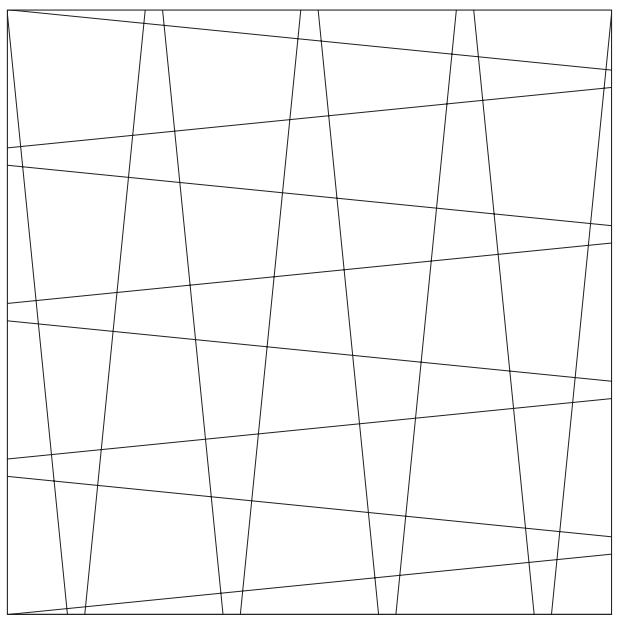


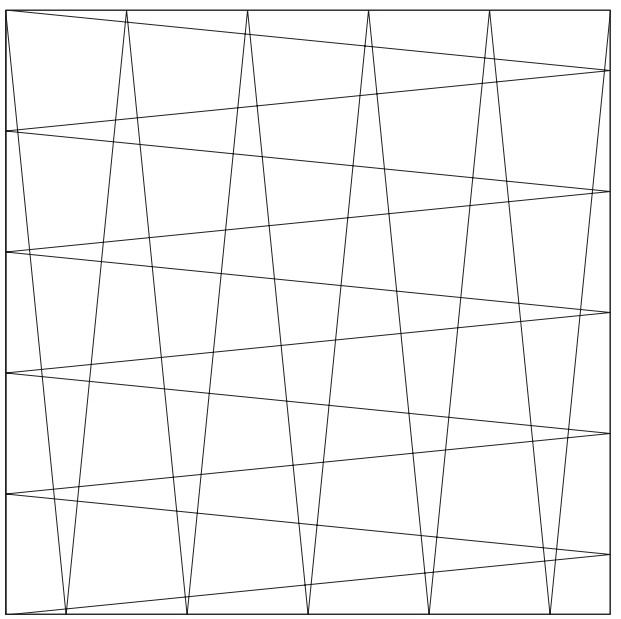
Diagonal

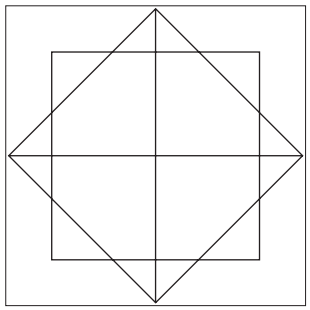
parallel und antiparallel

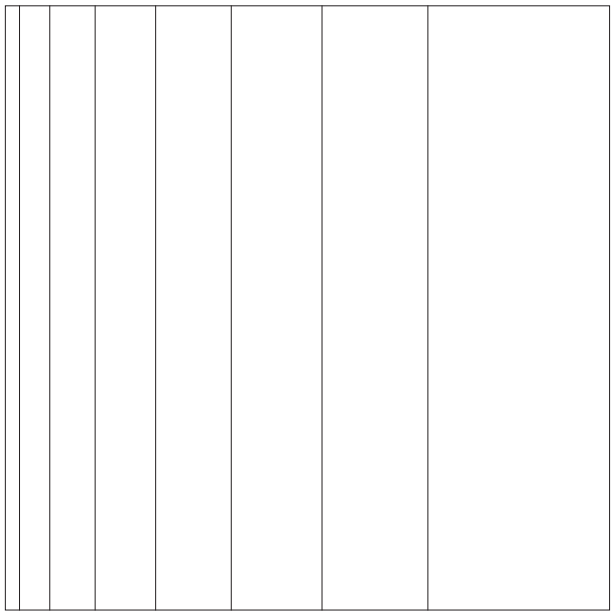


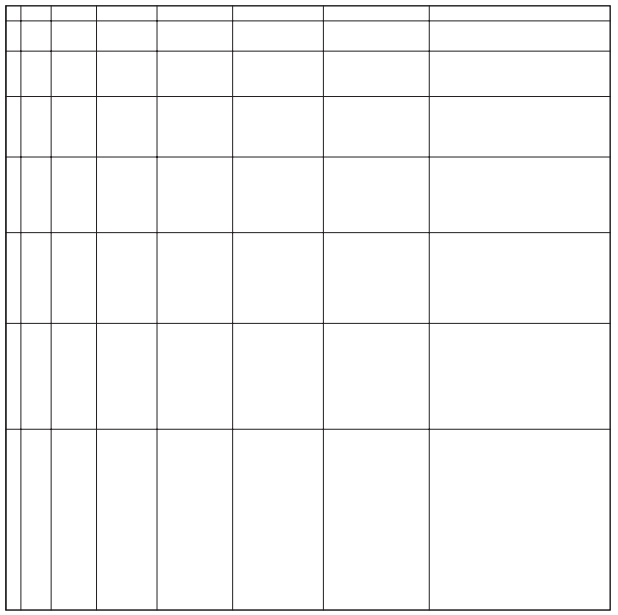






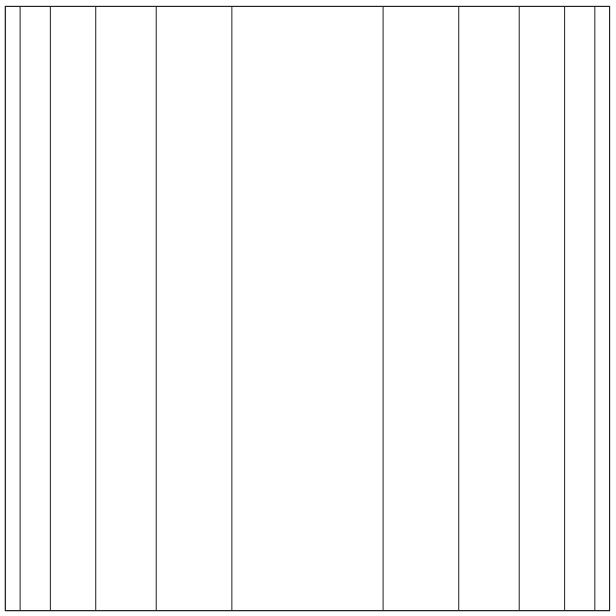


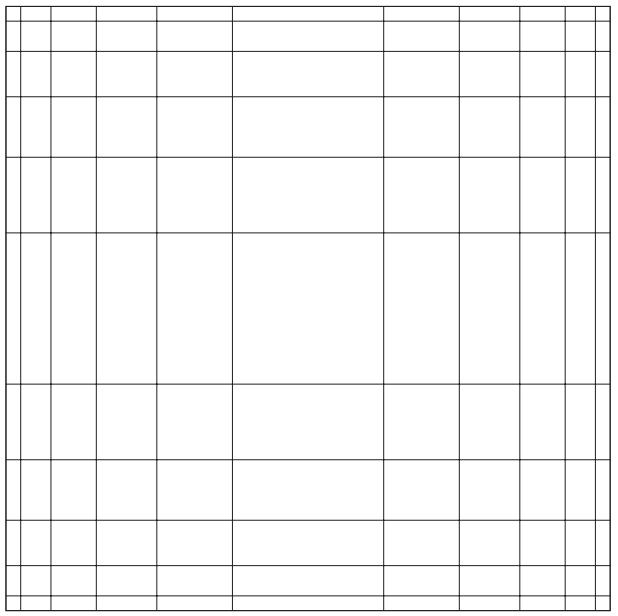


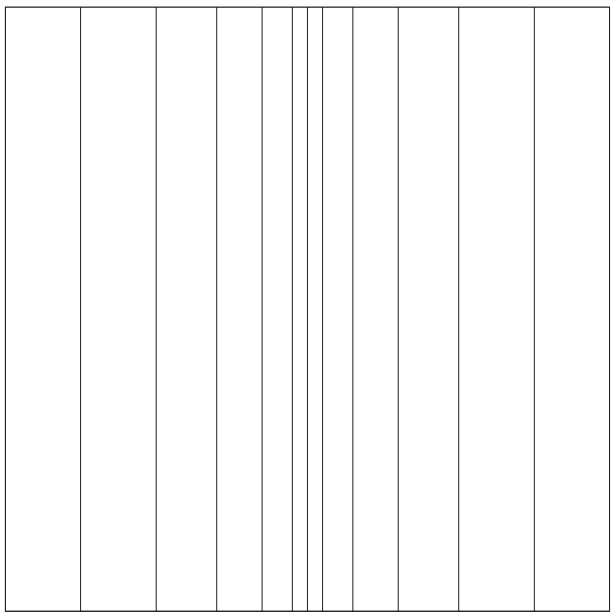


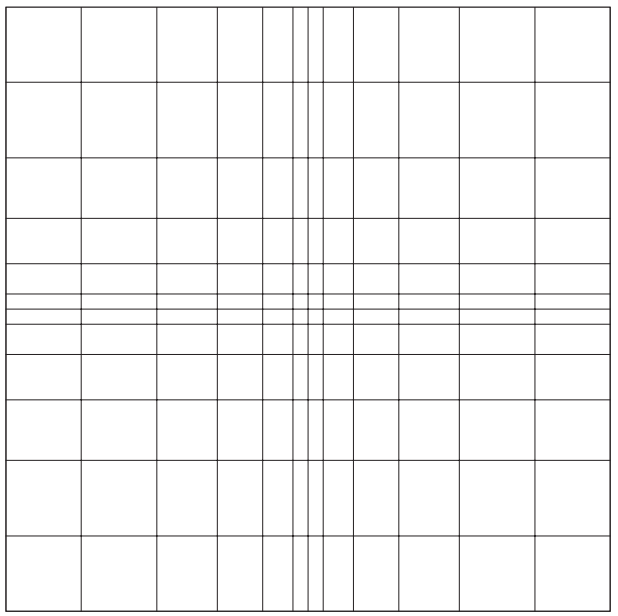
Orthogonal

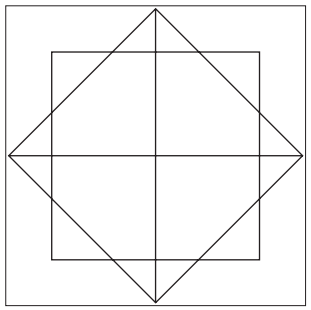
Additionsfolge
parallel und dezentral
progressiv und regressiv

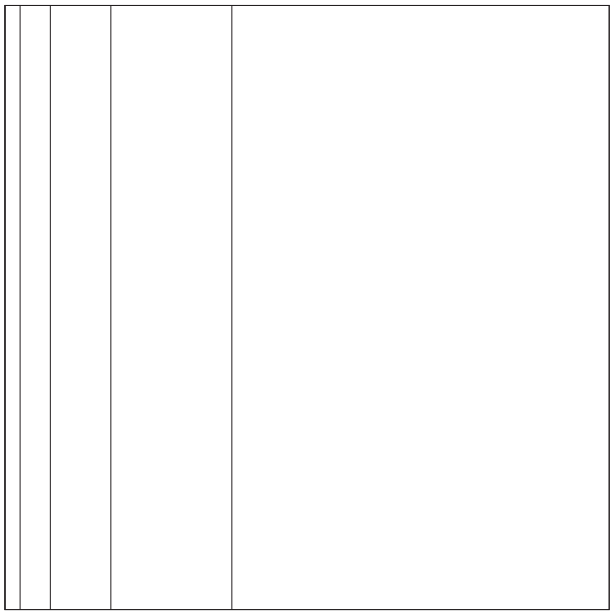


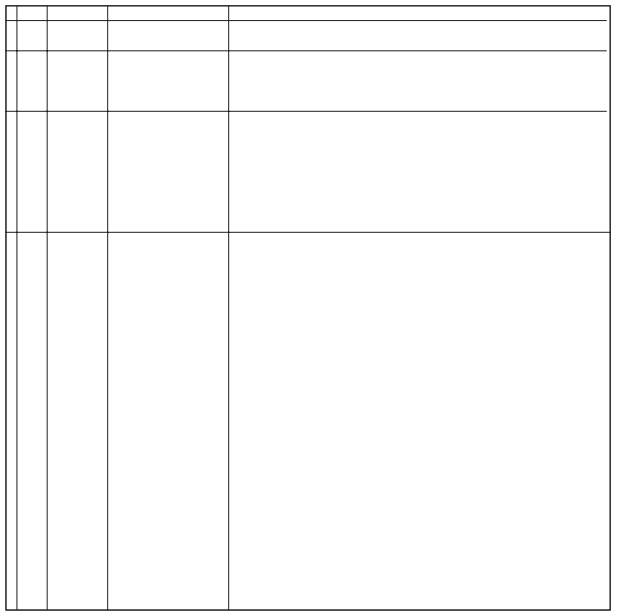






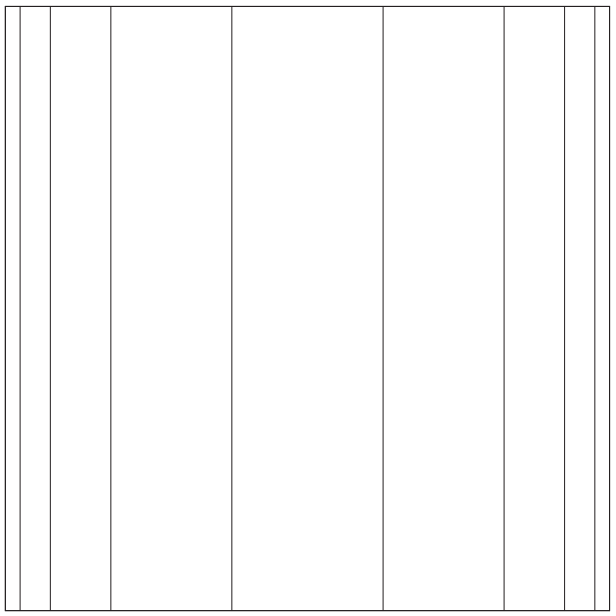


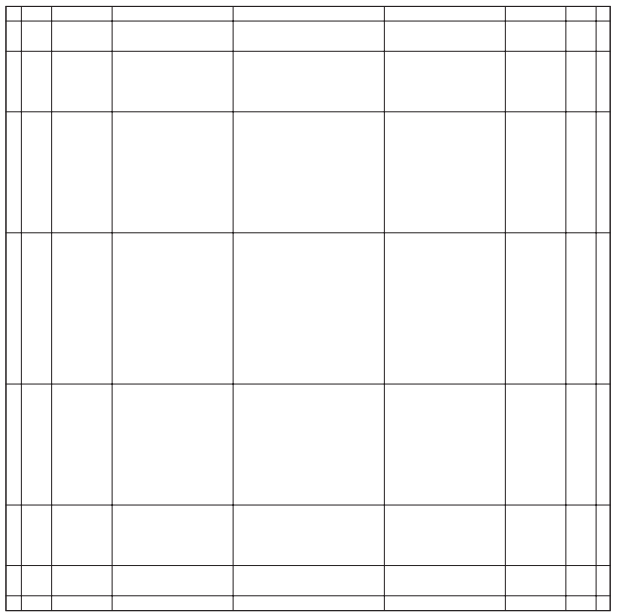


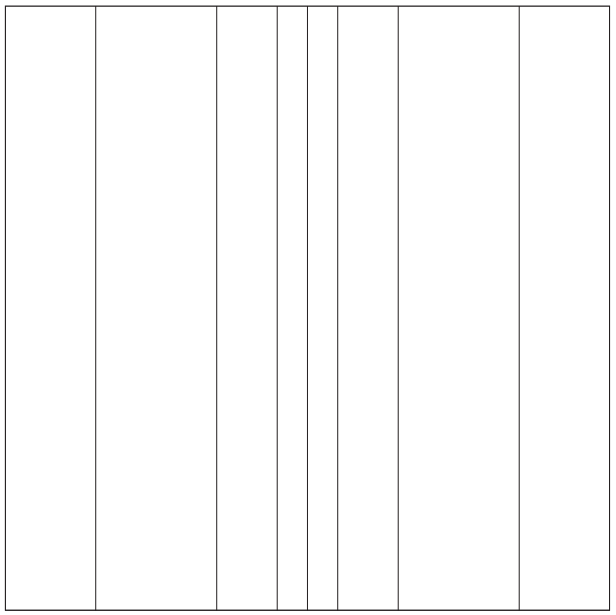


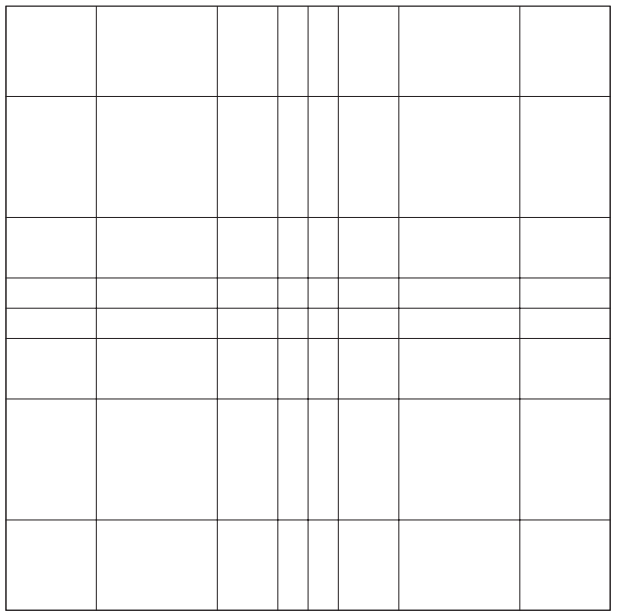
Orthogonal

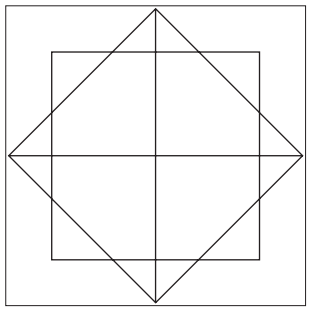
Multiplikationsfolge
parallel und dezentral
progressiv und regressiv

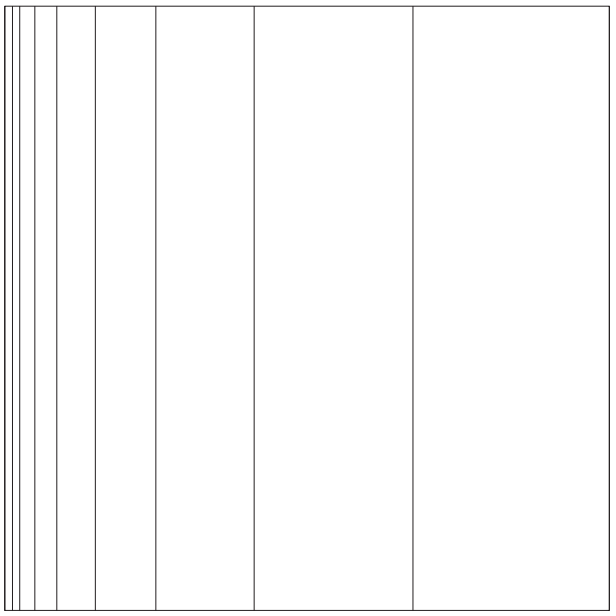


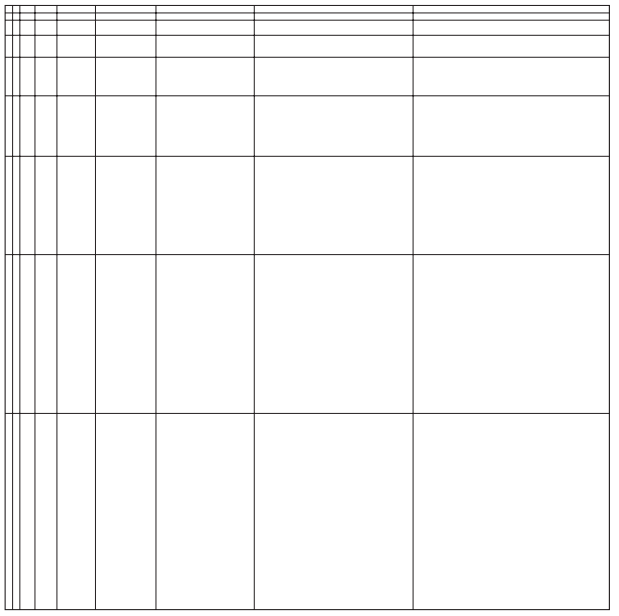






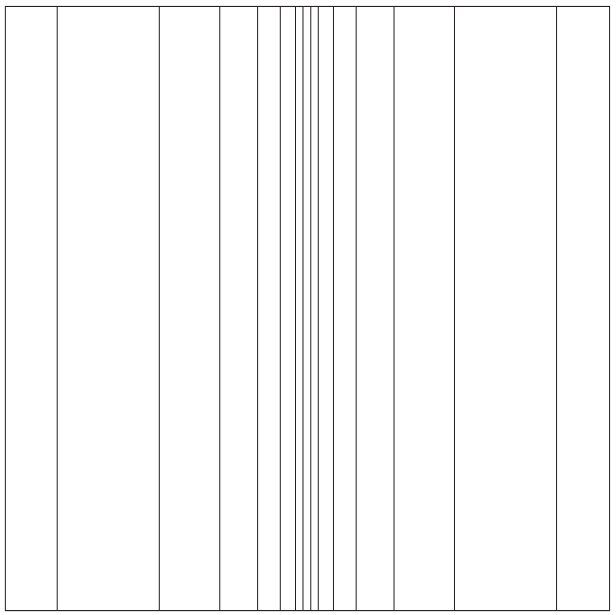


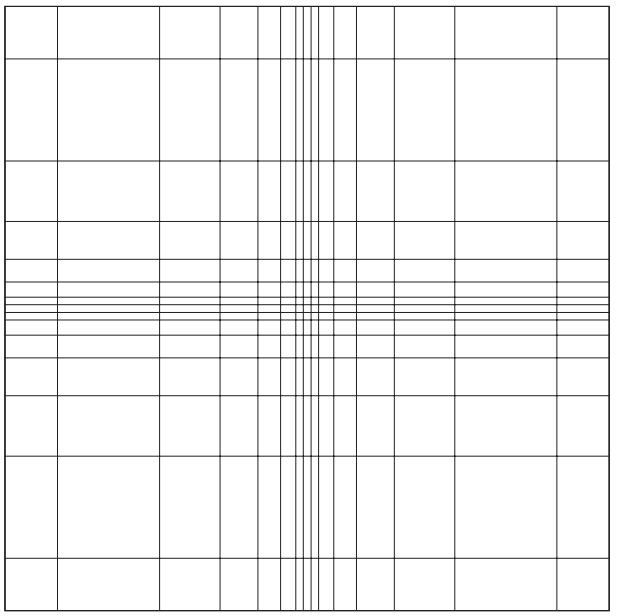


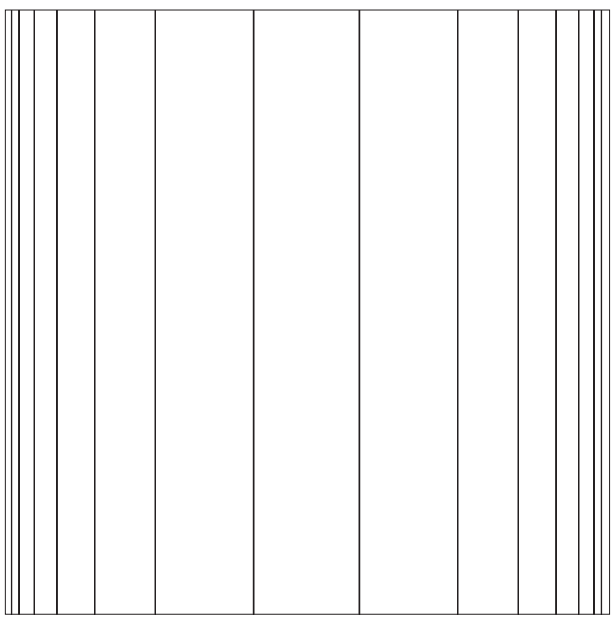


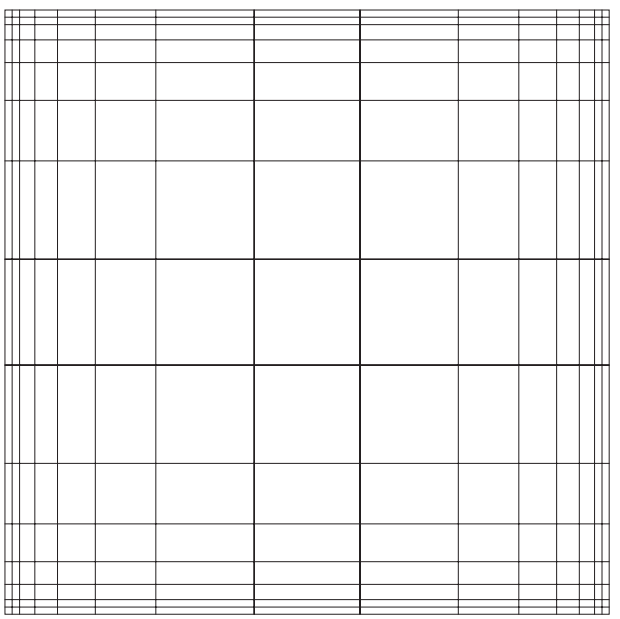
Orthogonal

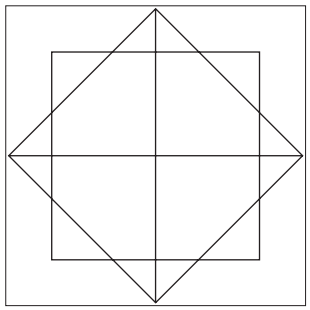
Fibonacci-Folge
progressiv und regressiv

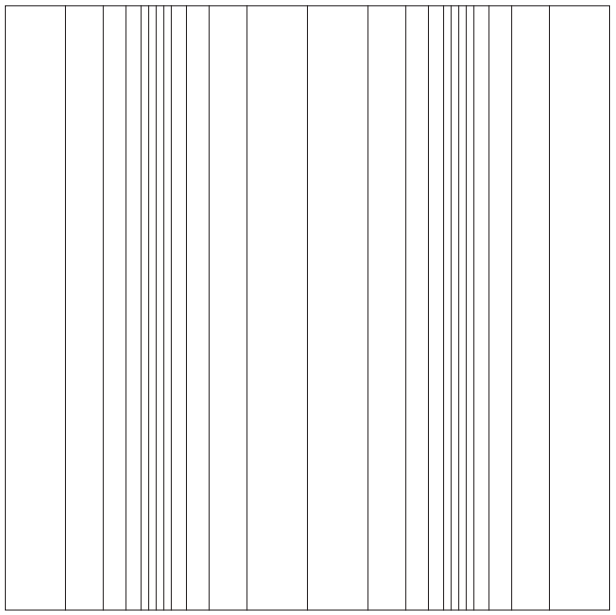


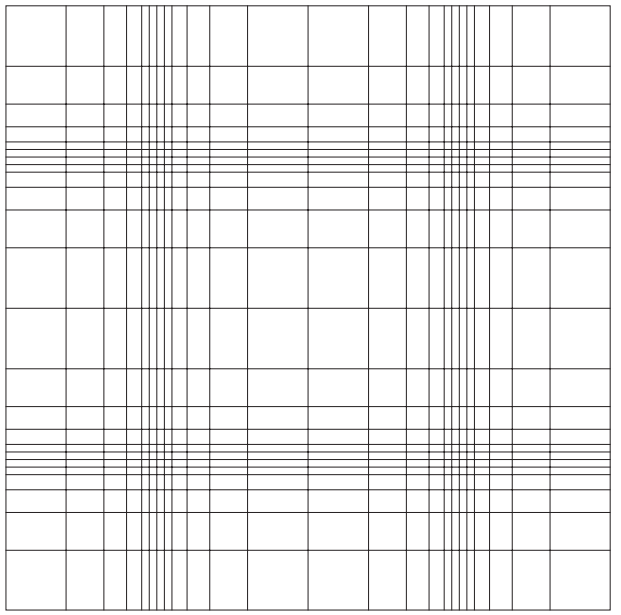






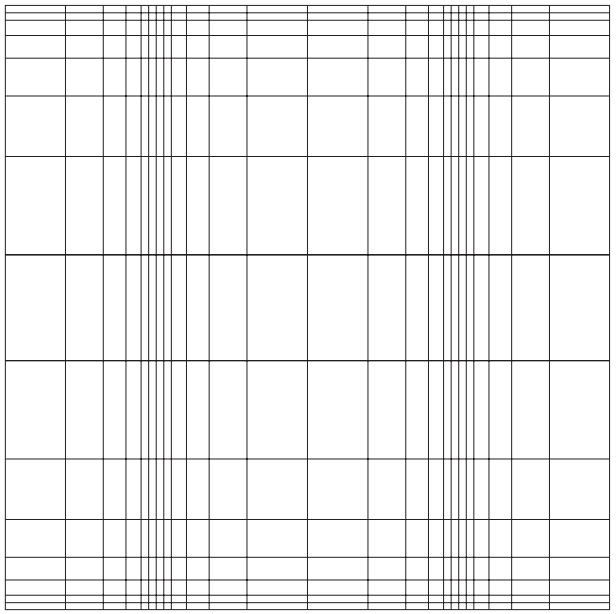


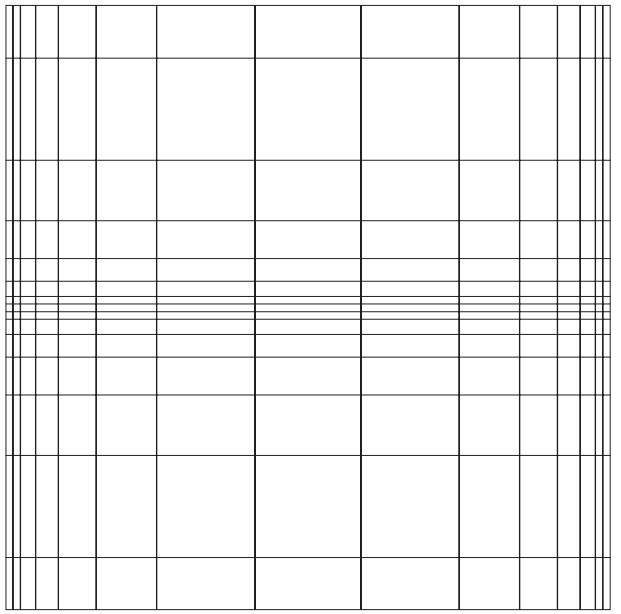


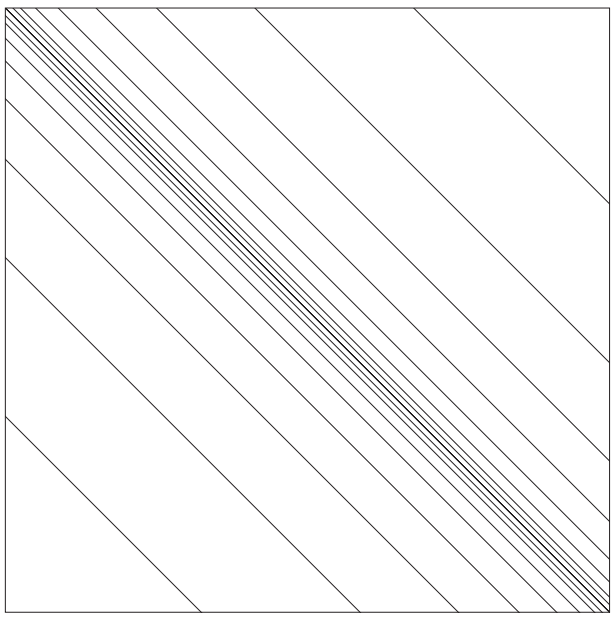


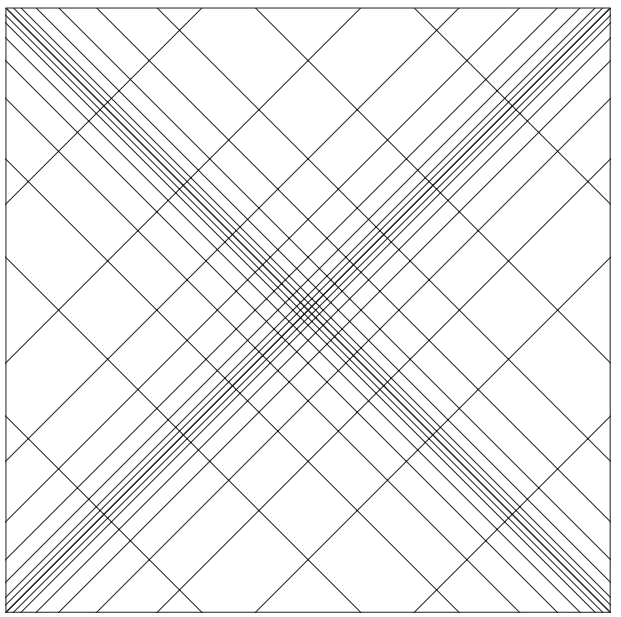
Grundlagen

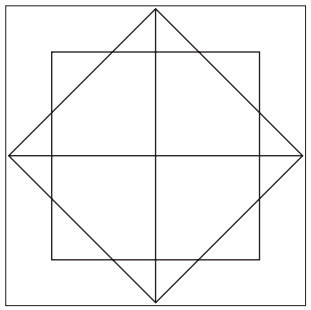
Fibonacci-Folge
progressiv und regressiv

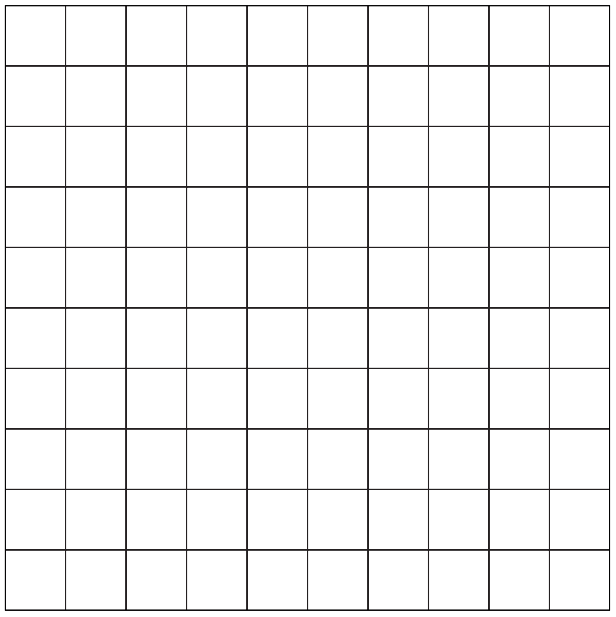


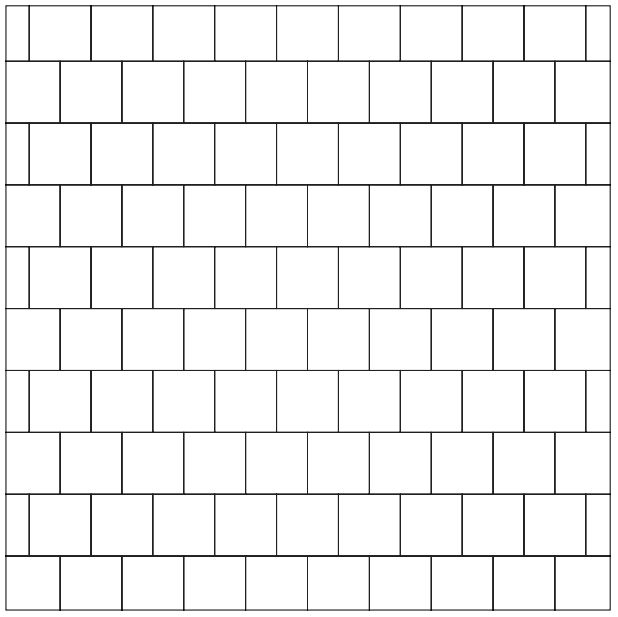






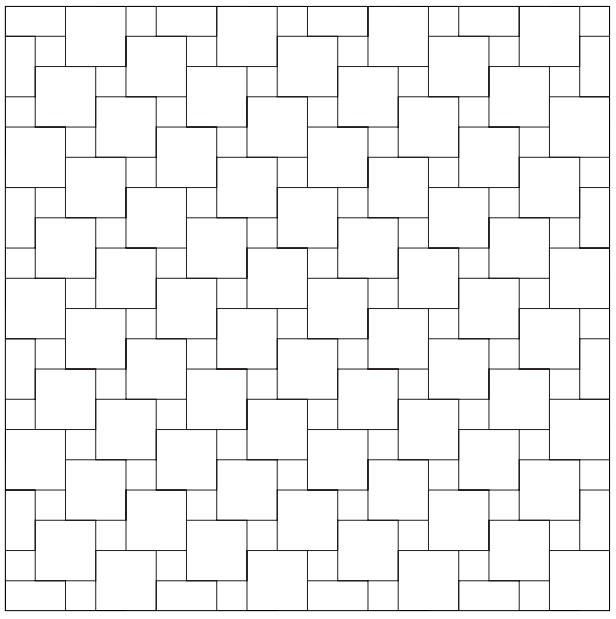


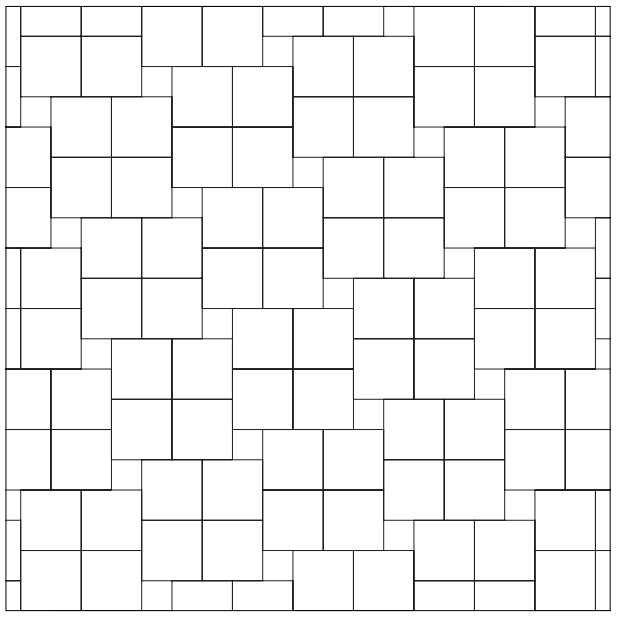


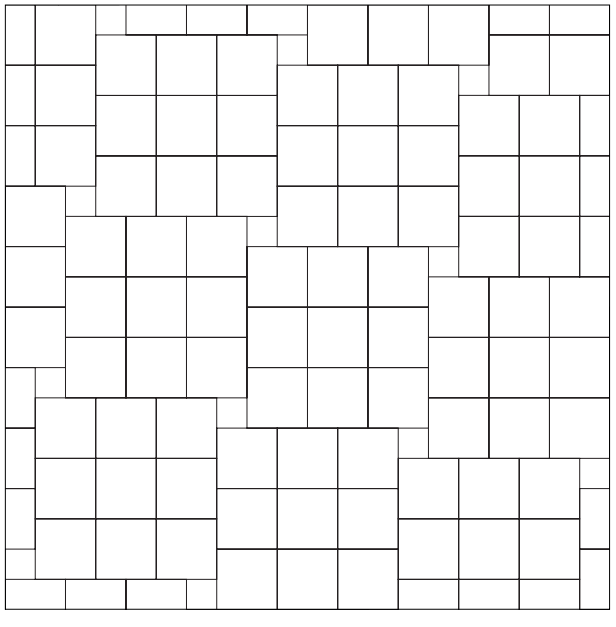


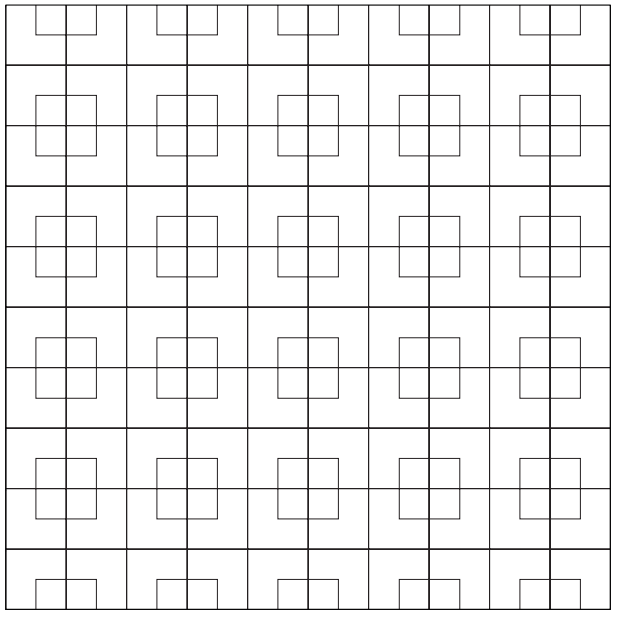
Orthogonal

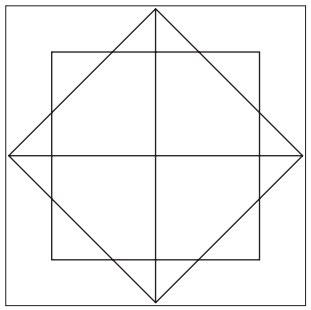
berühren und überschneiden
Translation





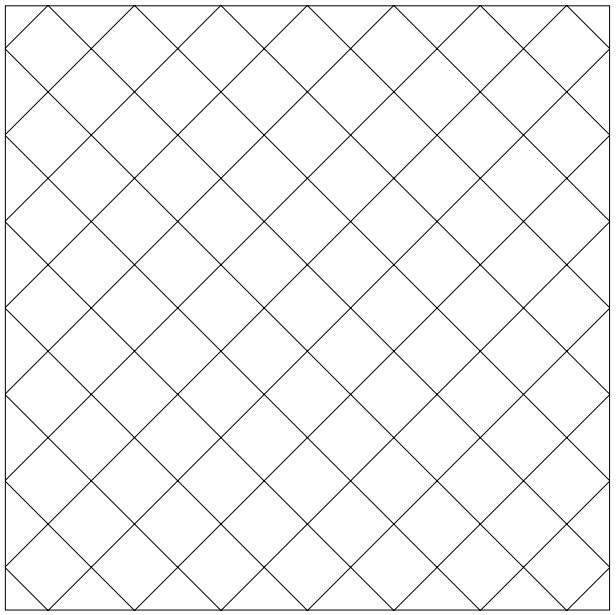


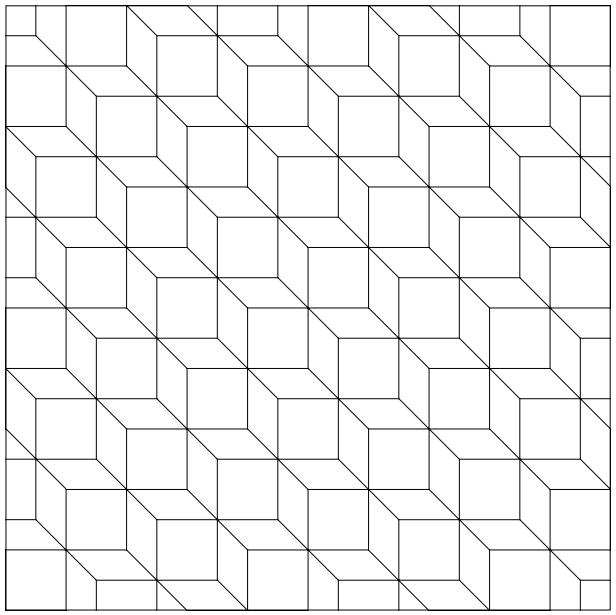


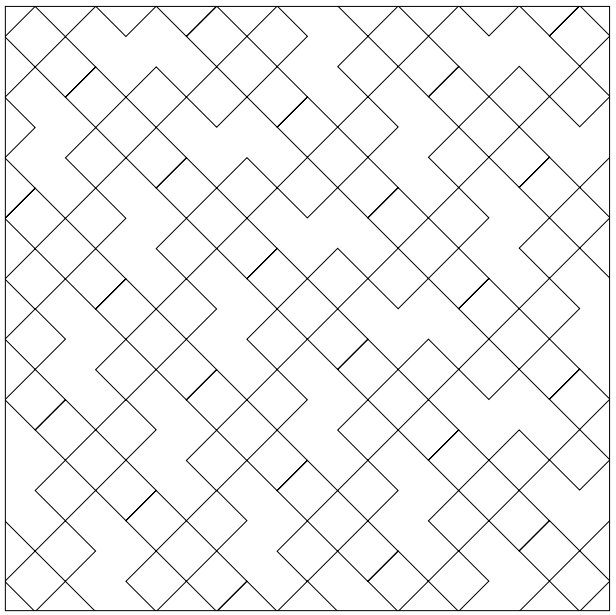


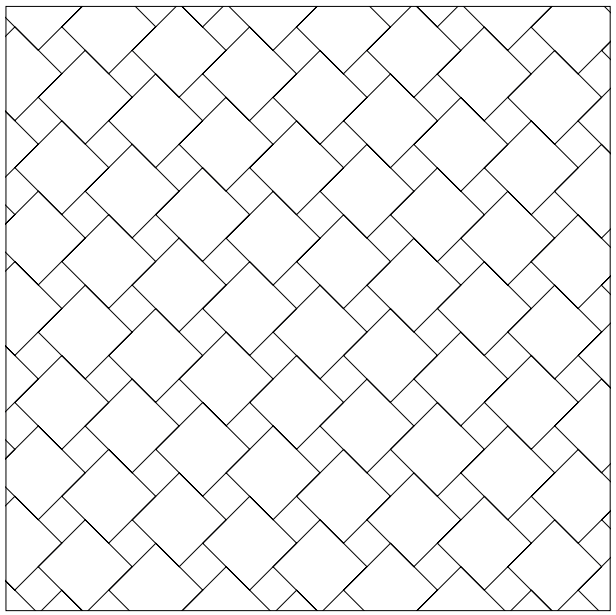
Diagonal

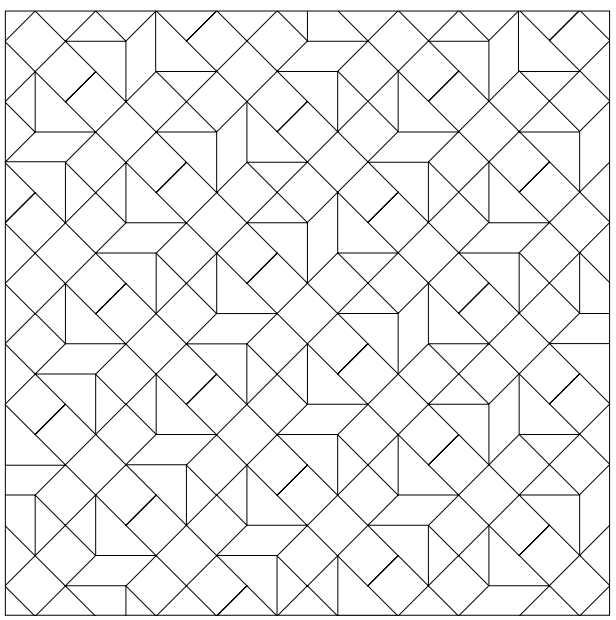
Translation

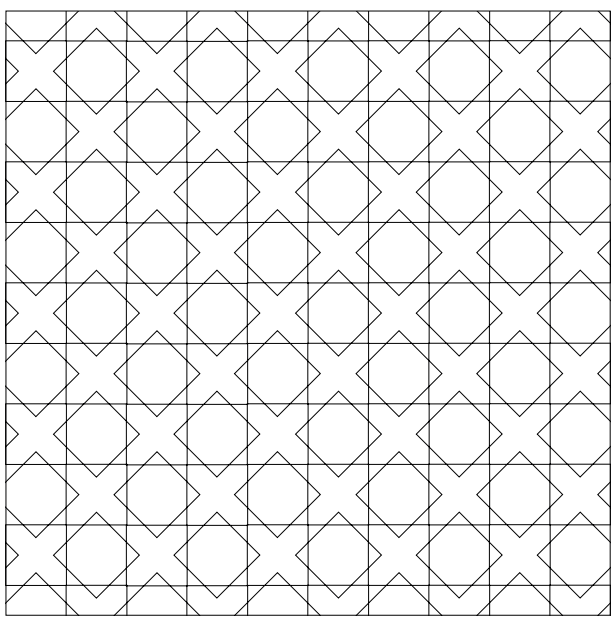


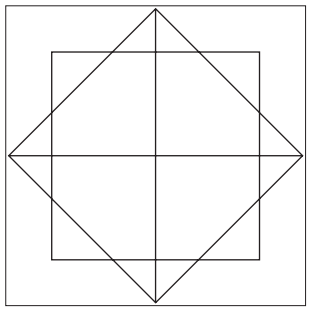






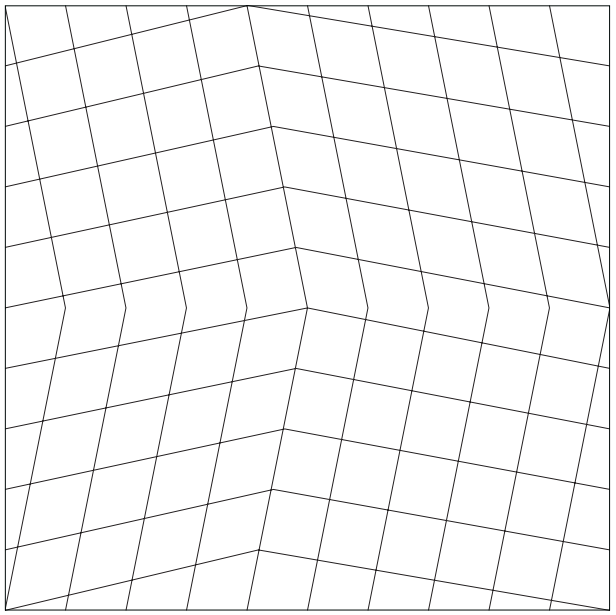


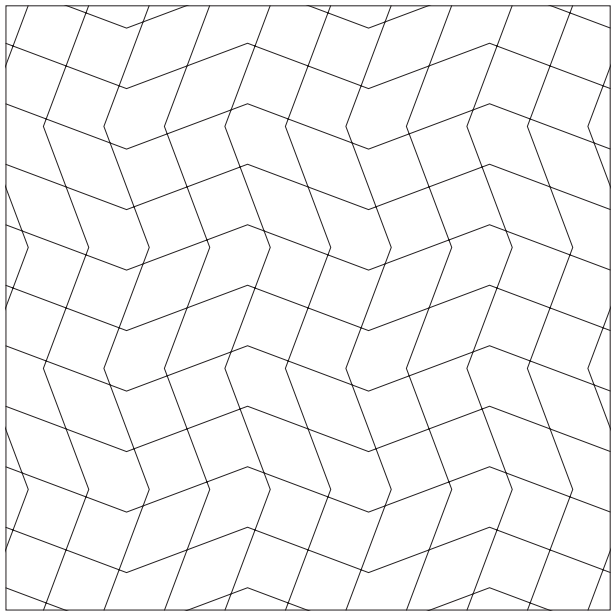


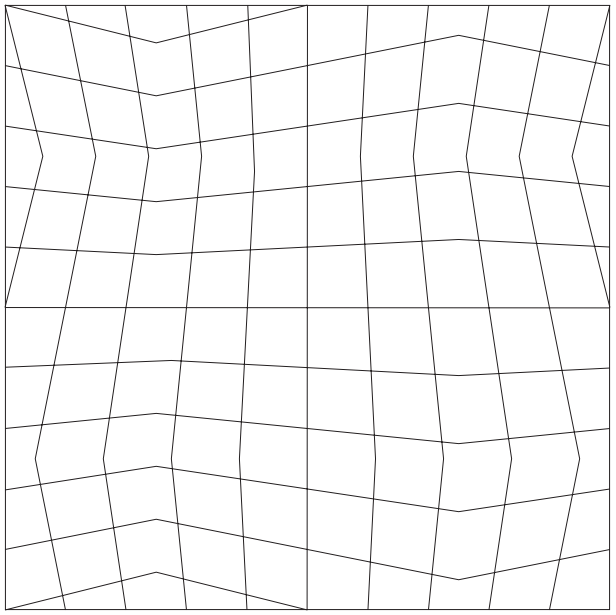


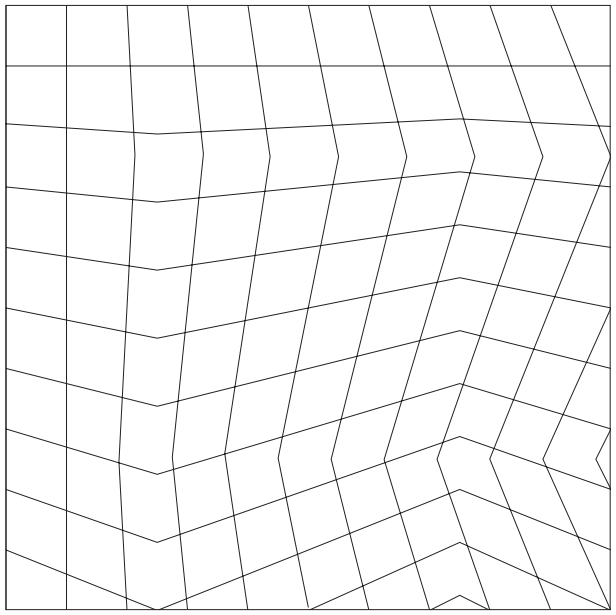
Primärform

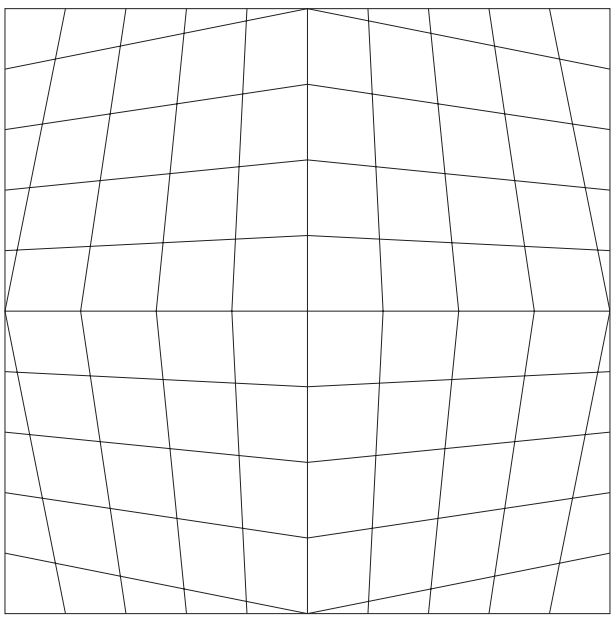
geknickt einfach und mehrfach

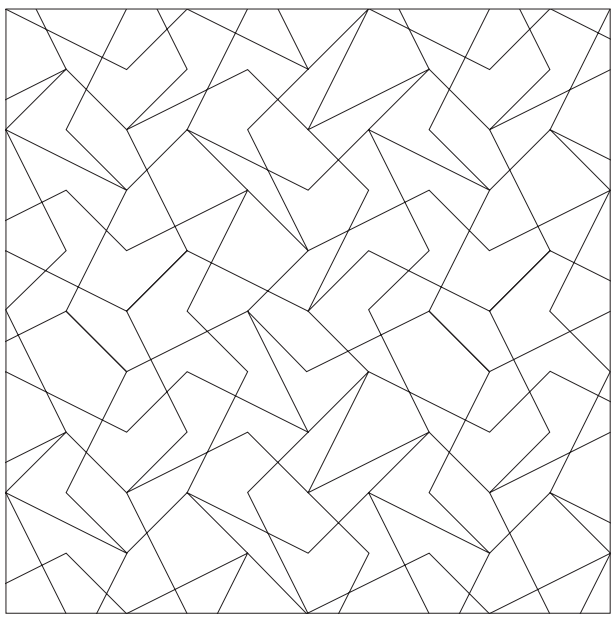


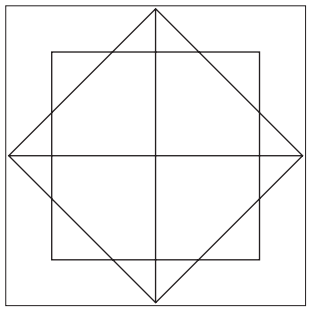


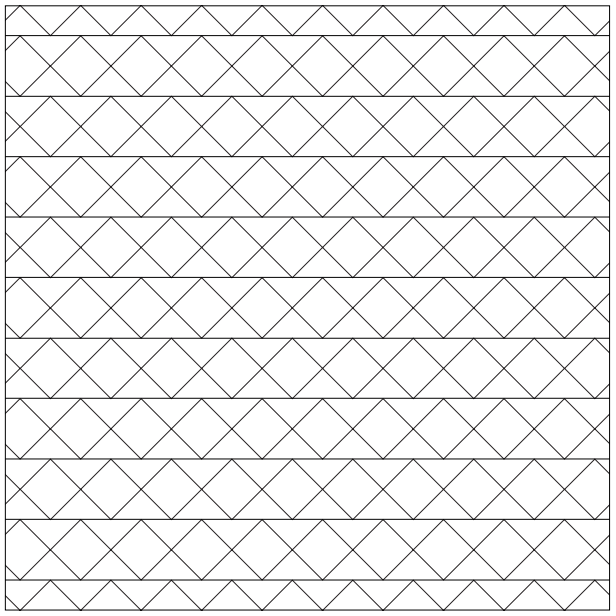


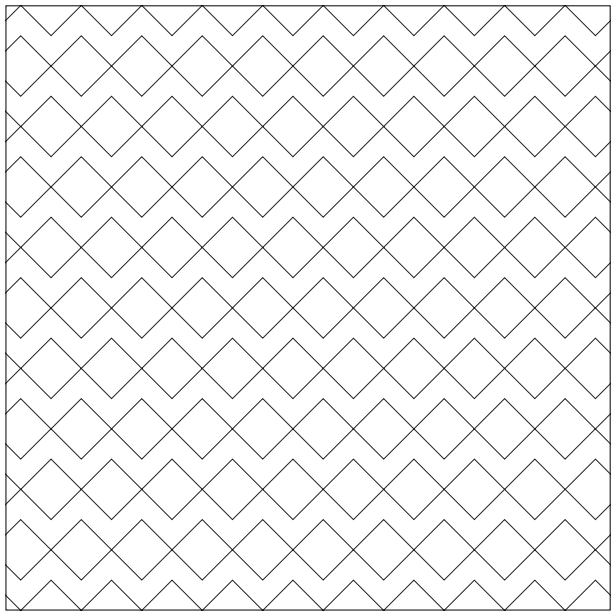






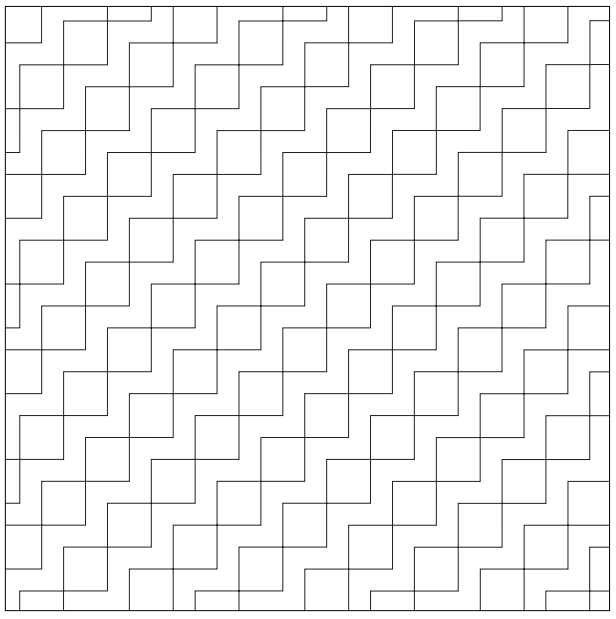


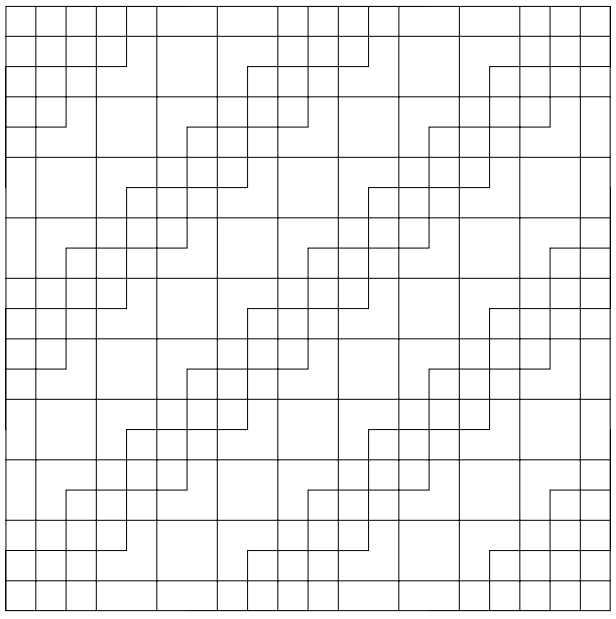


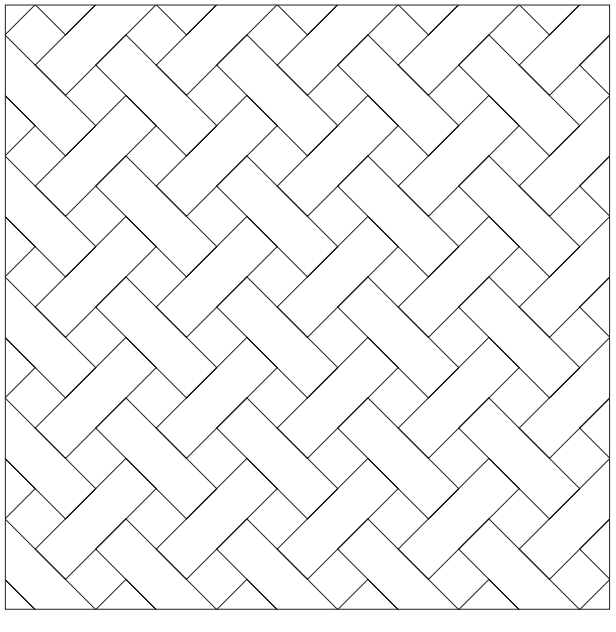


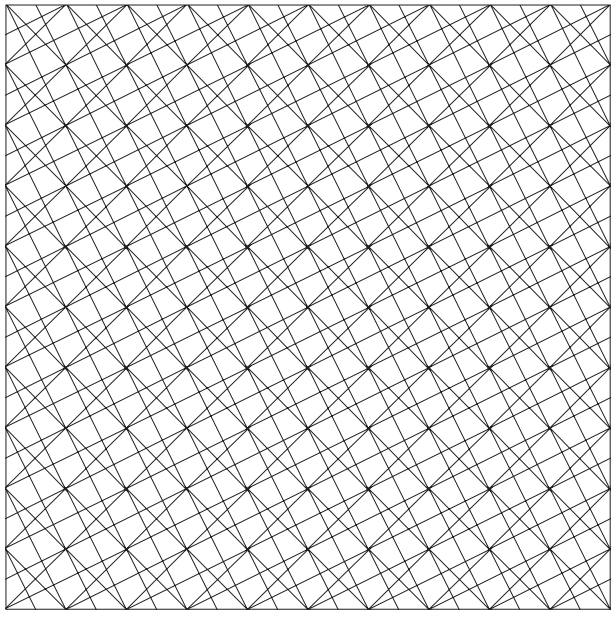
Primärform

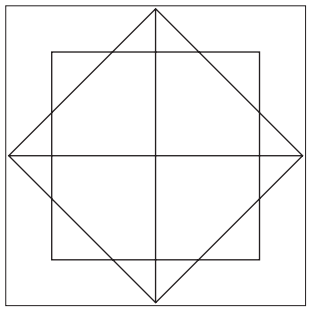
geknickt einfach und mehrfach

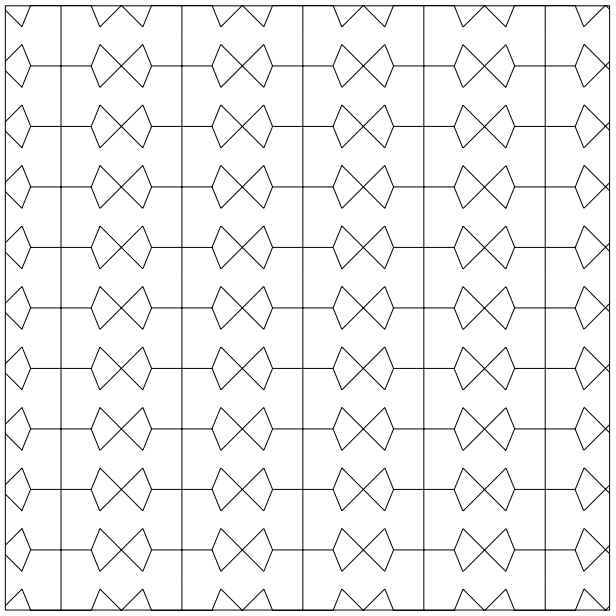


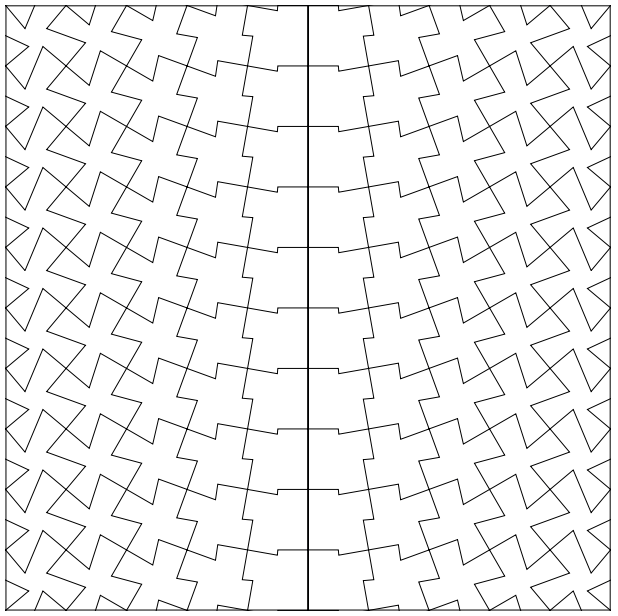






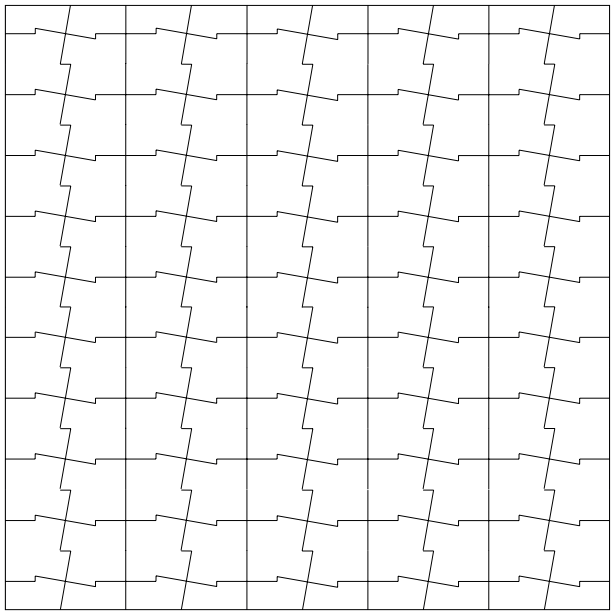


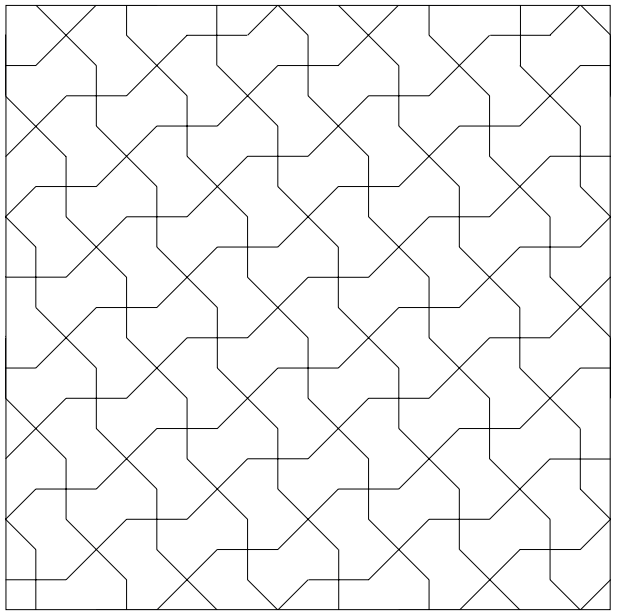


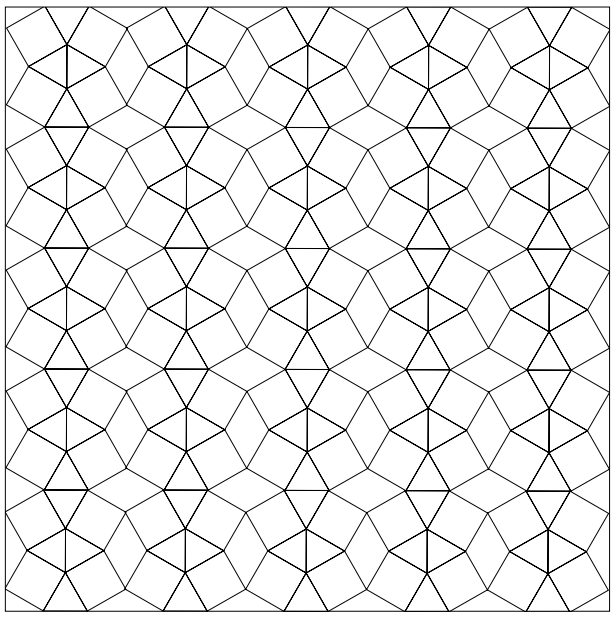


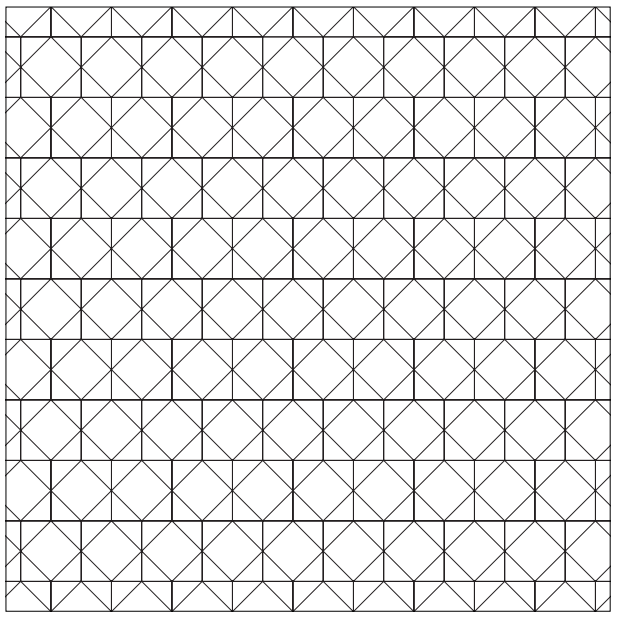
Primärformen

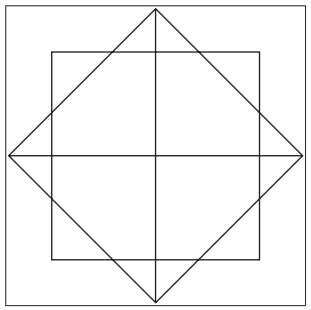
morphologische Transformation
Hybridformen





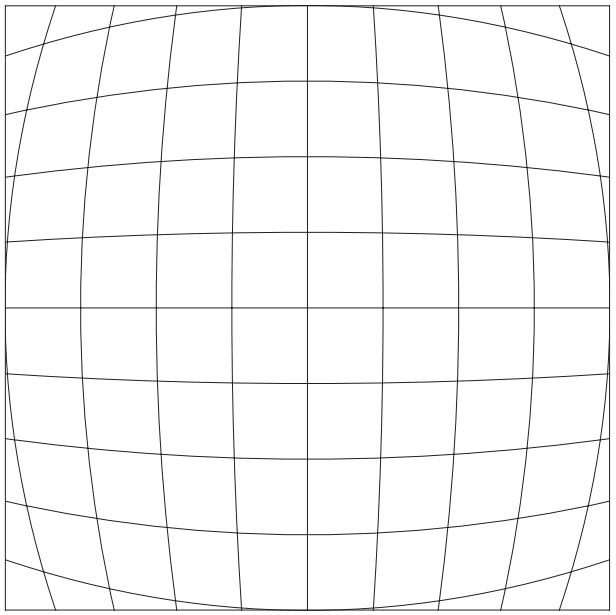


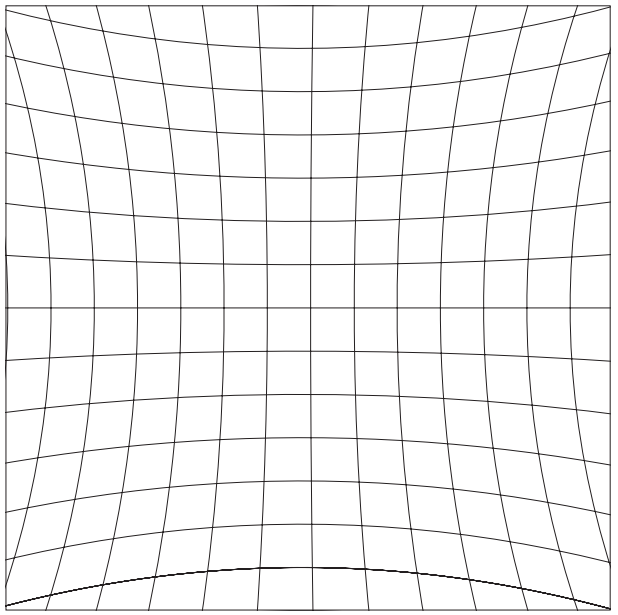


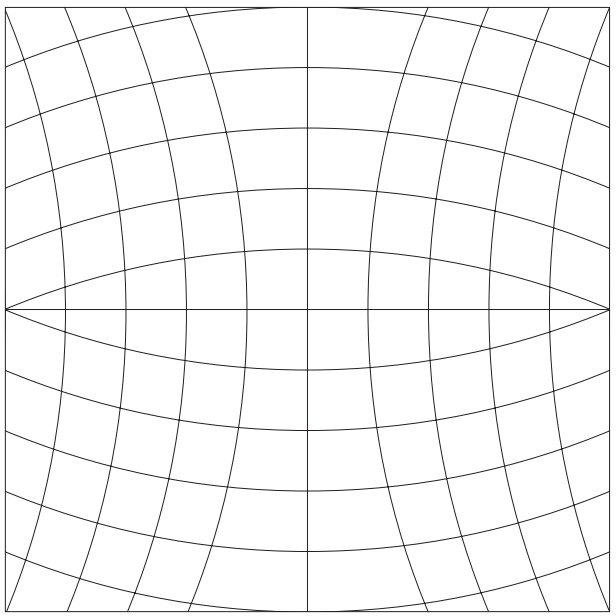


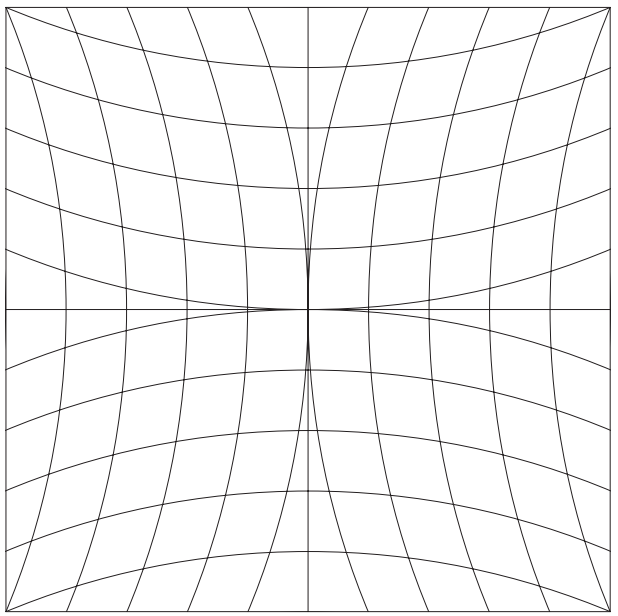
Primärformen

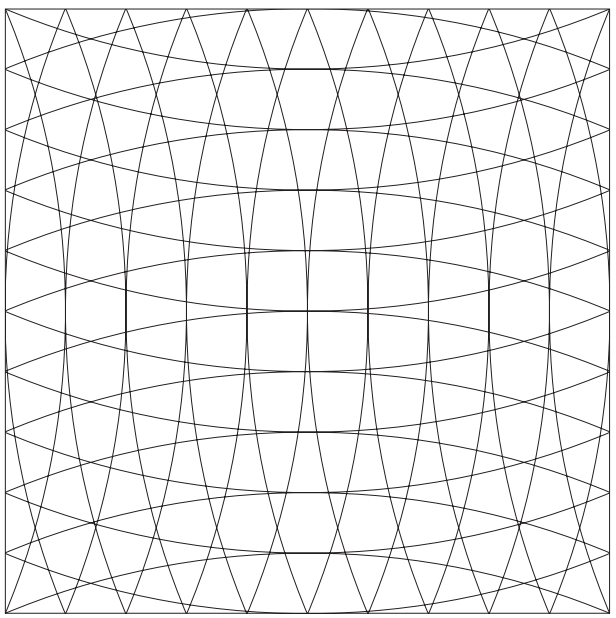
einfach gekrümmt

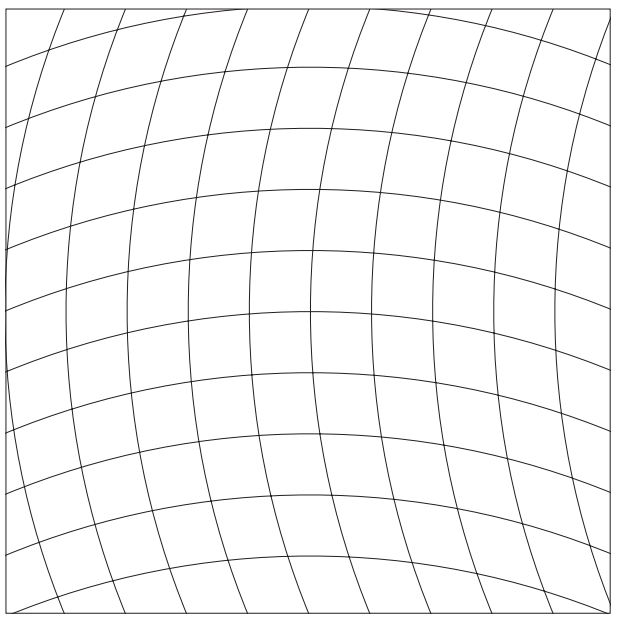


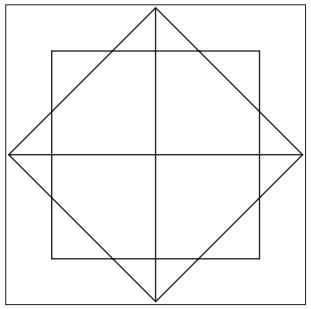


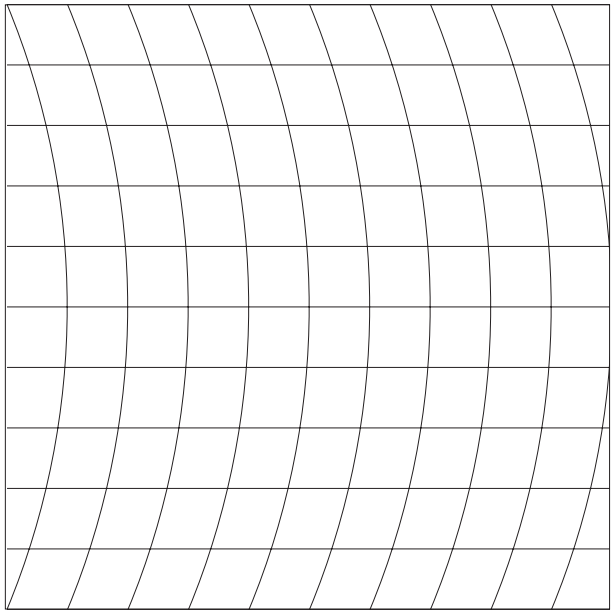


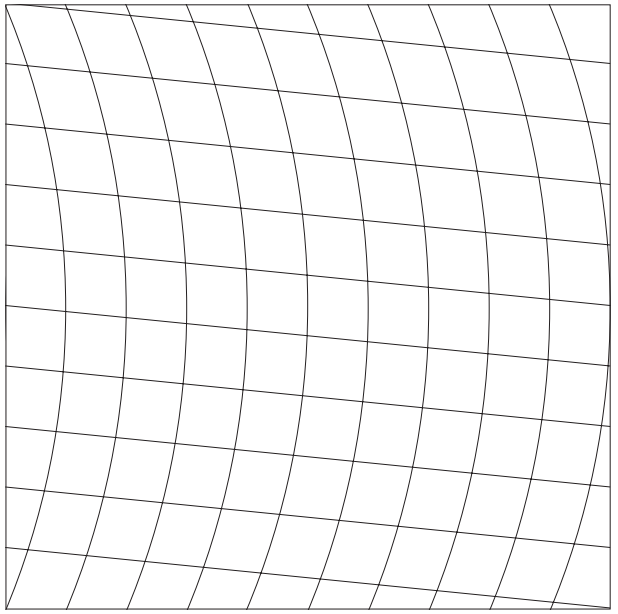






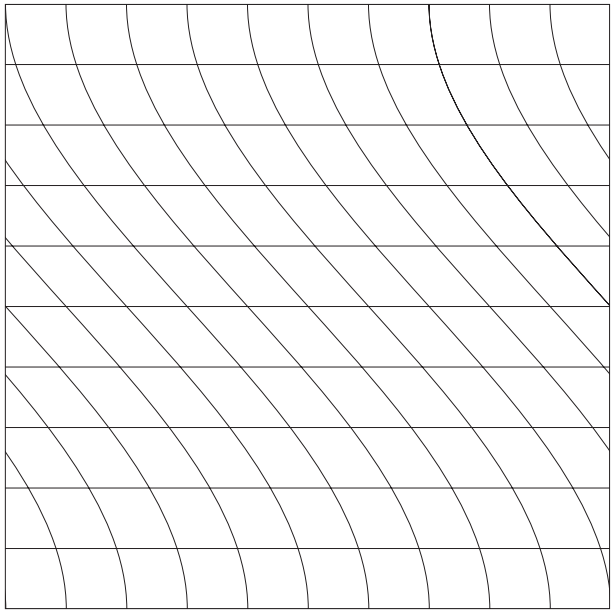


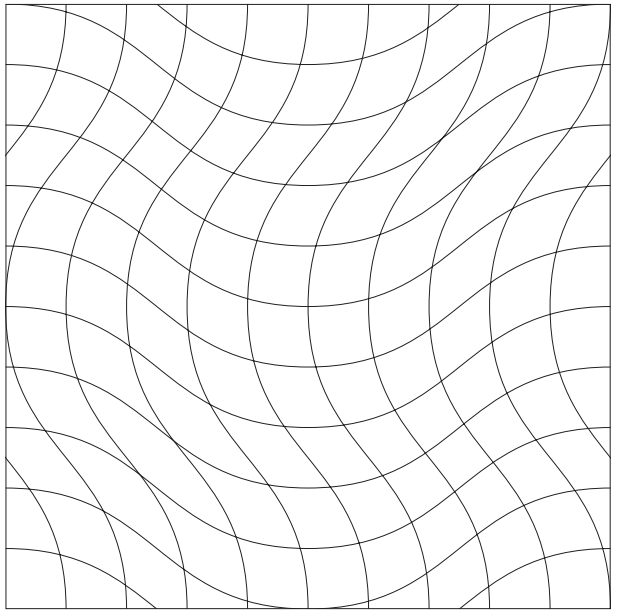


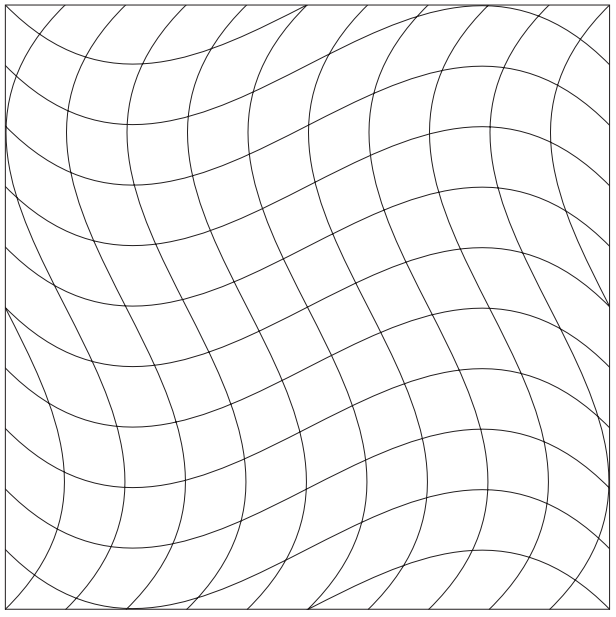


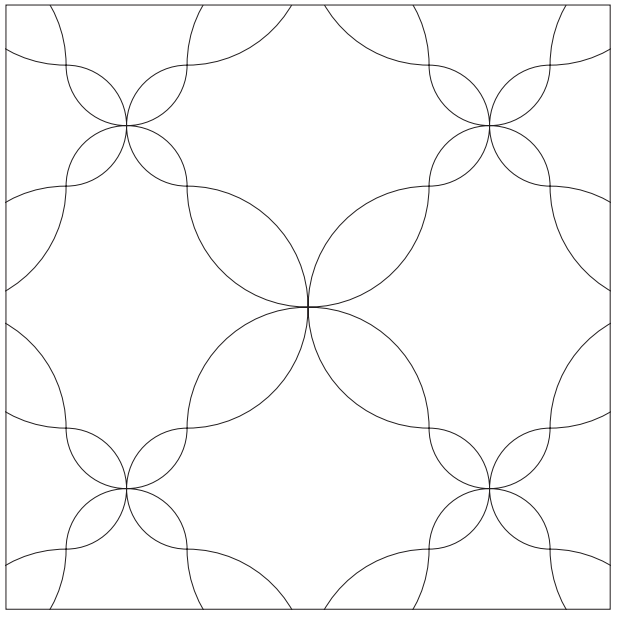
Primärformen

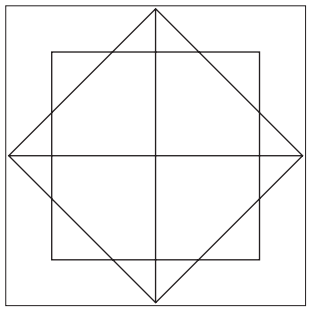
einfach und mehrfach gekrümmt





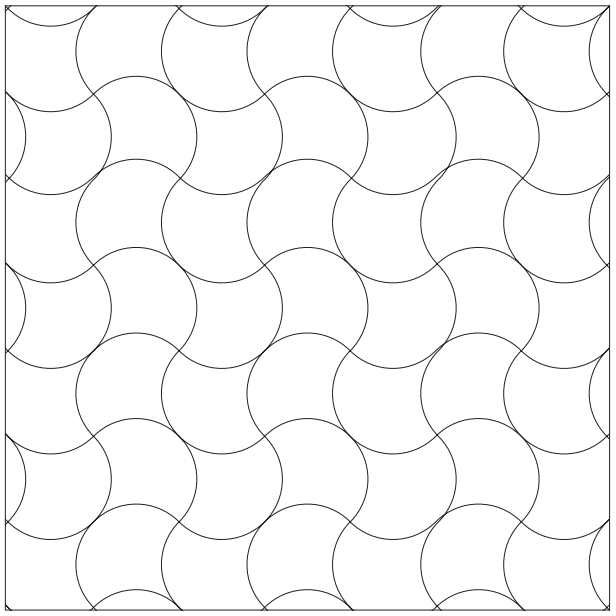


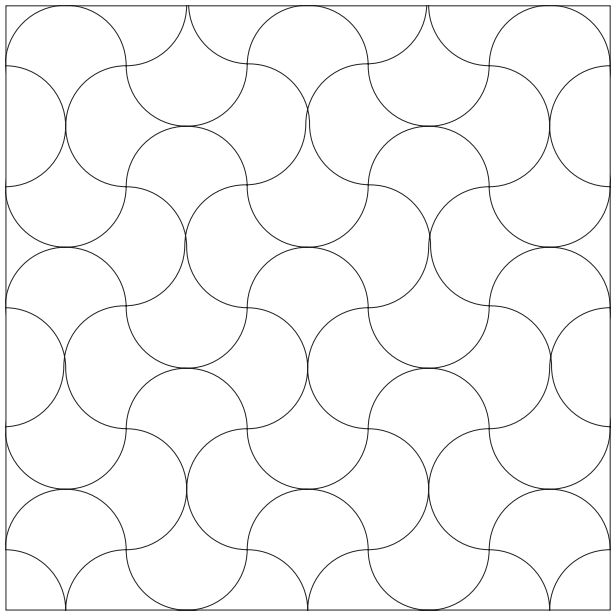


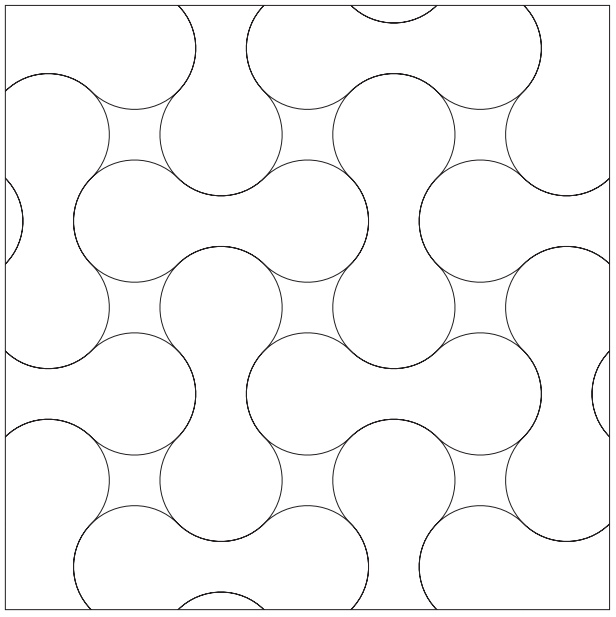


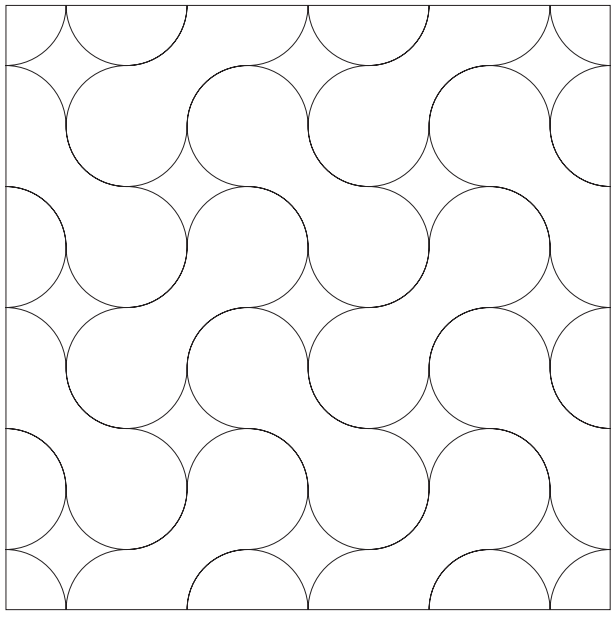
Primärformen

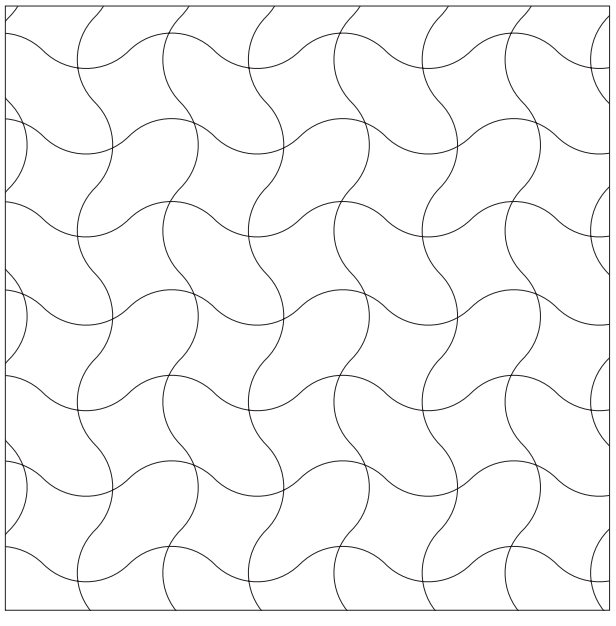
mehrfach gekrümmt

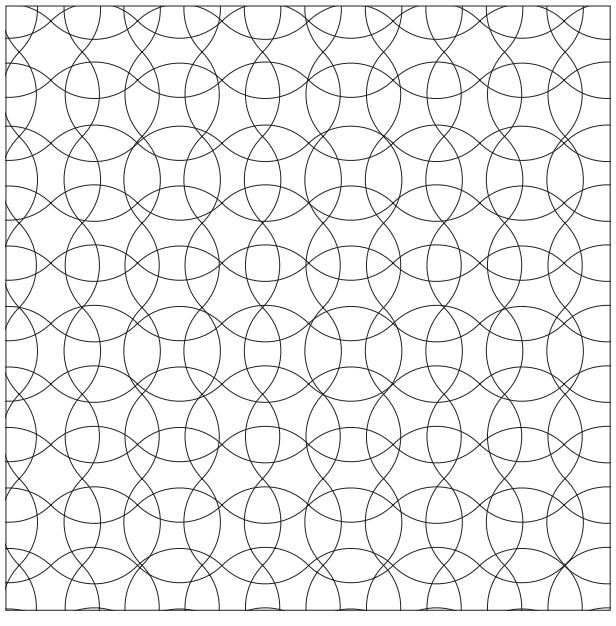


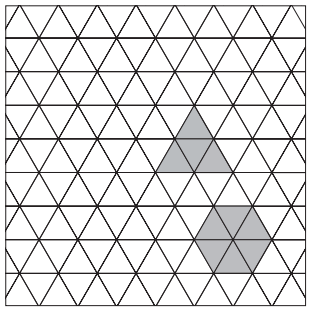


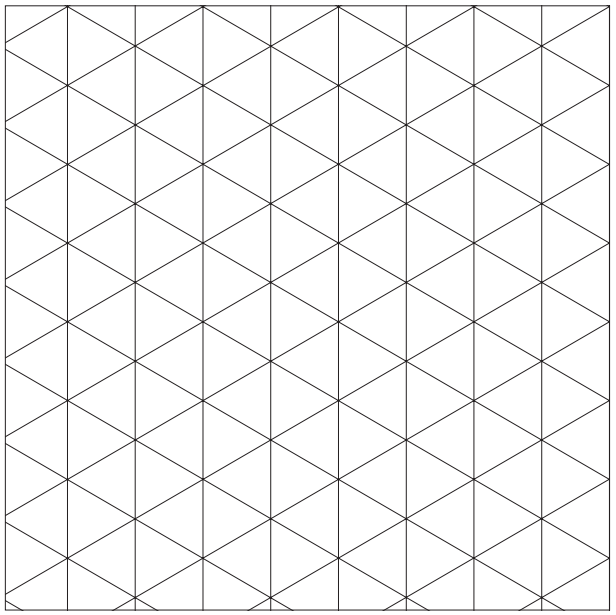


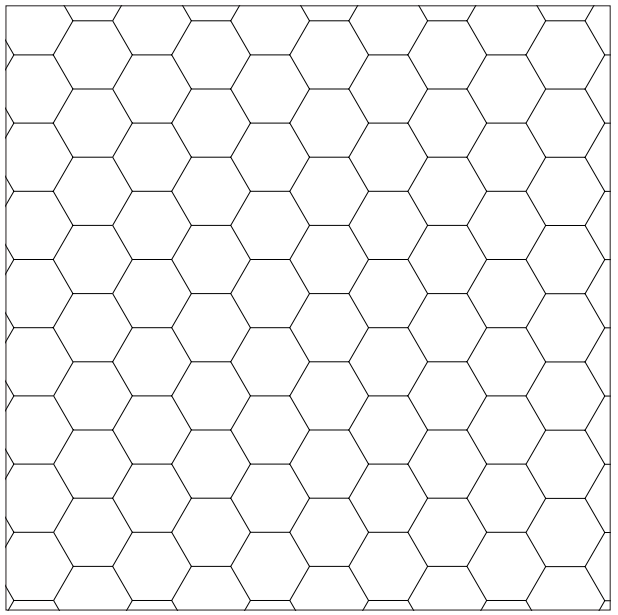








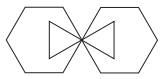




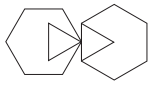
Trigonal & Hexagonal

linear
tangieren
skalierung

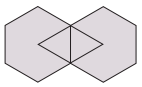
Punkt an Punkt

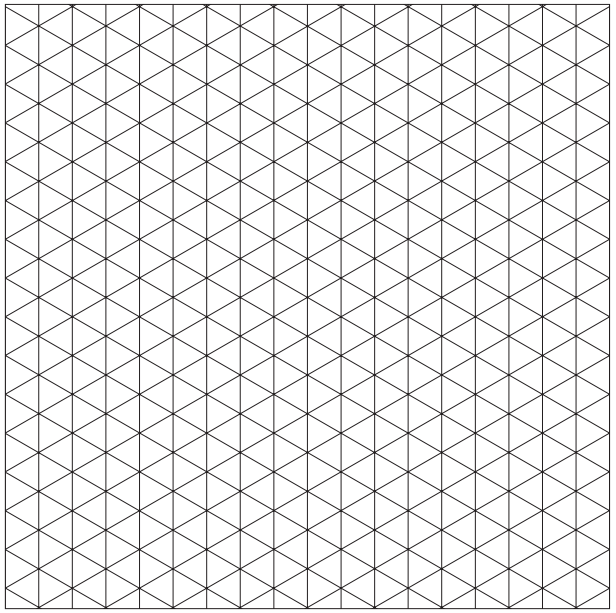


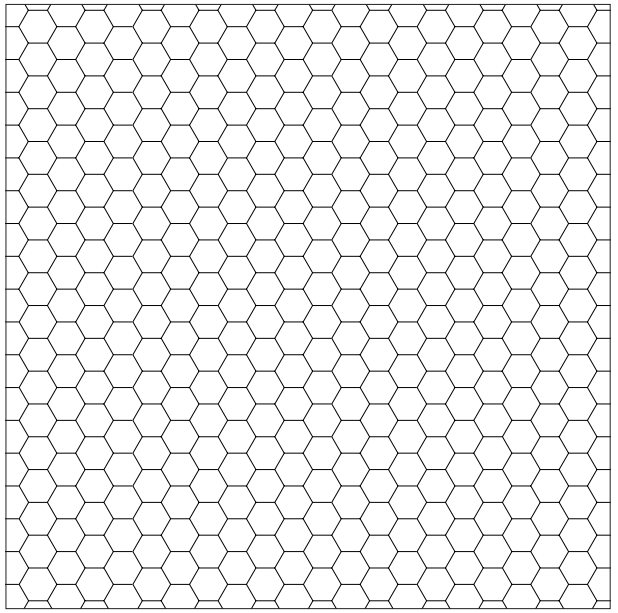
Punkt an Kante

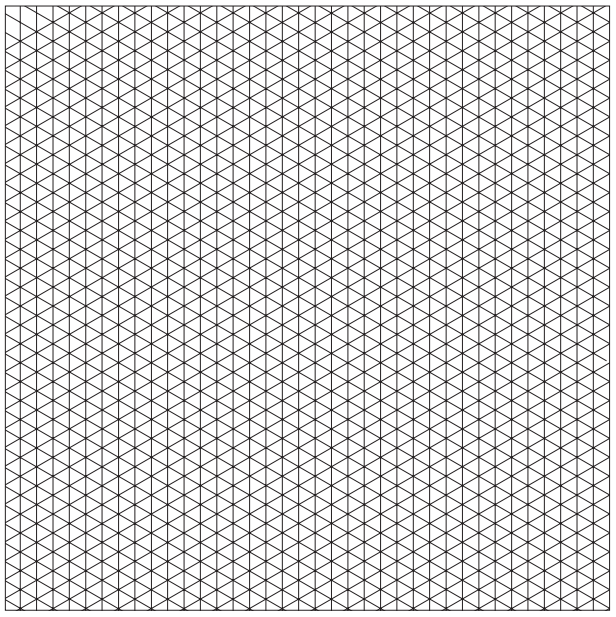


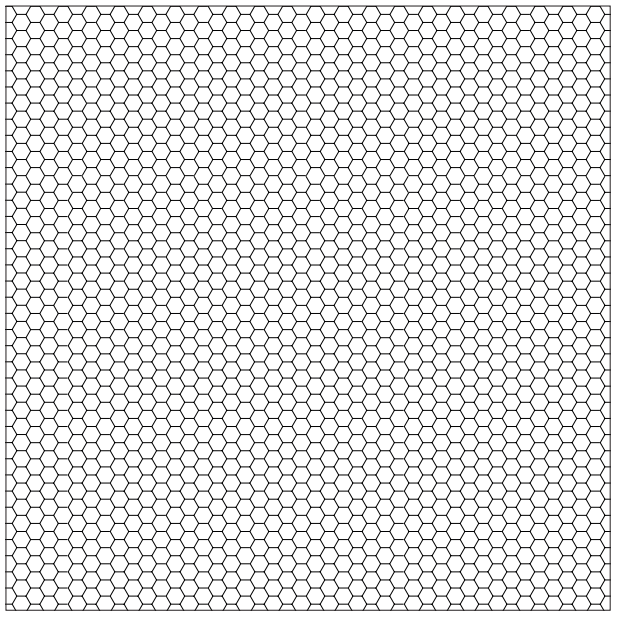
Kante an Kante

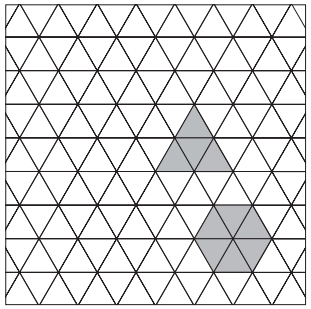


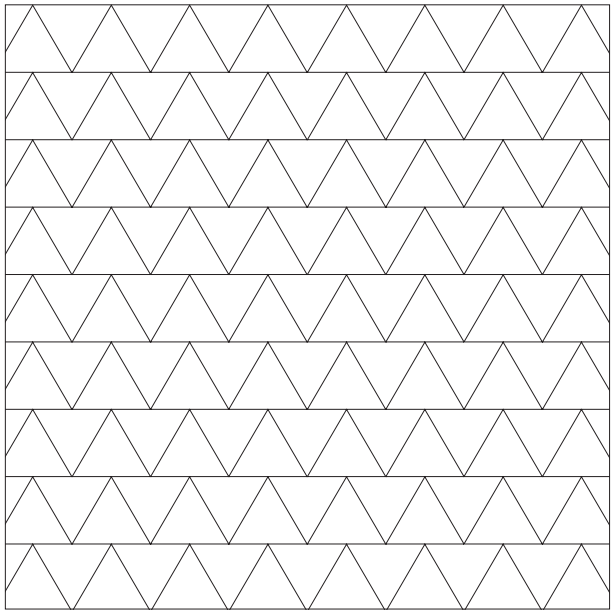


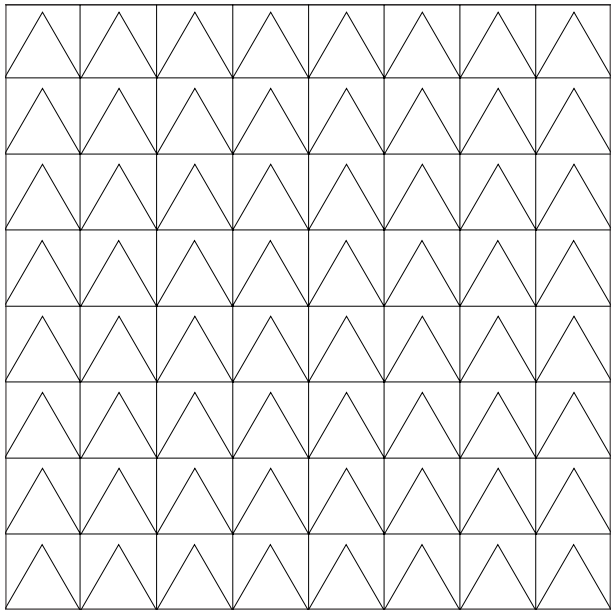








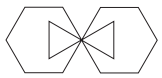




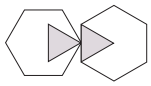
Trigonal

linear
tangieren
dezentral

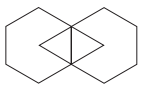
Punkt an Punkt

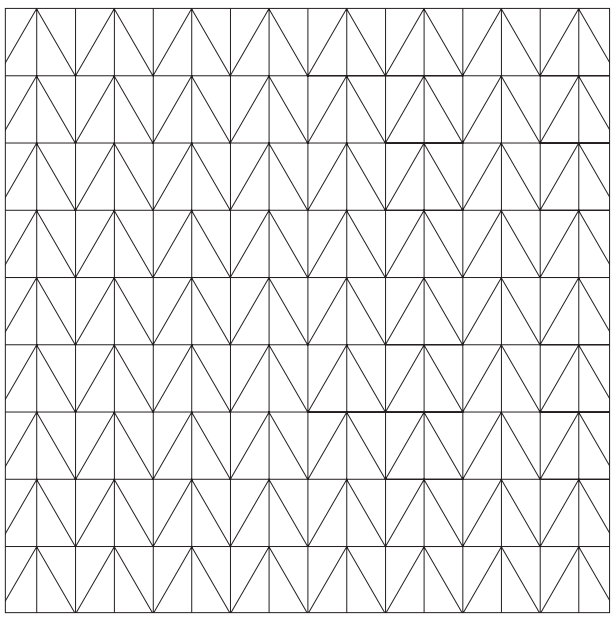


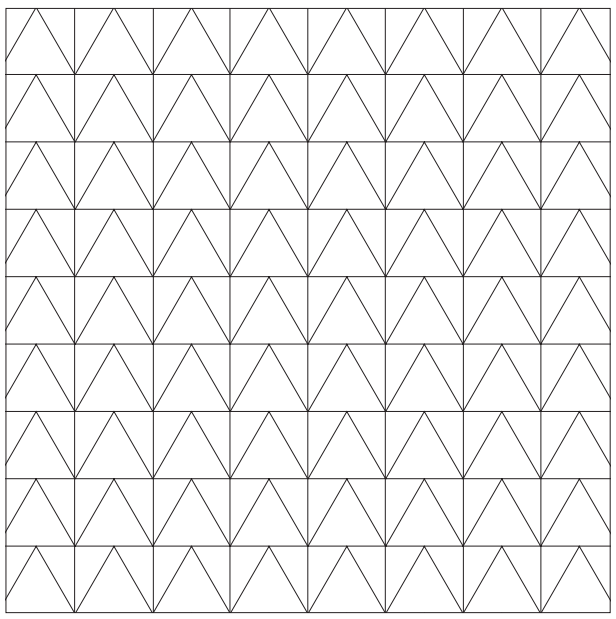
Punkt an Kante

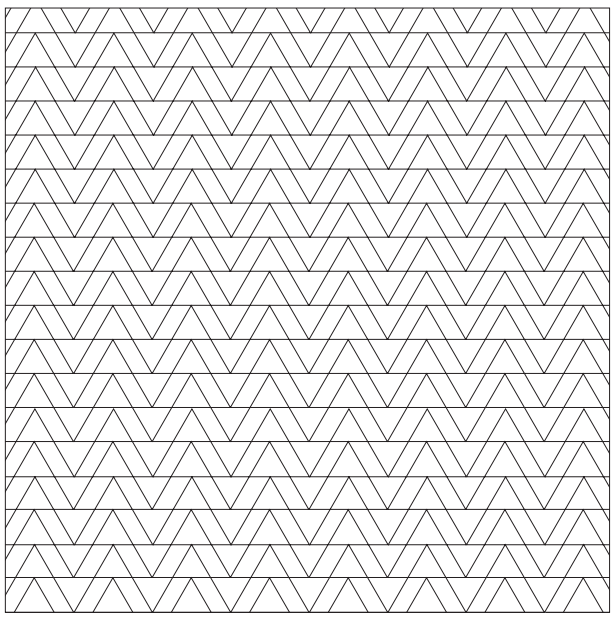


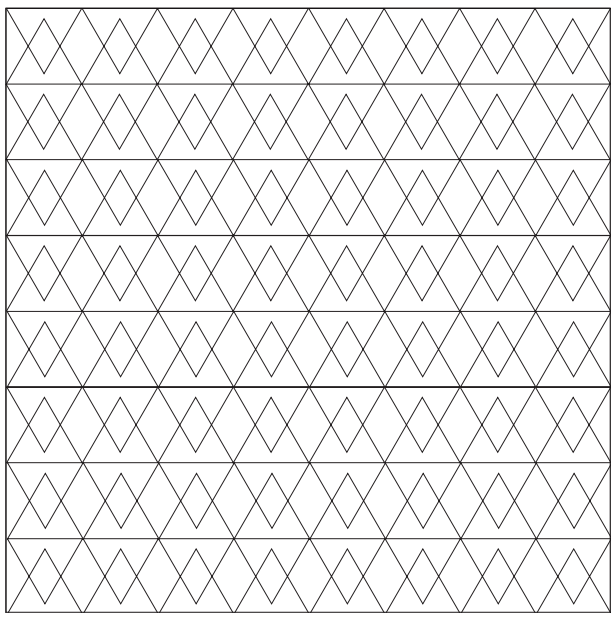
Kante an Kante

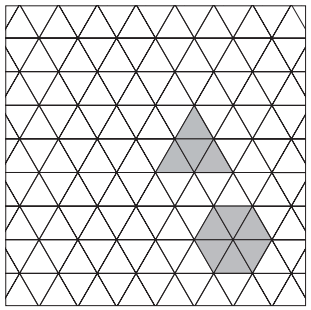


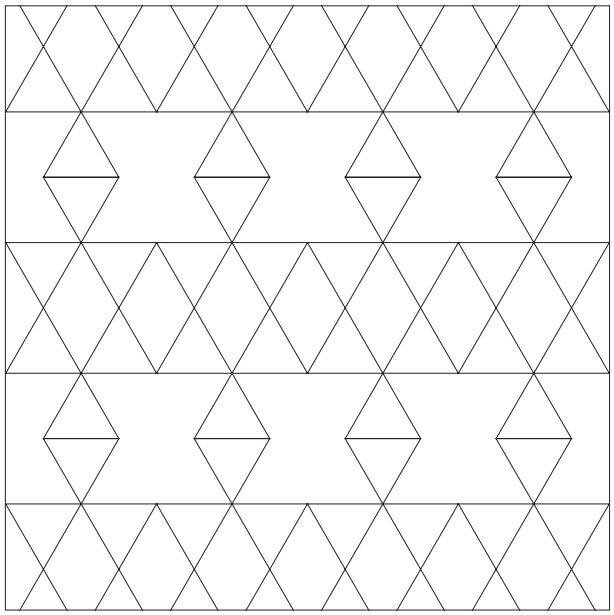


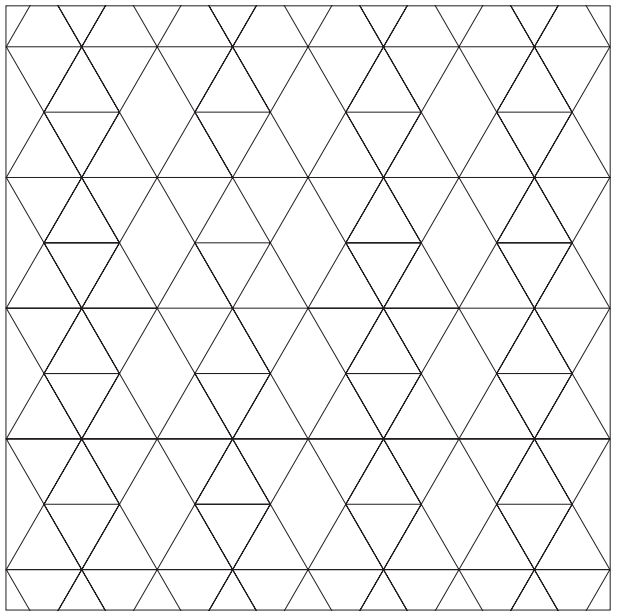








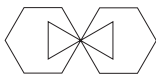




Trigonal

modular
tangieren
dezentral

Punkt an Punkt



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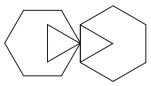
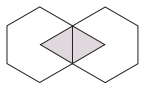
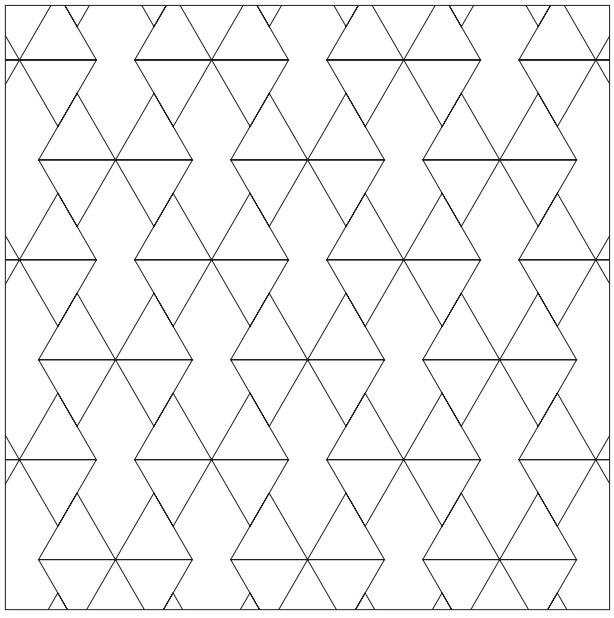
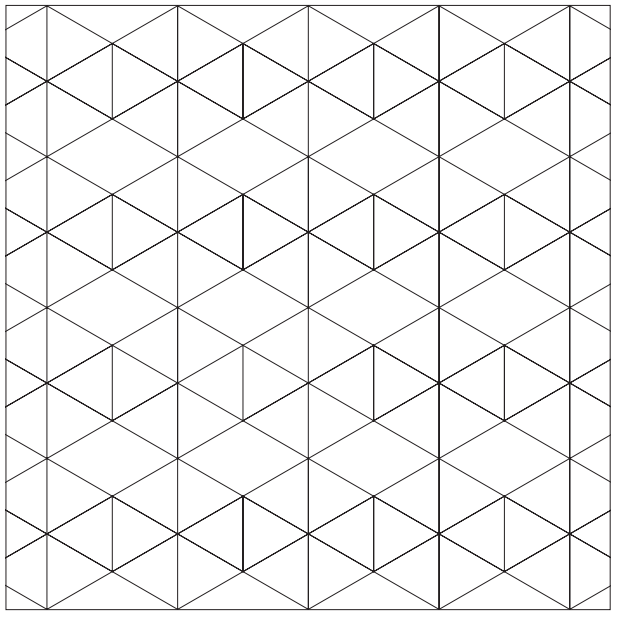
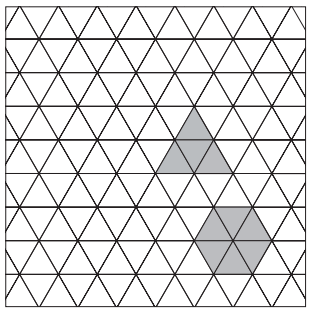


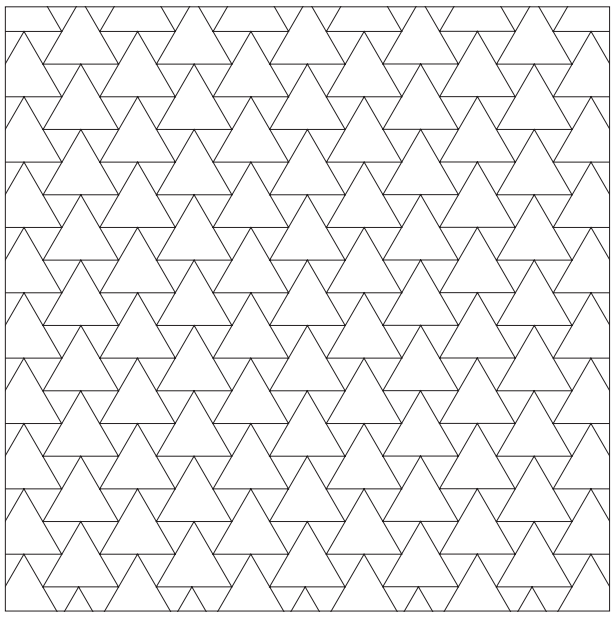
Kante an Kante

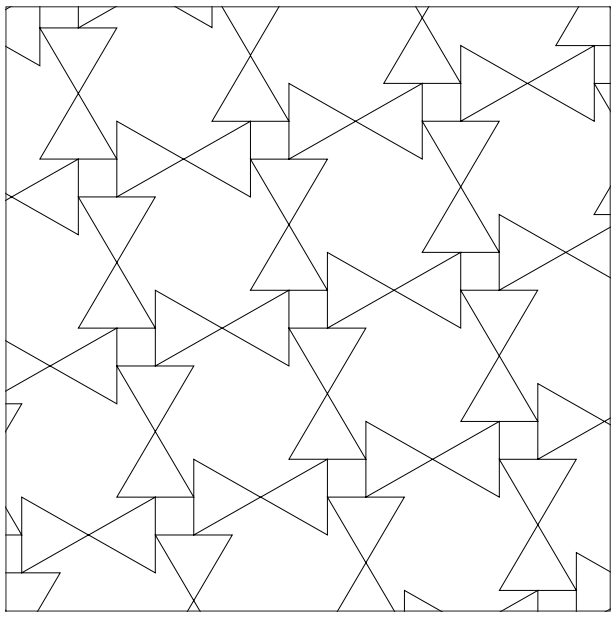








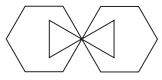




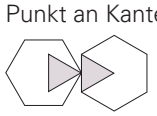
Trigonal

modular
tangieren
zentral

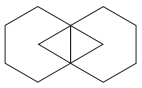
Punkt an Punkt

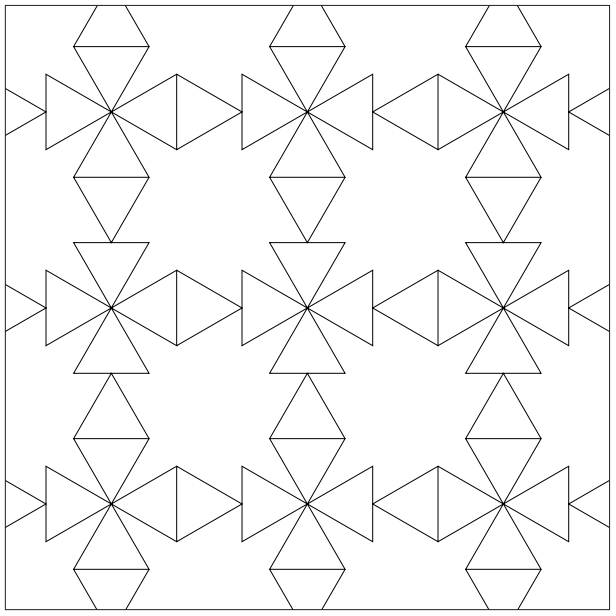


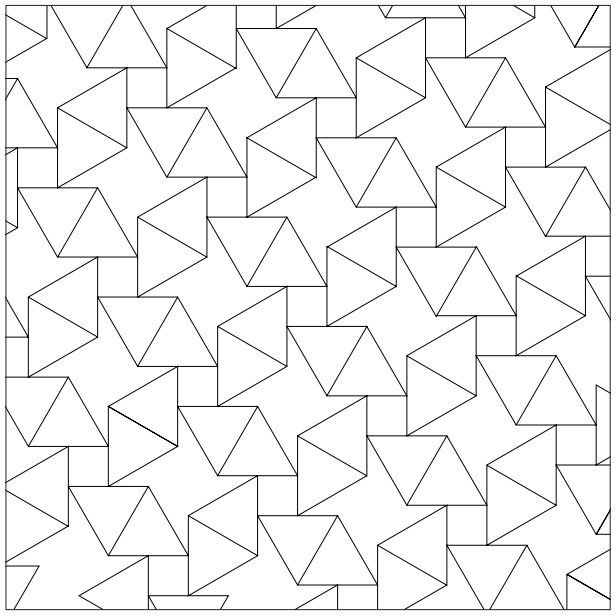
Punkt an Kante

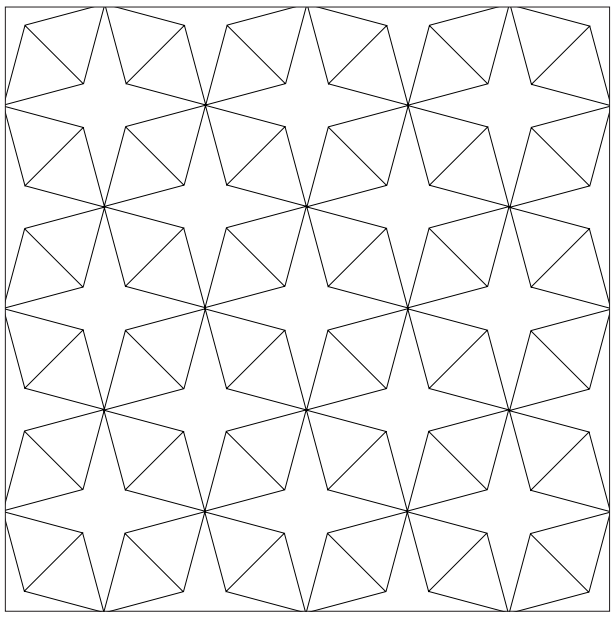


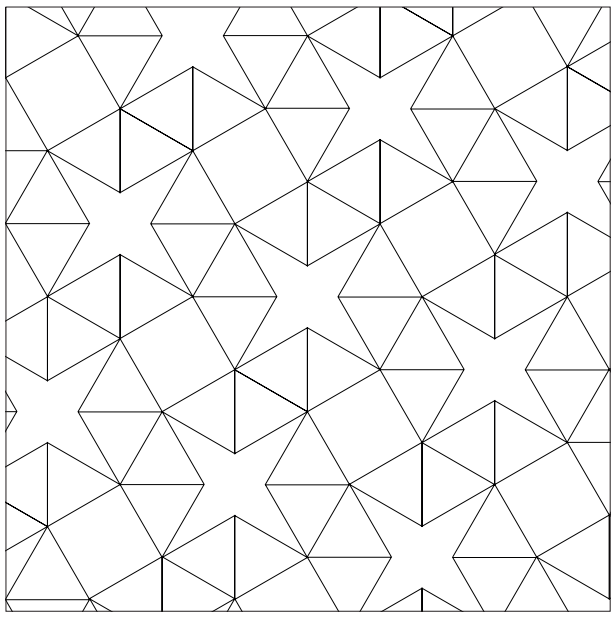
Kante an Kante

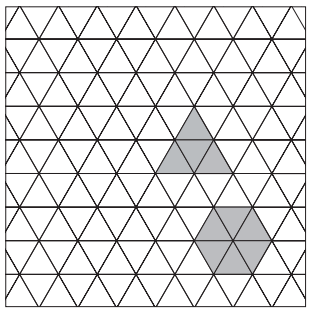


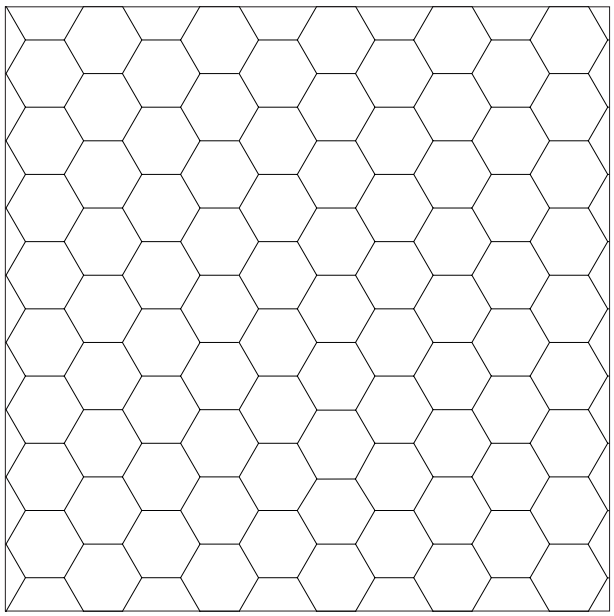


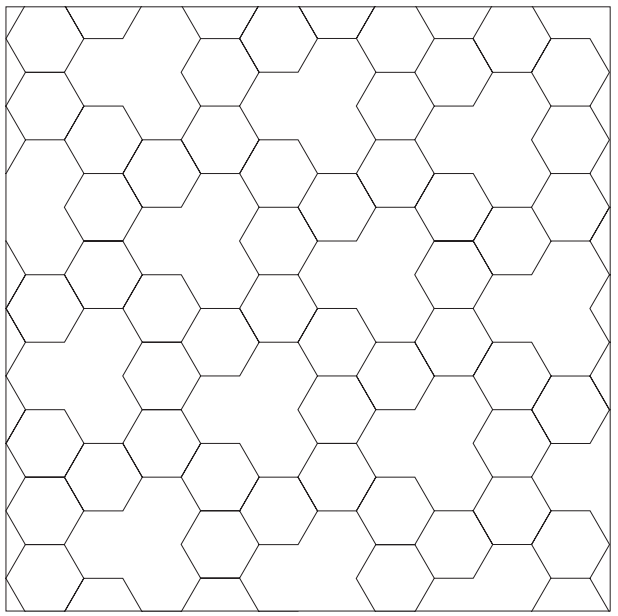








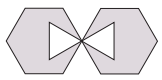




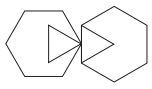
Hexagonal

modular
tangieren
dezentral

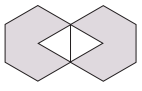
Punkt an Punkt

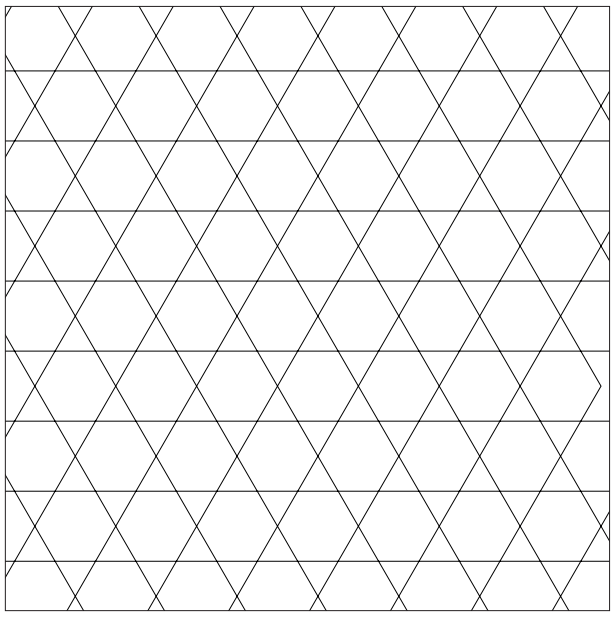


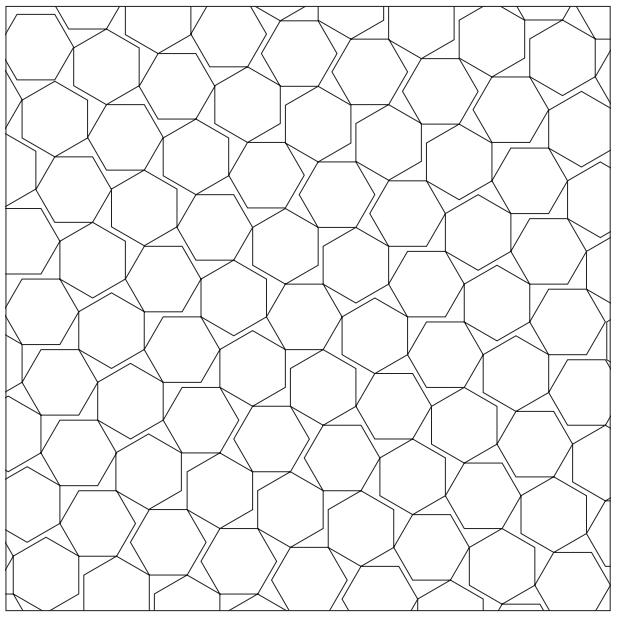
Punkt an Kante

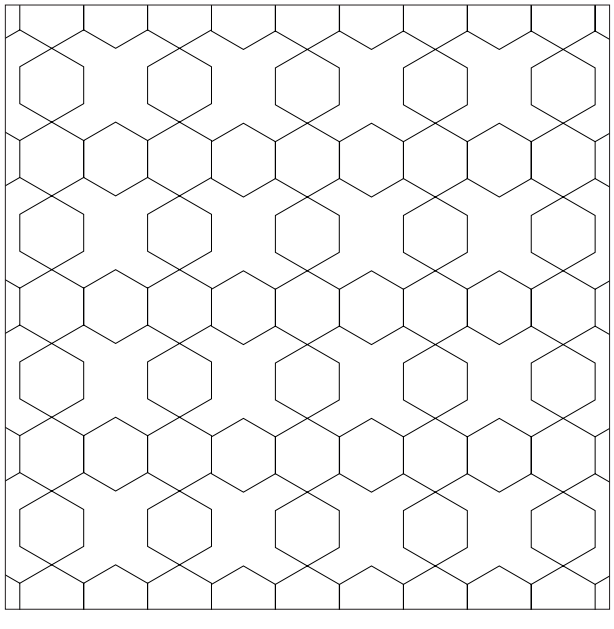


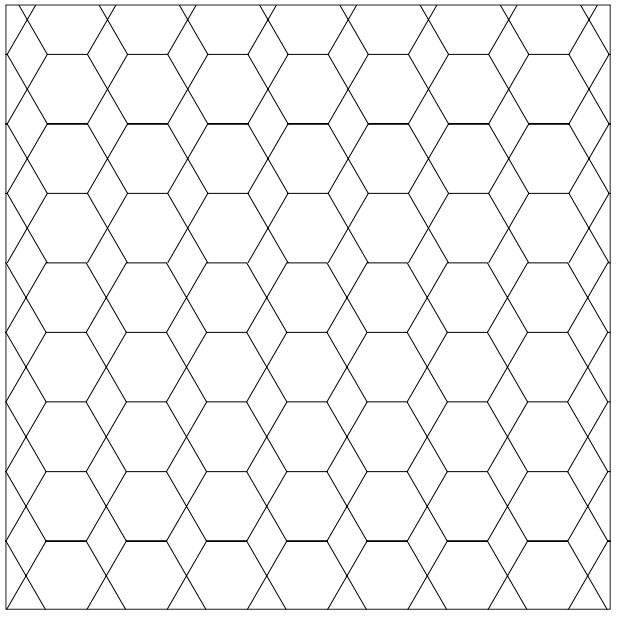
Kante an Kante

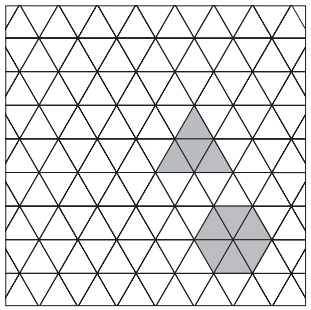








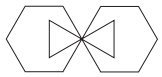




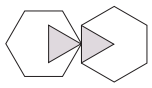
Hexagonal

linear
tangieren
Binnengliederung

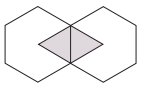
Punkt an Punkt

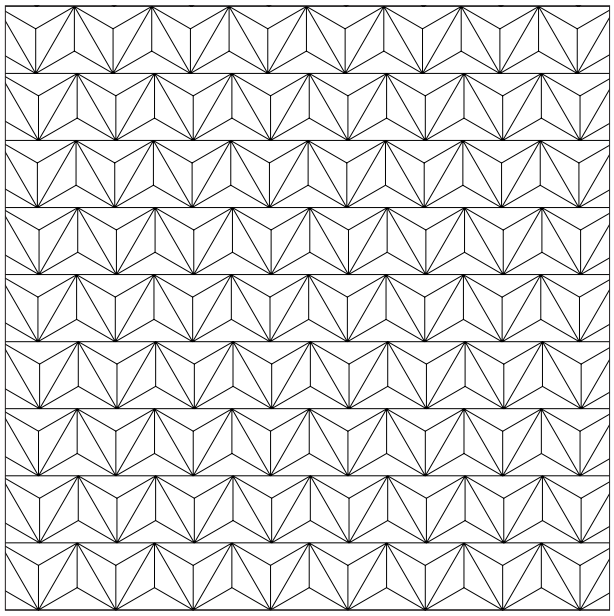


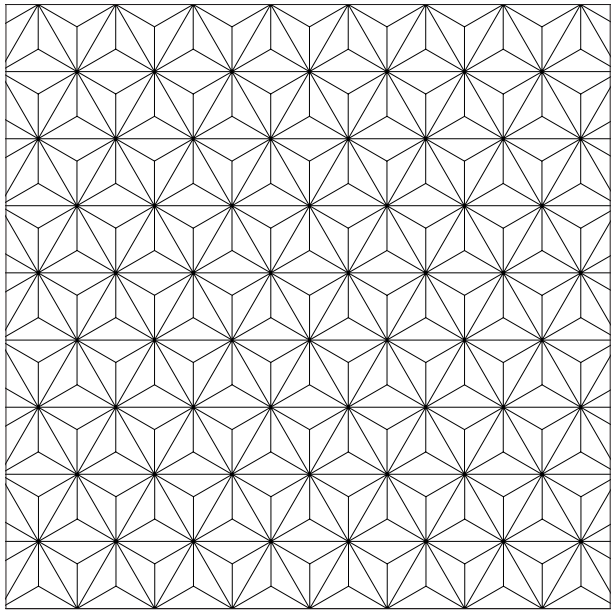
Punkt an Kante

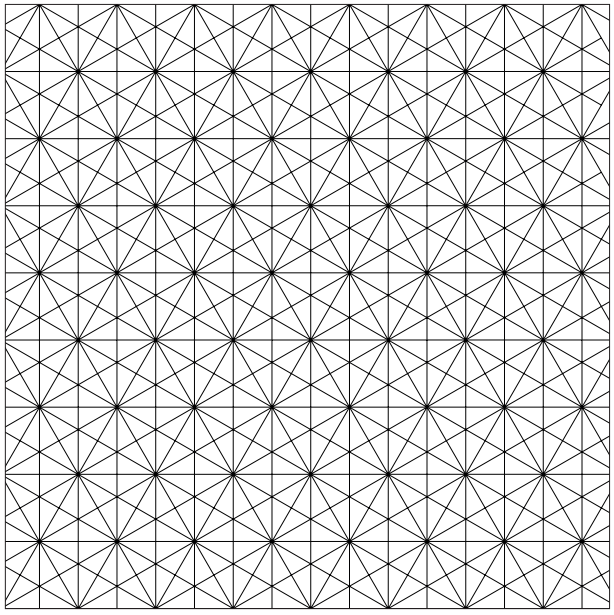


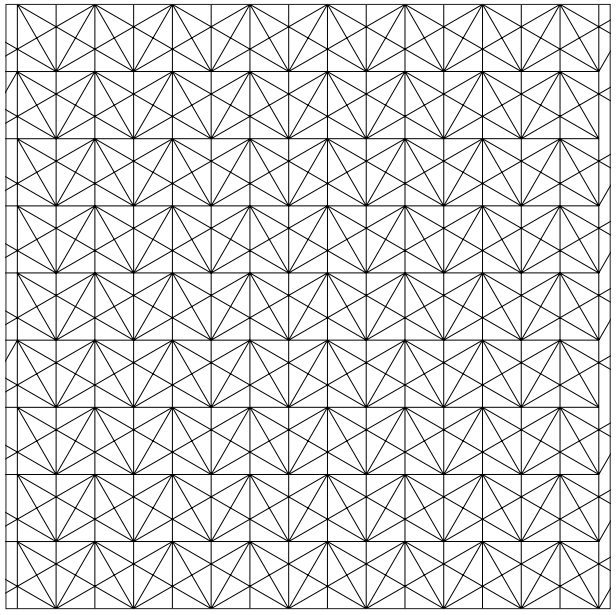
Kante an Kante

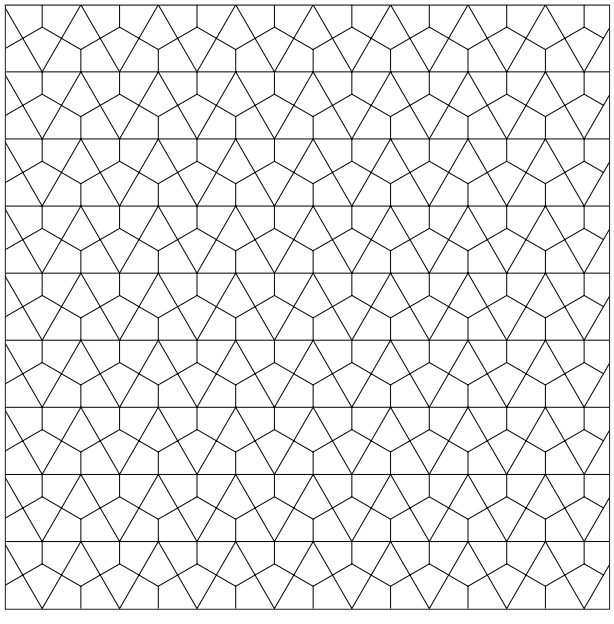


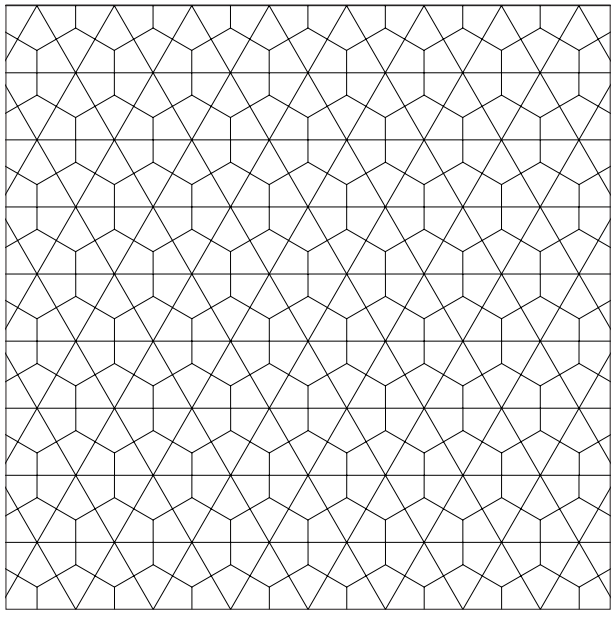


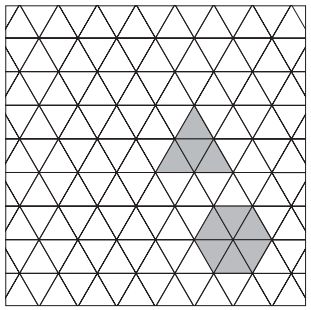


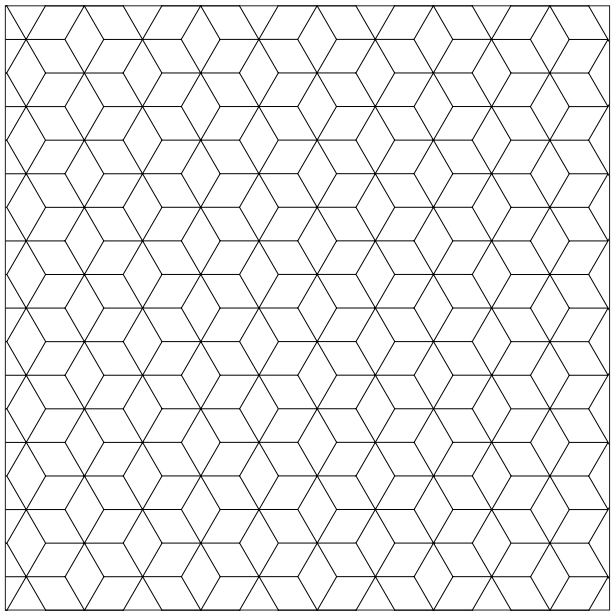


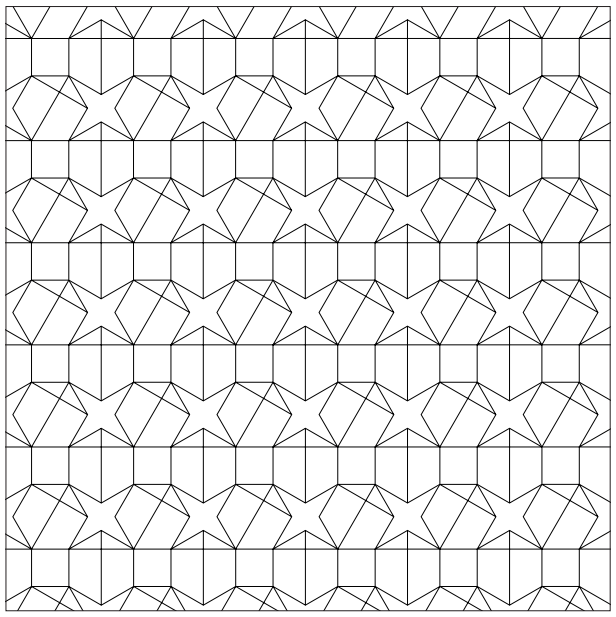










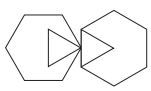


Hexagonal

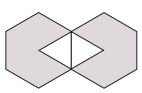
modular
tangieren
Binnengliederung

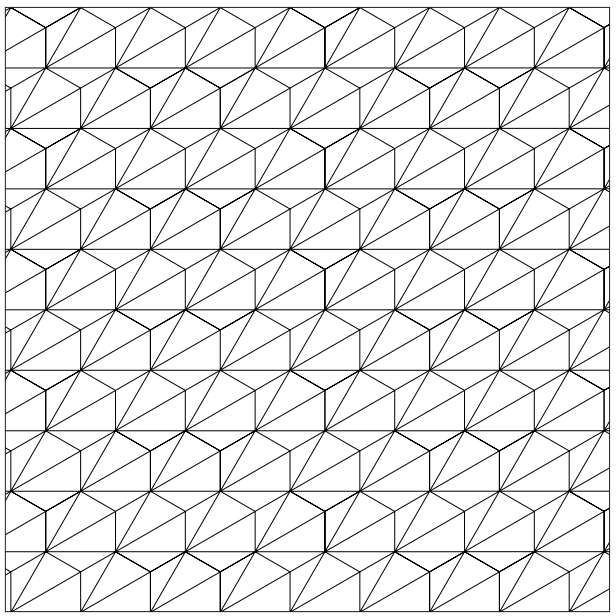
Punkt an Punkt

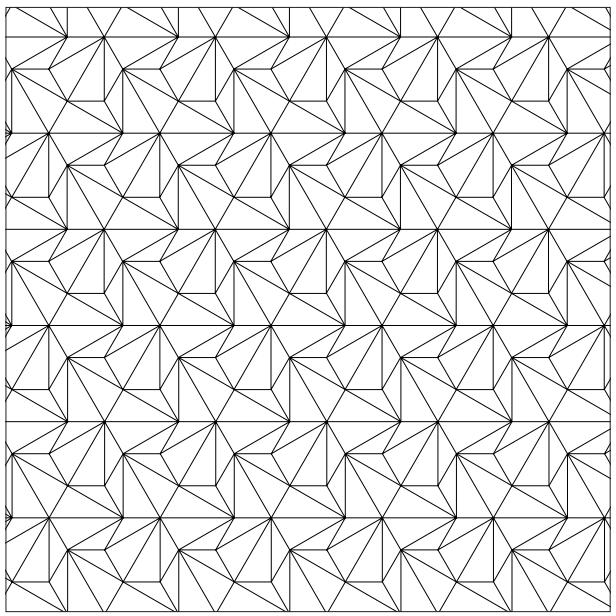
Punkt an Kante

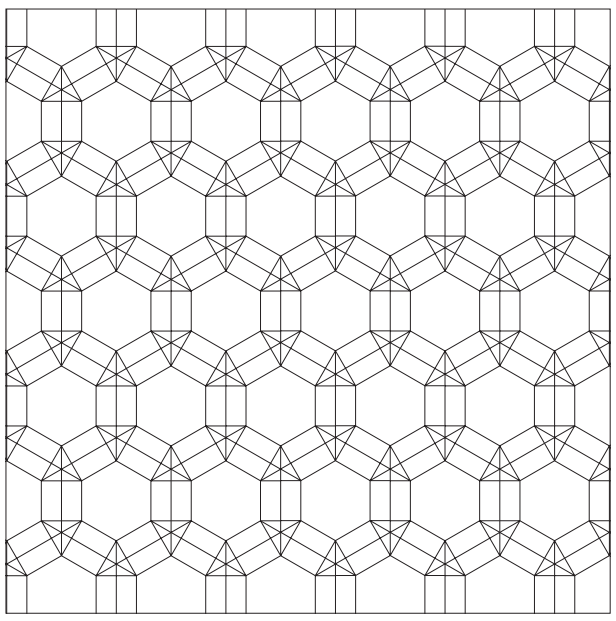


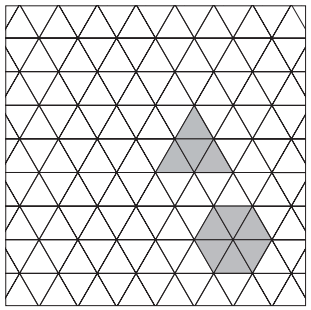
Kante an Kante

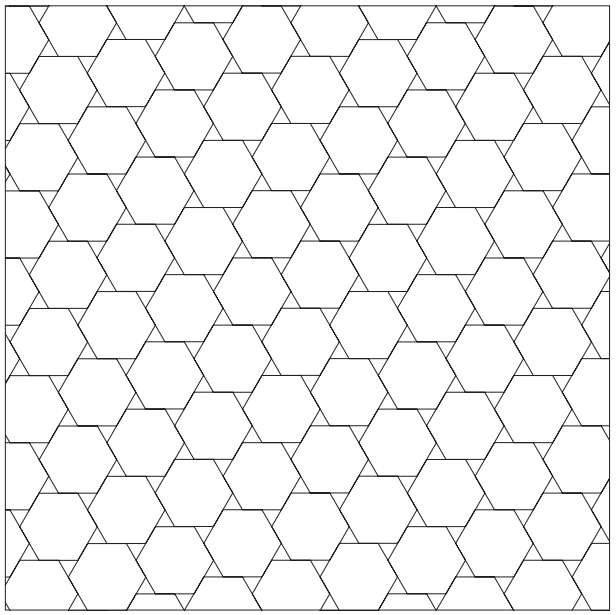


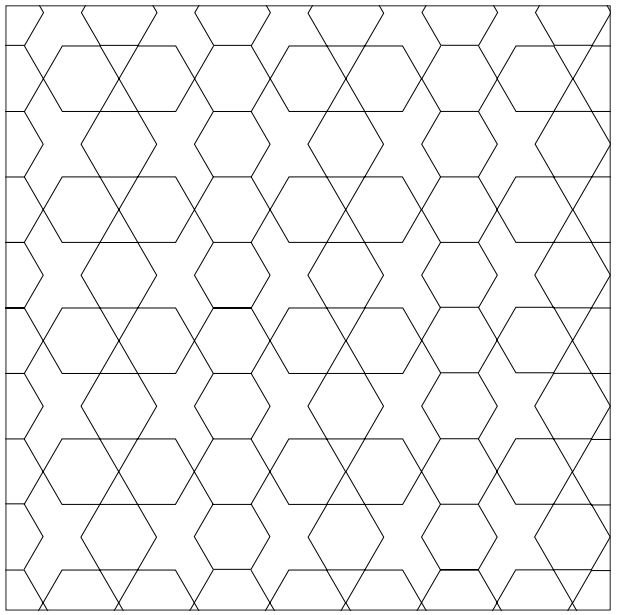








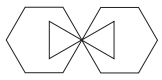




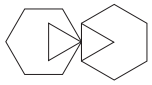
Hexagonal

modular
tangieren
hybrid

Punkt an Punkt



Punkt an Kante



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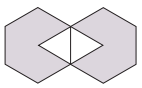
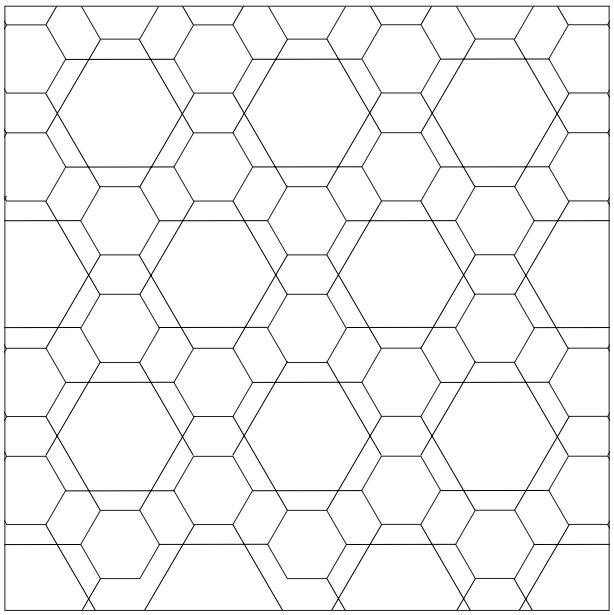
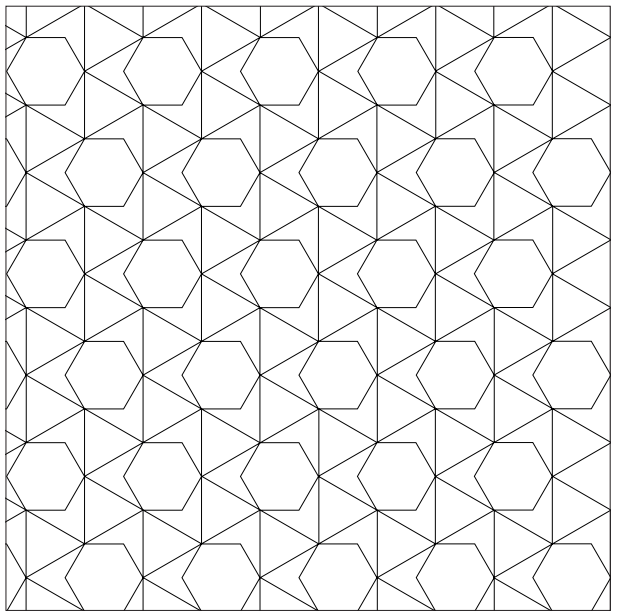
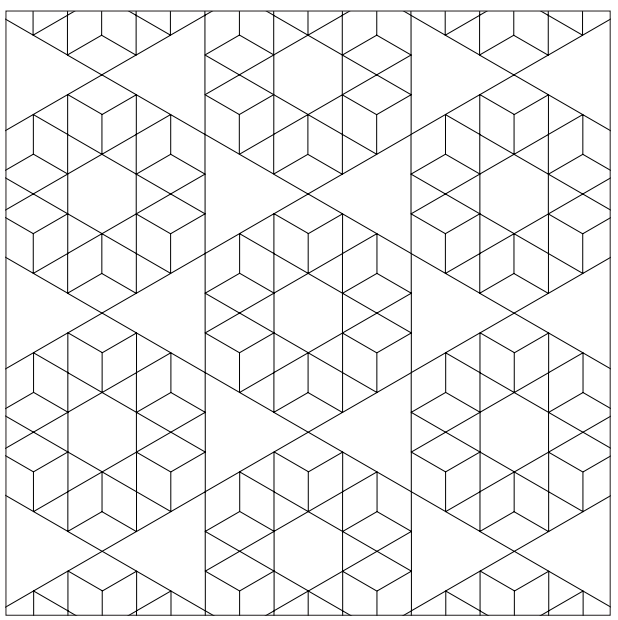
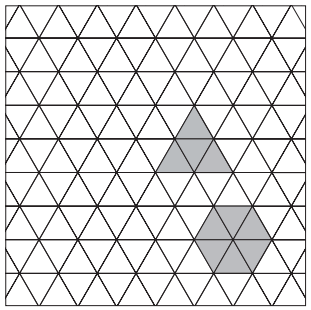
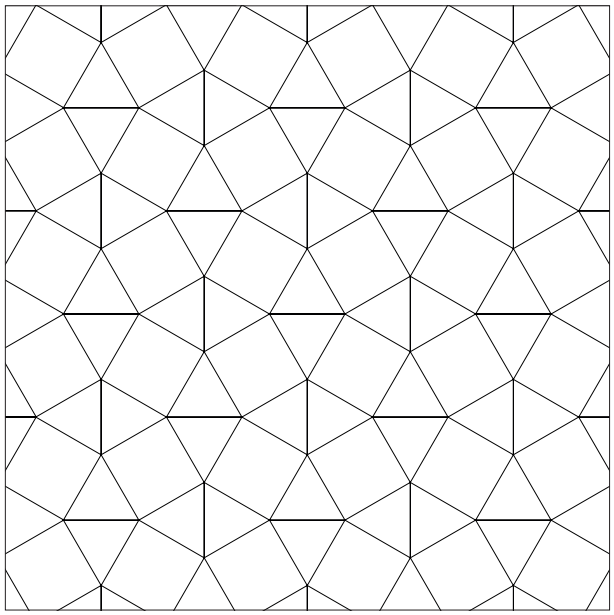


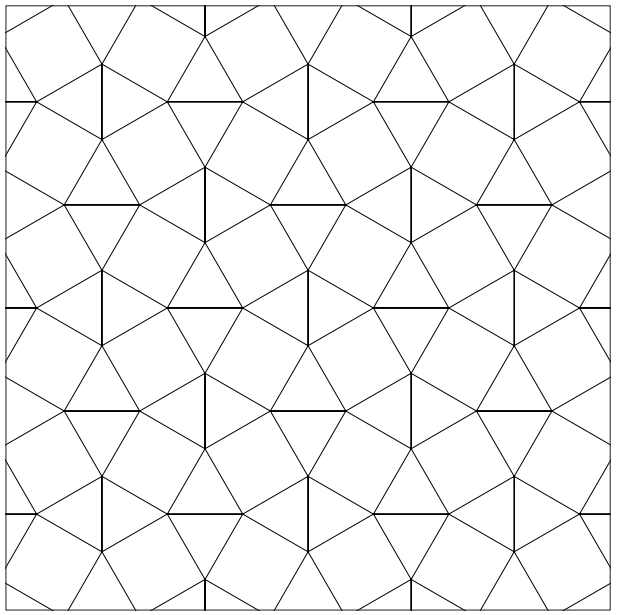








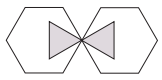




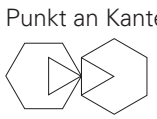
Trigonal

modular
tangieren
hybrid

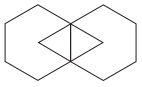
Punkt an Punkt

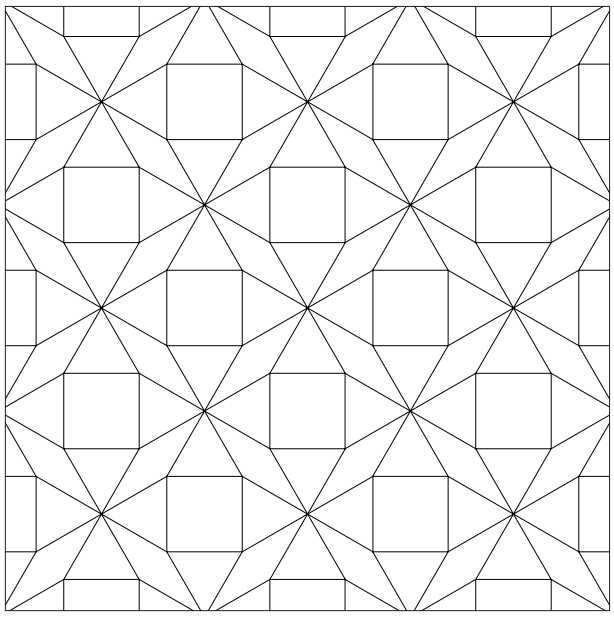


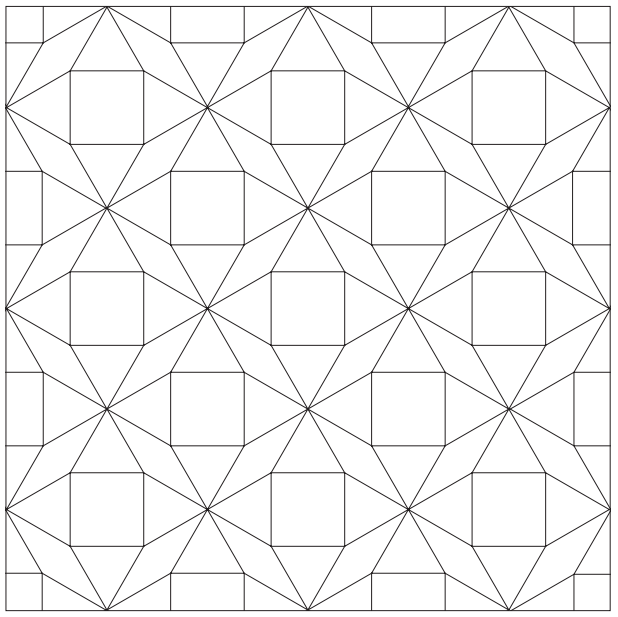
Punkt an Kante

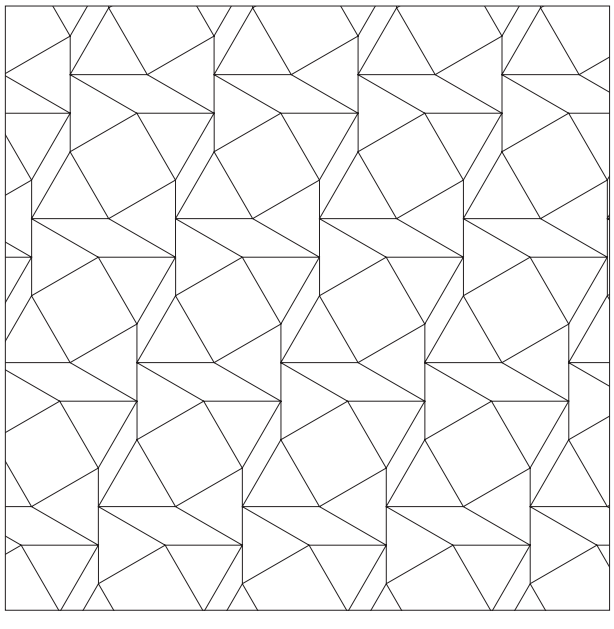


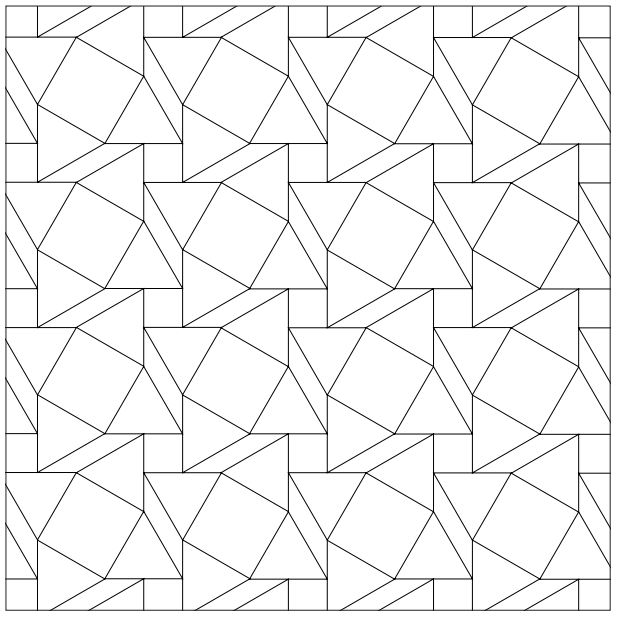
Kante an Kante

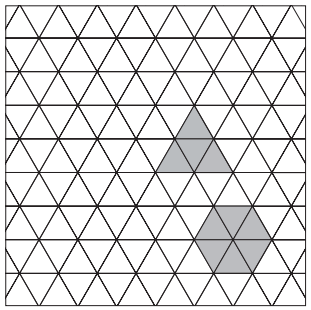


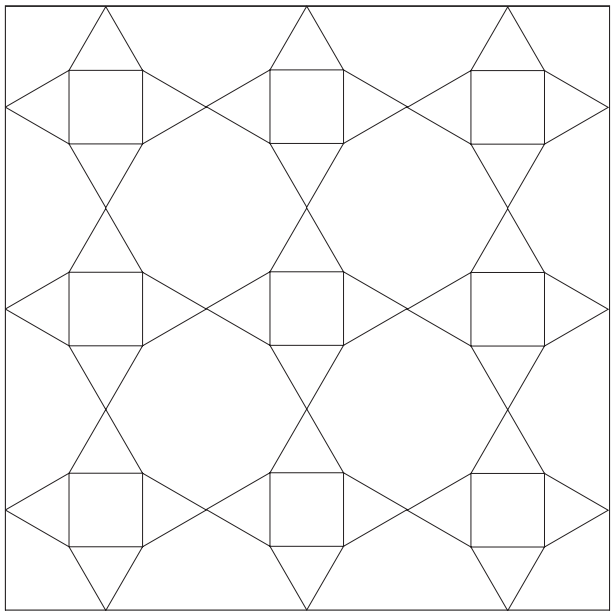


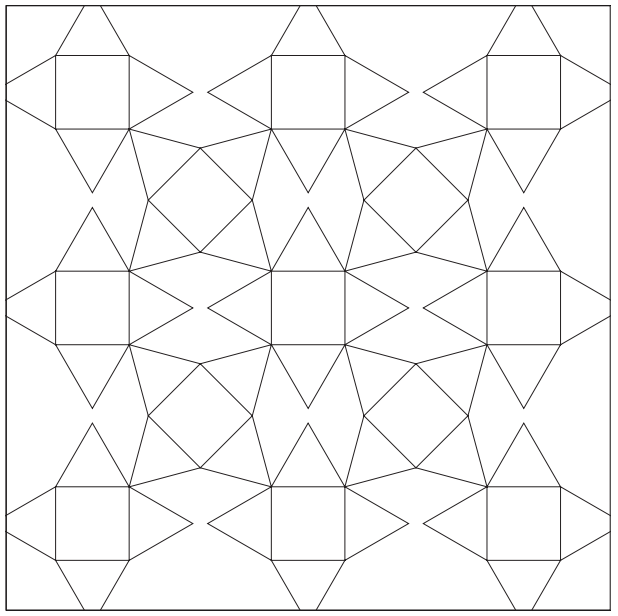








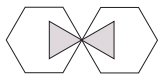




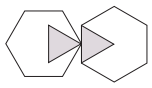
Trigonal

modular
tangieren
hybrid

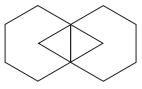
Punkt an Punkt

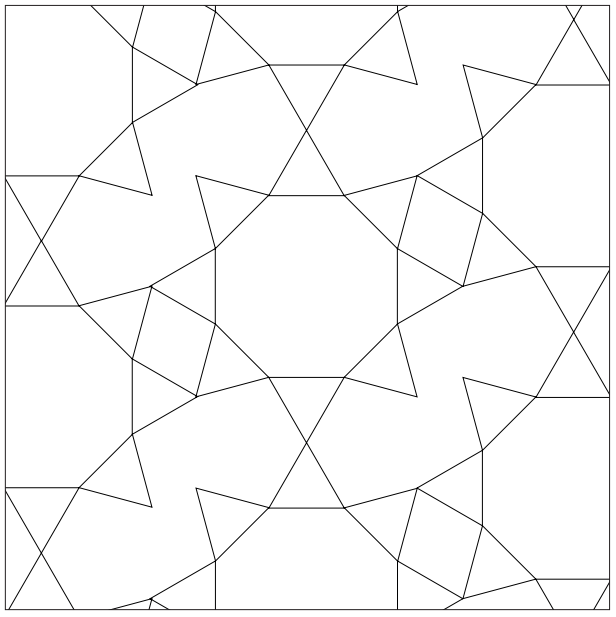


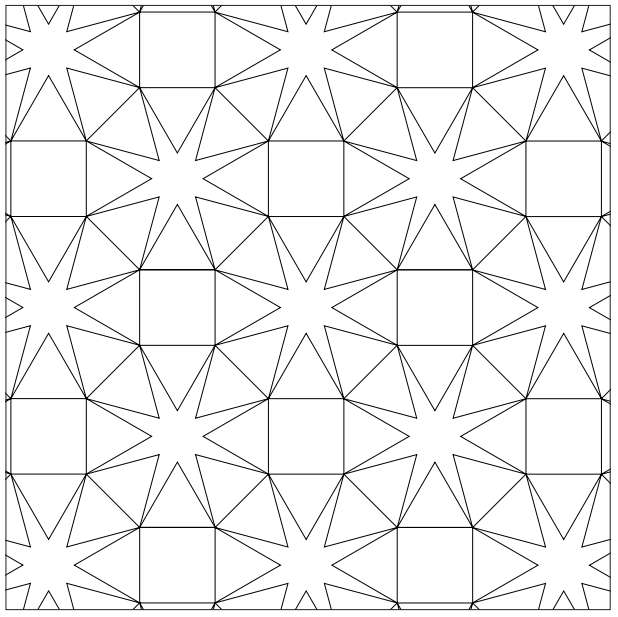
Punkt an Kante

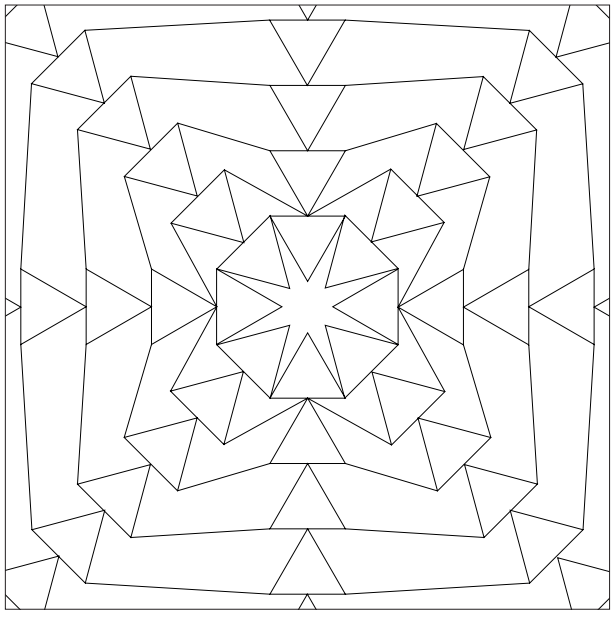


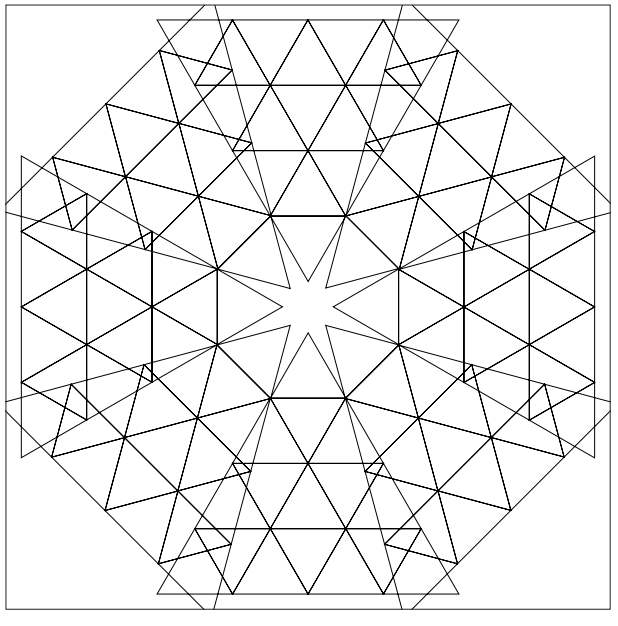
Kante an Kante

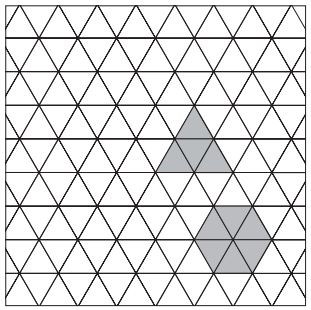


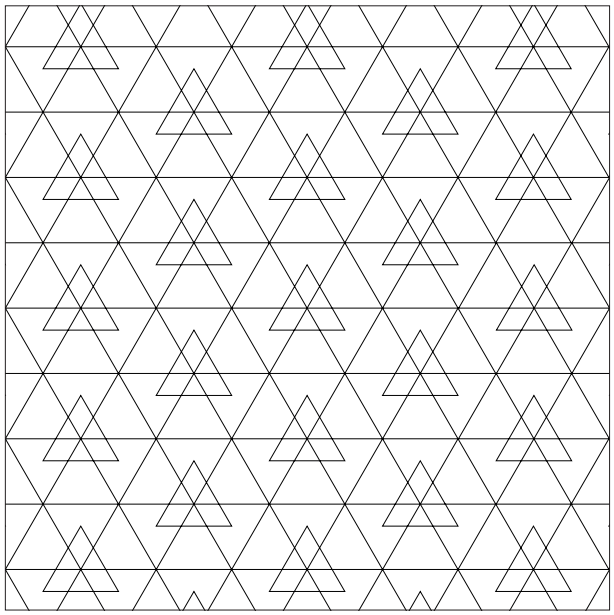


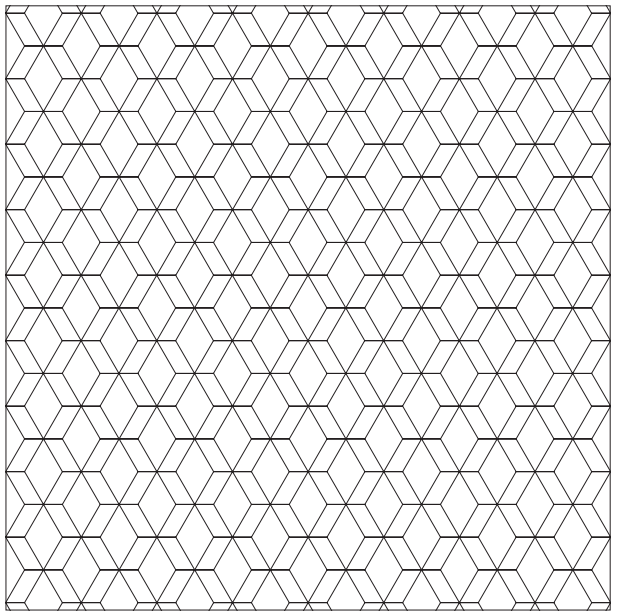








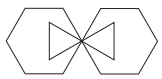




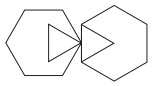
Hexagonal

modular
überschneiden
Binnengliederung

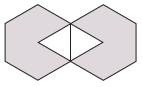
Punkt an Punkt

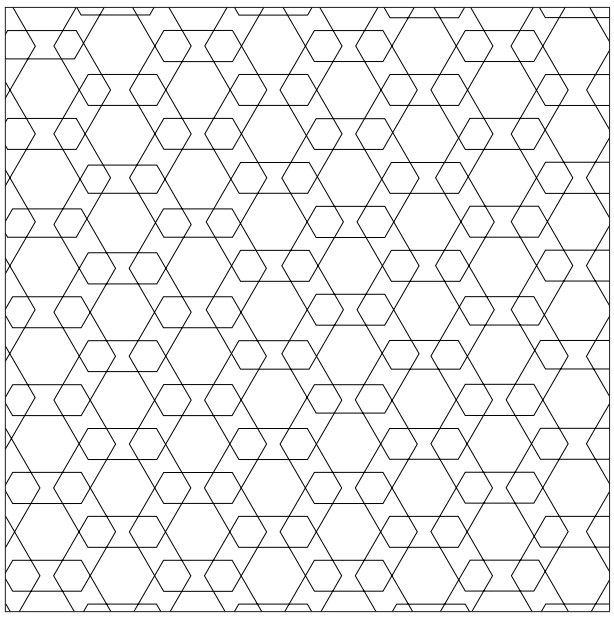


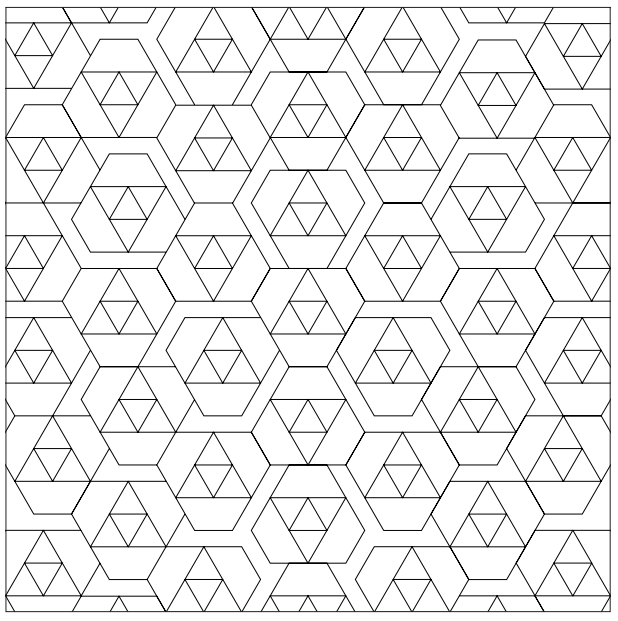
Punkt an Kante

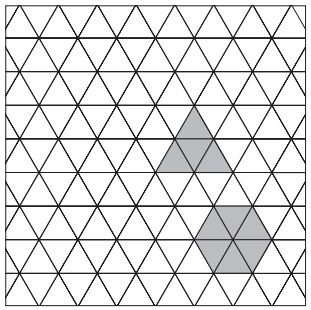


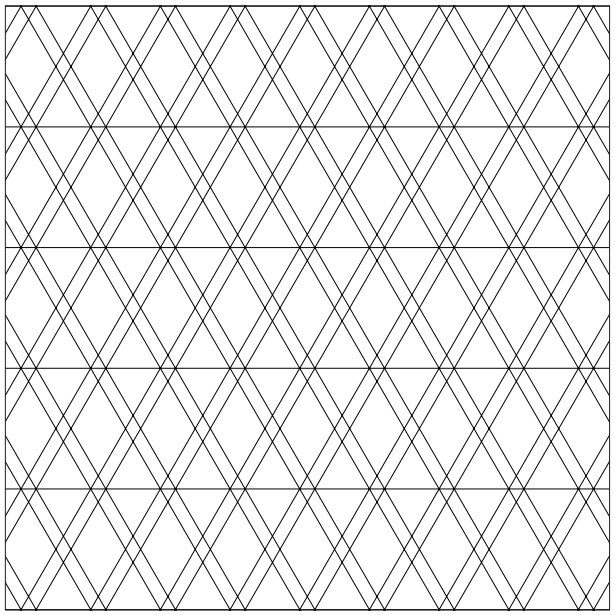
Kante an Kante

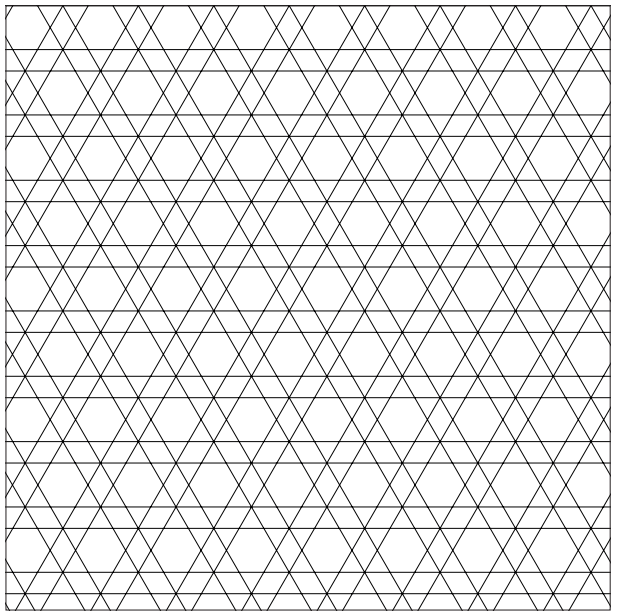








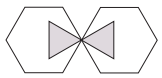




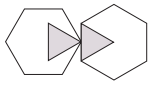
Trigonal

modular
überschneiden
Binnengliederung

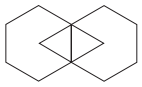
Punkt an Punkt

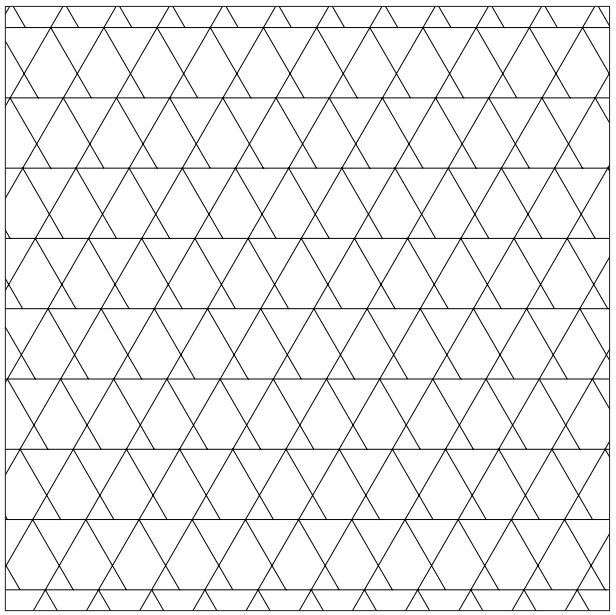


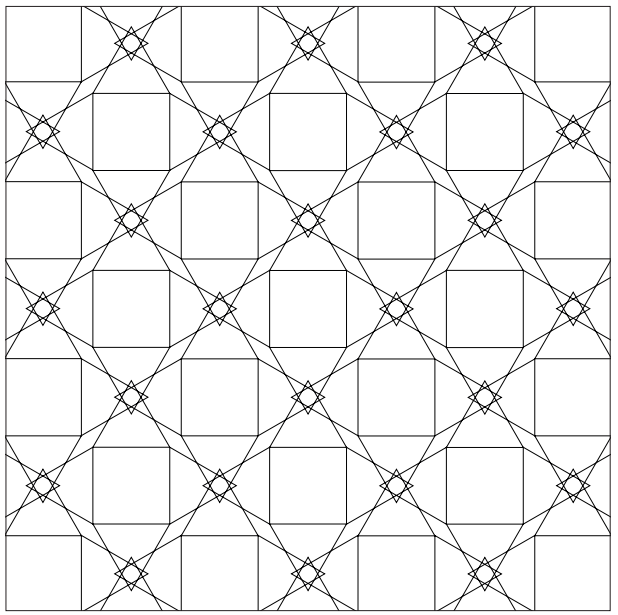
Punkt an Kante

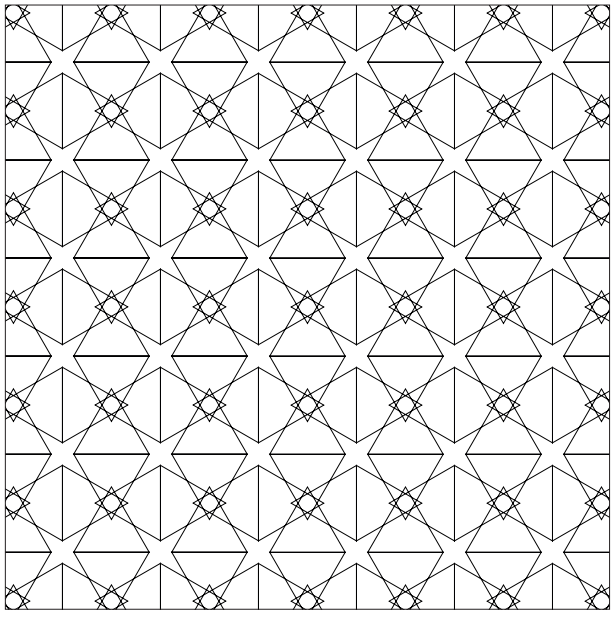


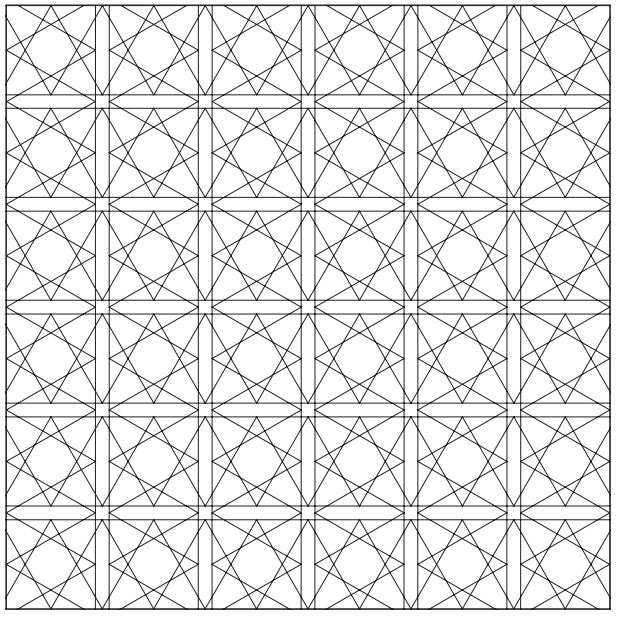
Kante an Kante

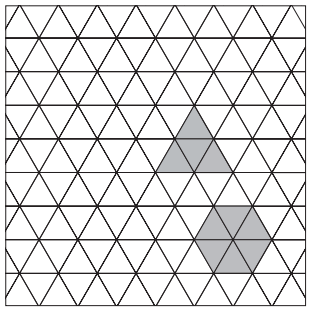


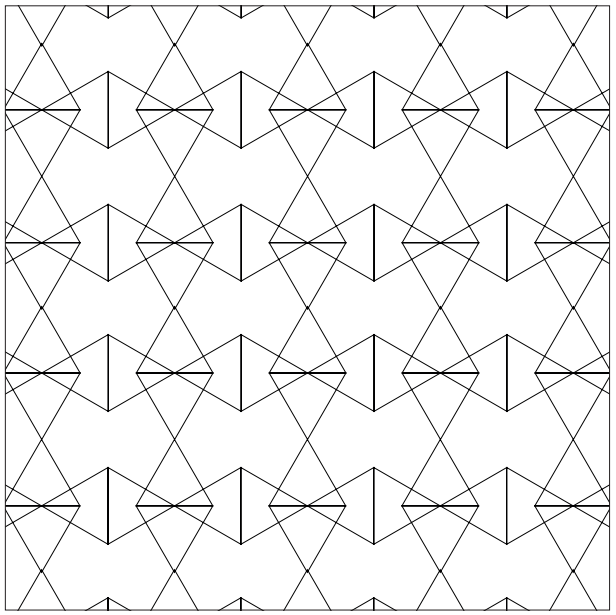


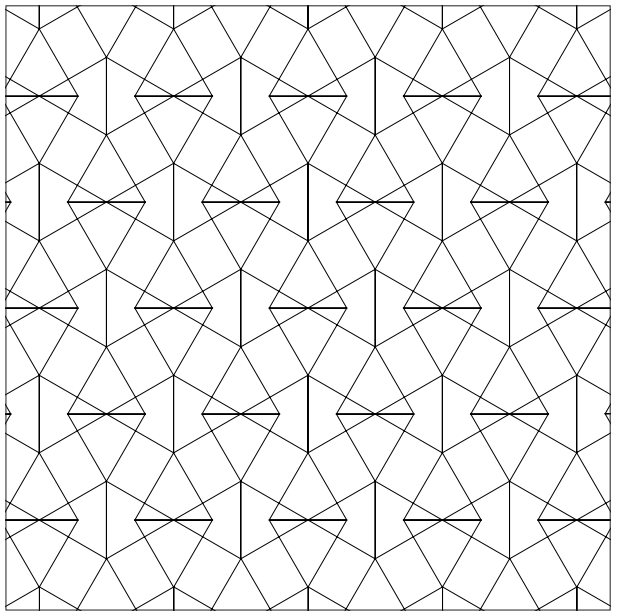








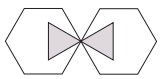




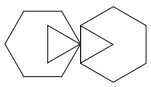
Trigonal

linear
überschneiden
Binnengliederung

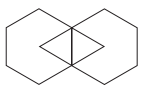
Punkt an Punkt

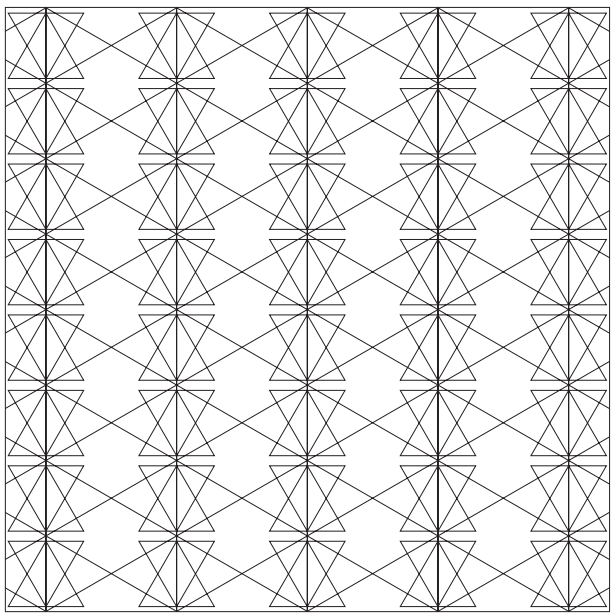


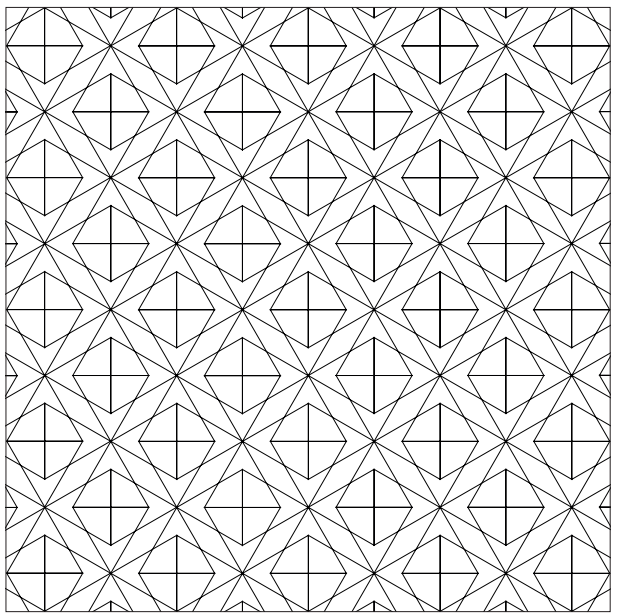
Punkt an Kante

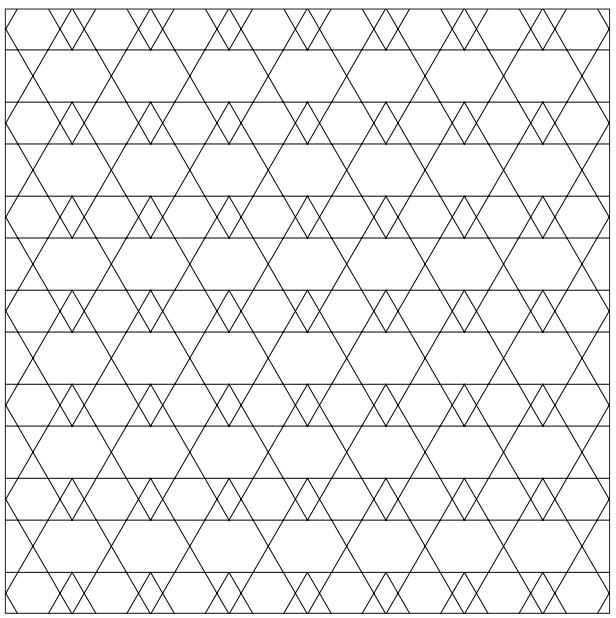


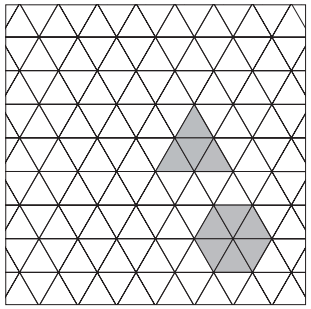
Kante an Kante

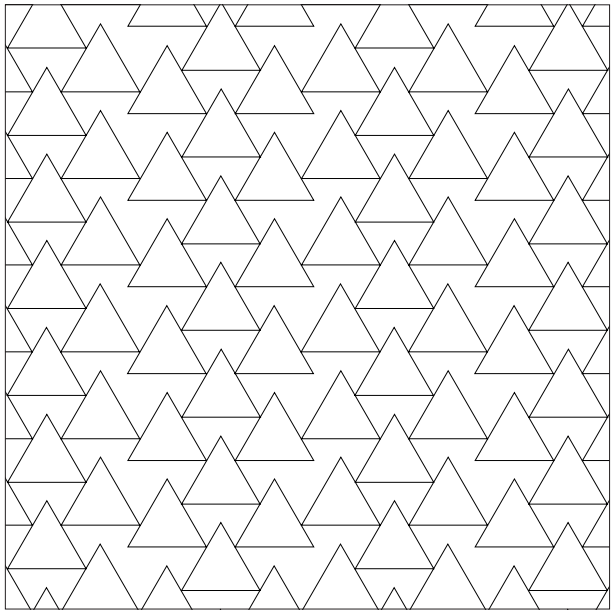


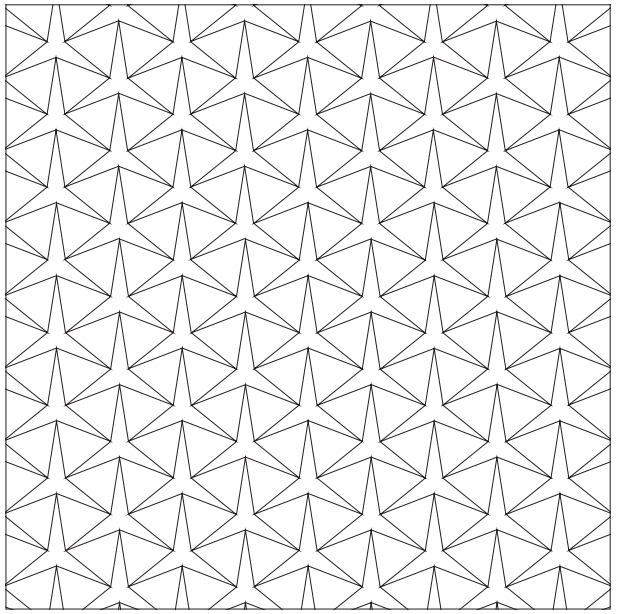








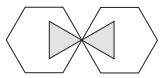




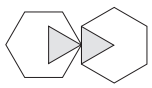
Trigonal

modular
tangieren
Sterne & sonstige

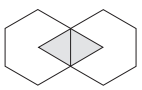
Punkt an Punkt

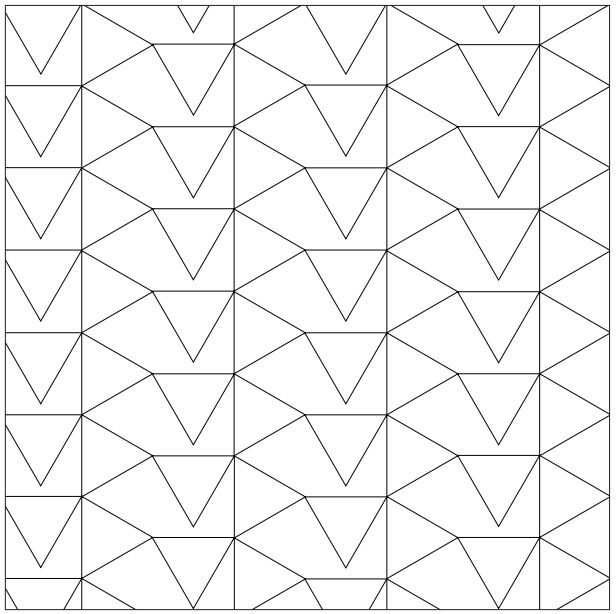


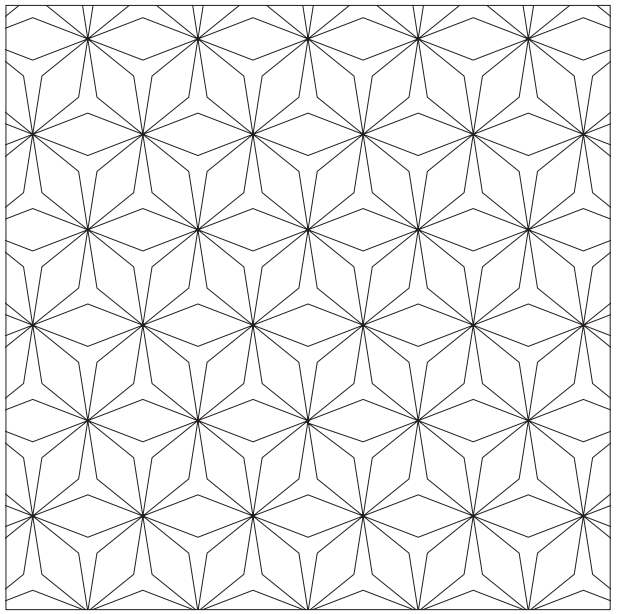
Punkt an Kante

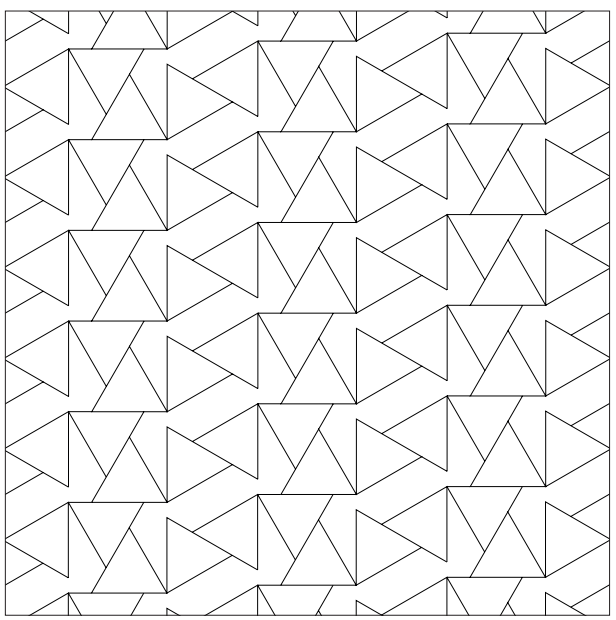


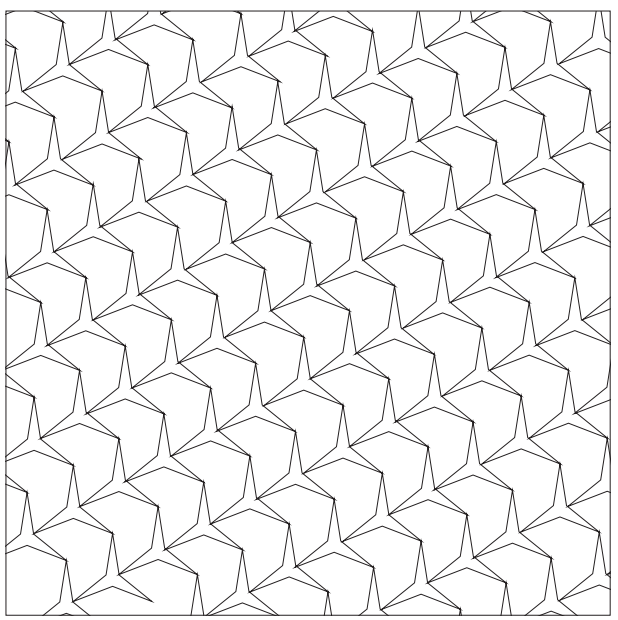
Kante an Kante

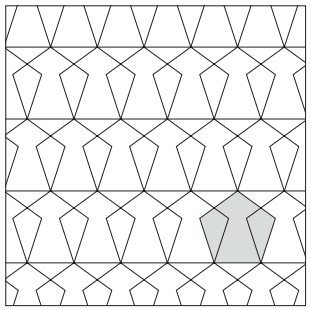


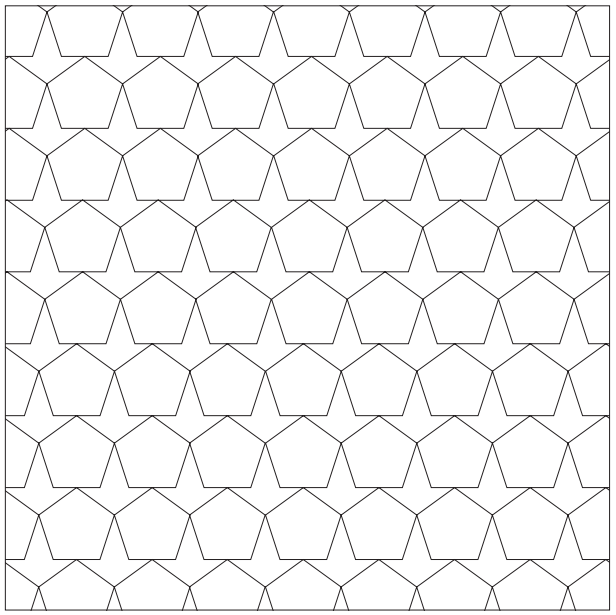


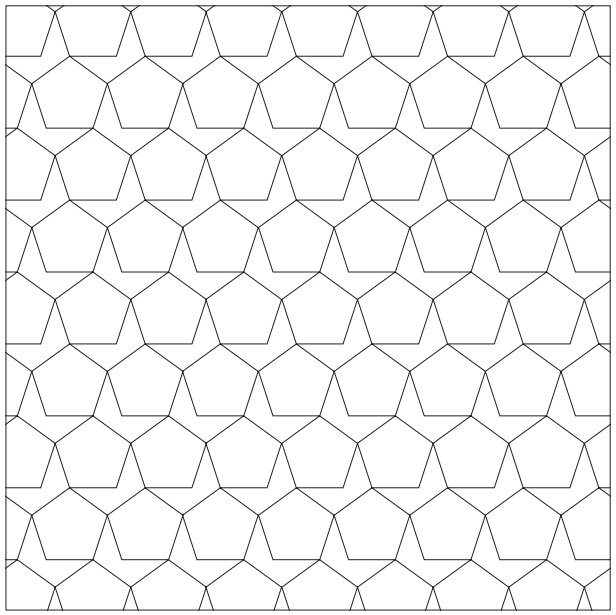








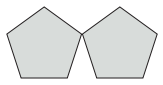




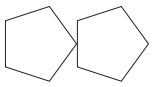
Pentagonal

dezentral
linear
berühren / überschneiden

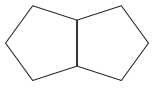
Punkt an Punkt

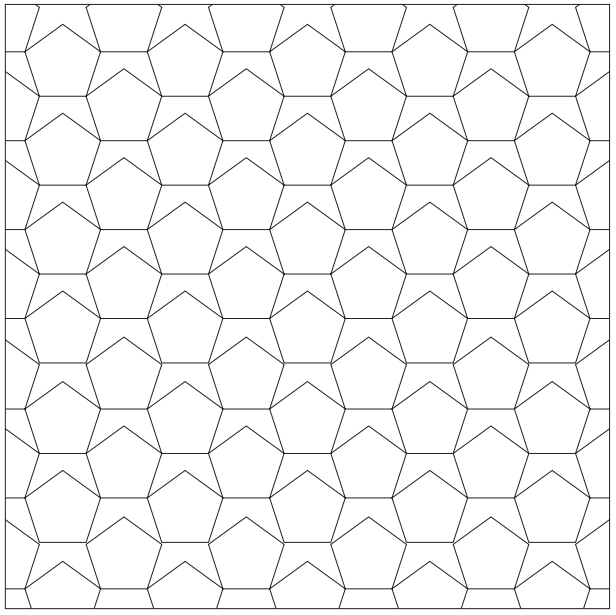


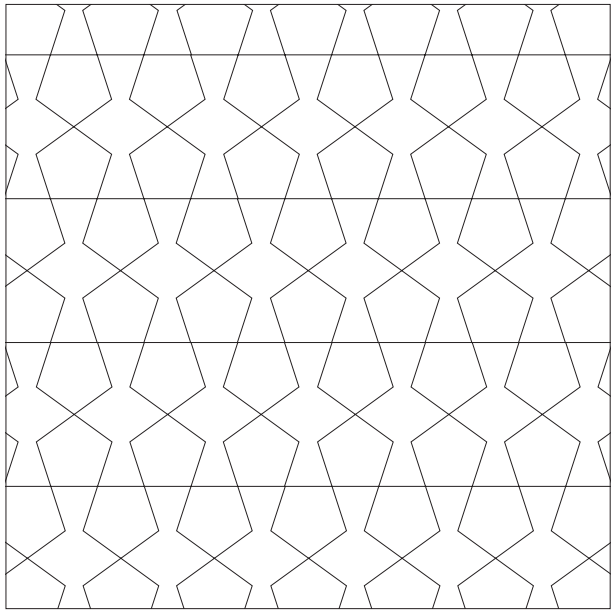
Punkt an Kante

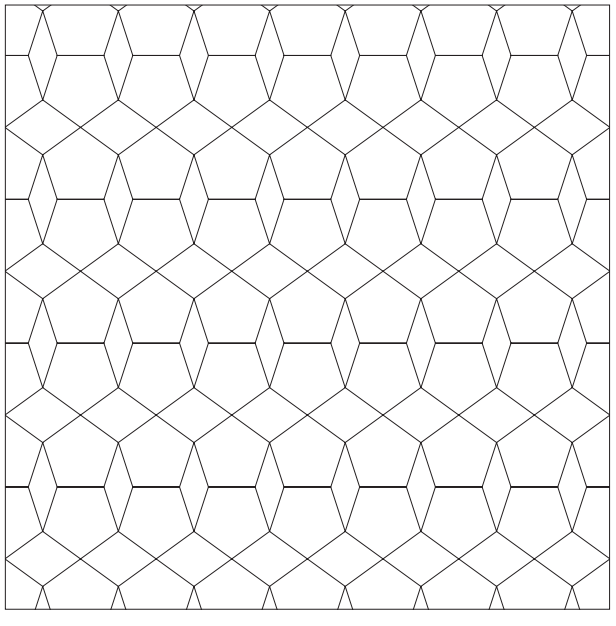


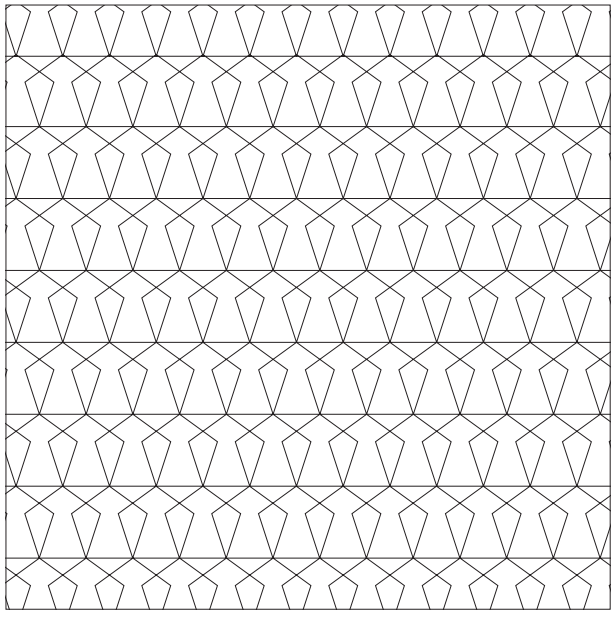
Kante an Kante

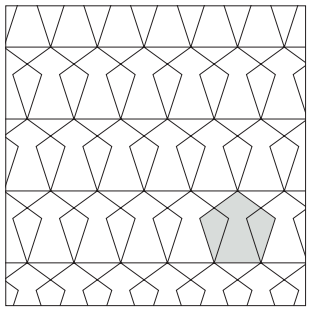


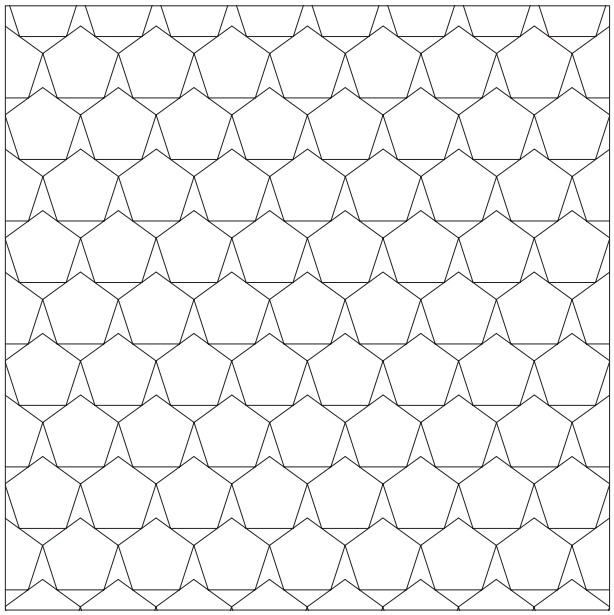


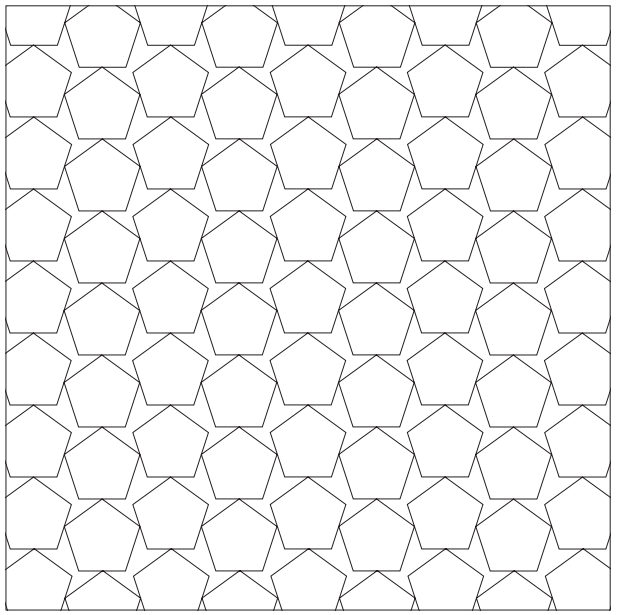








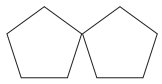




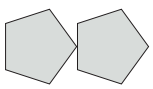
Pentagonal

dezentral
linear
berühren / überschneiden

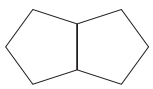
Punkt an Punkt

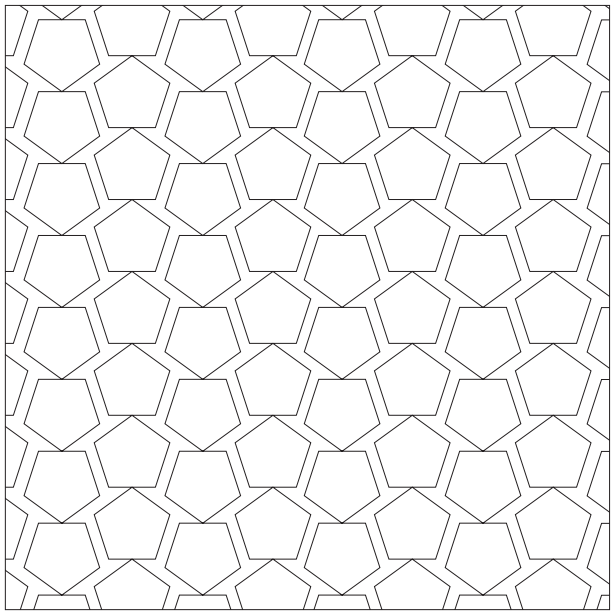


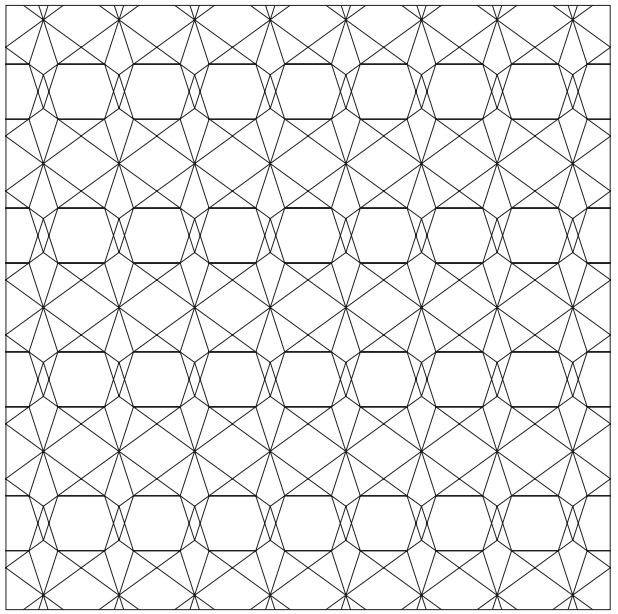
Punkt an Kante

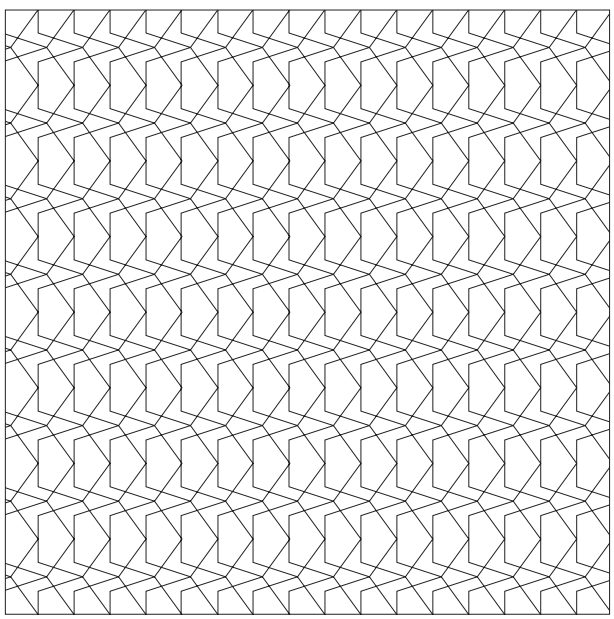


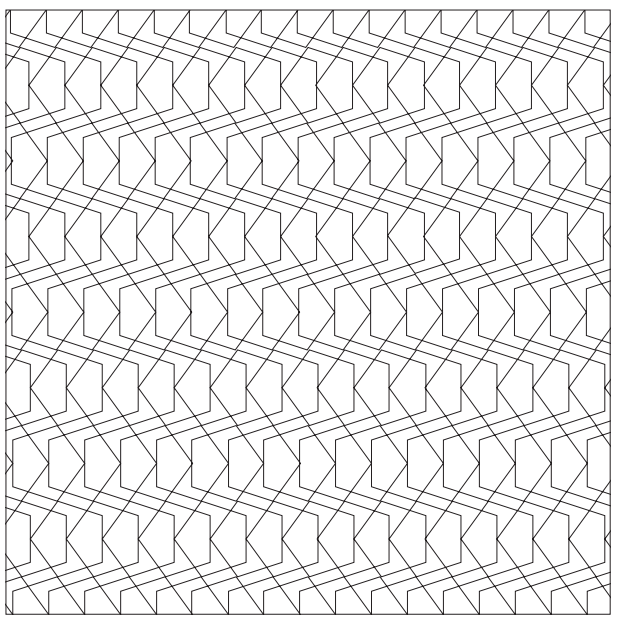
Kante an Kante

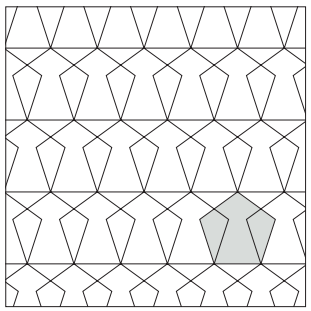


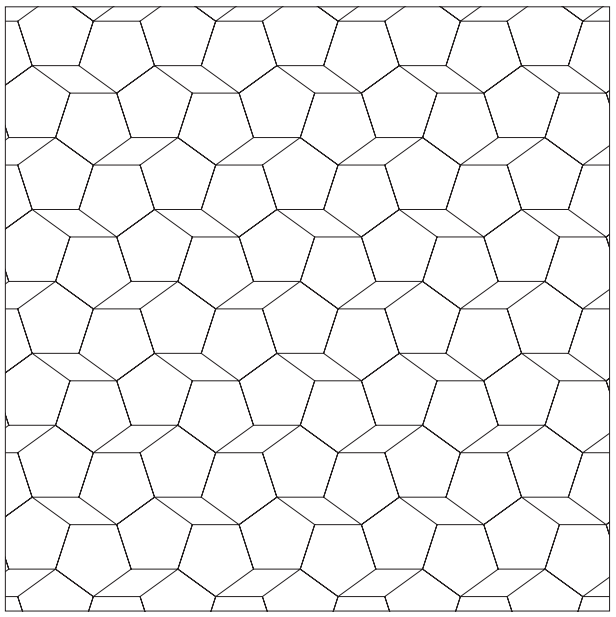


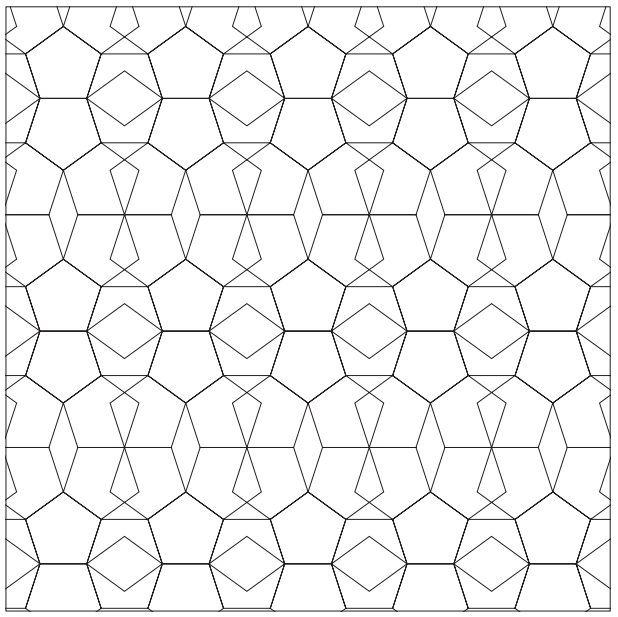








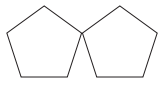




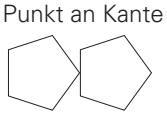
Pentagonal

dezentral
linear
berühren / überschneiden

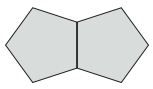
Punkt an Punkt

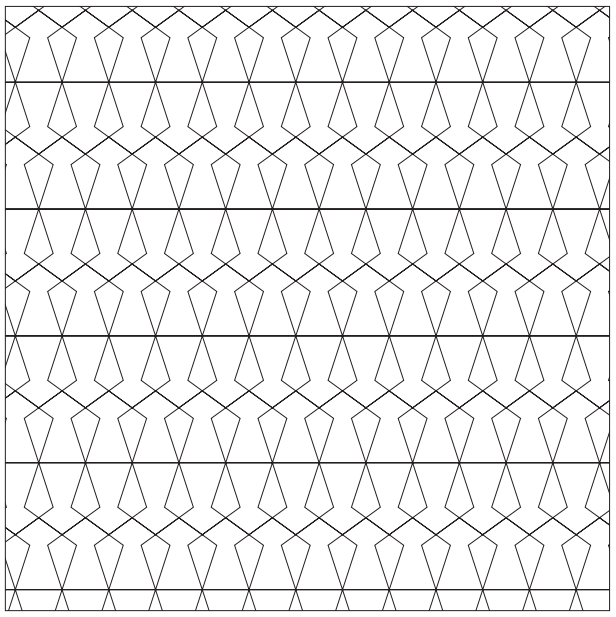


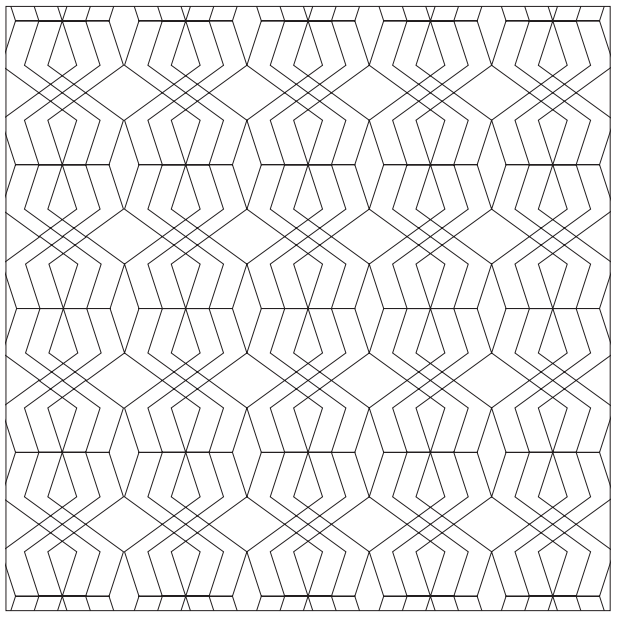
Punkt an Kante

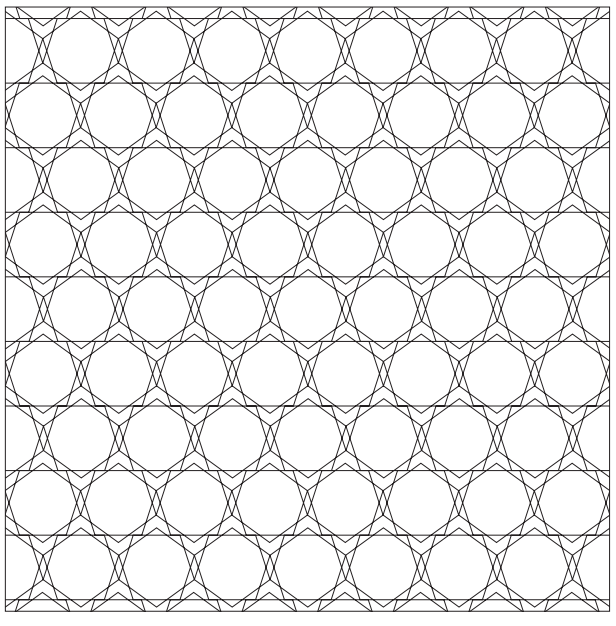


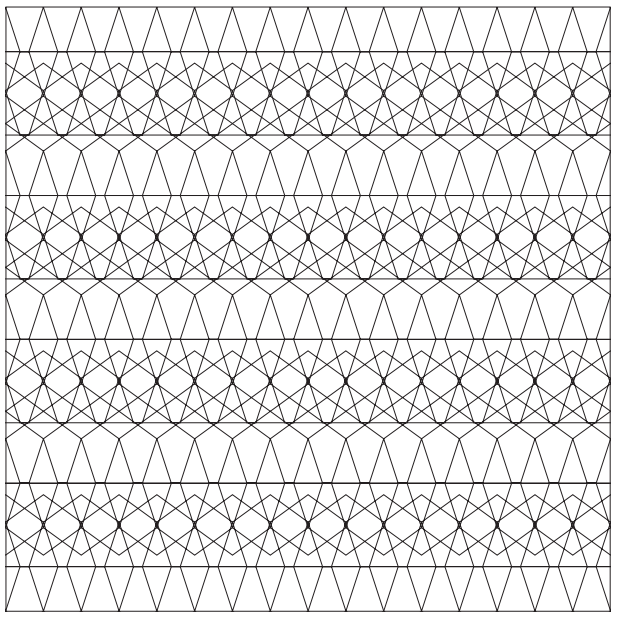
Kante an Kante

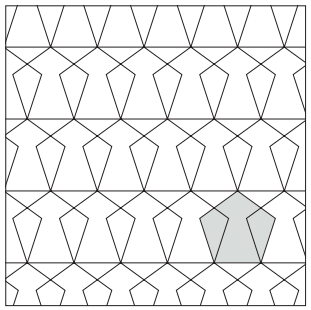


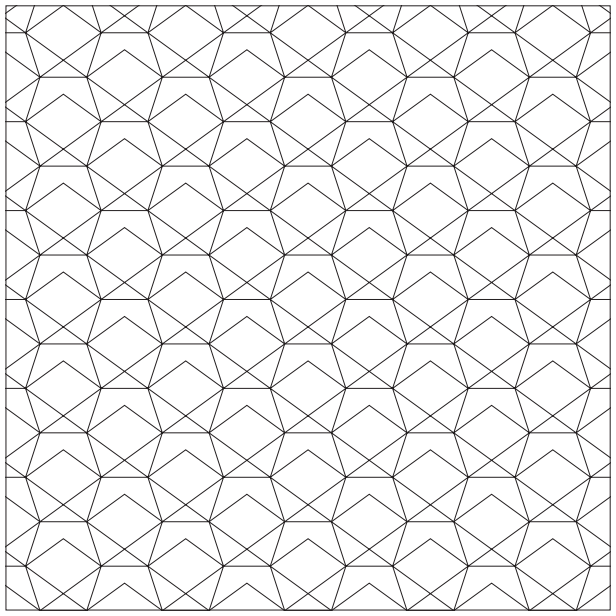








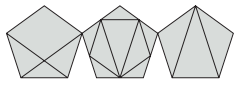


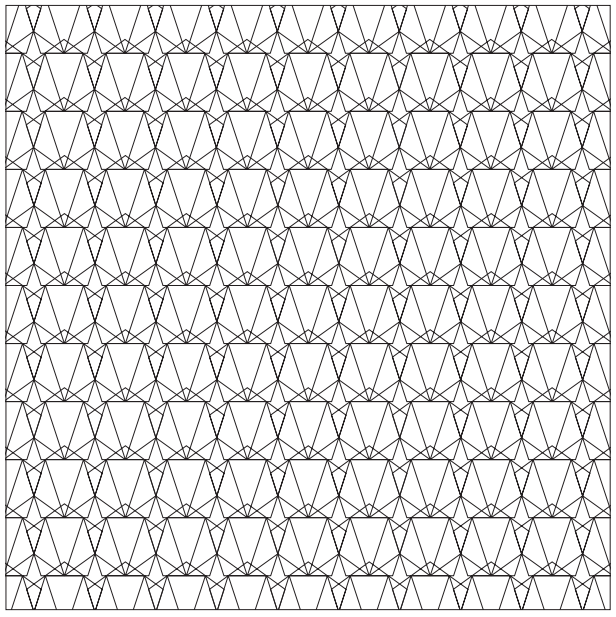


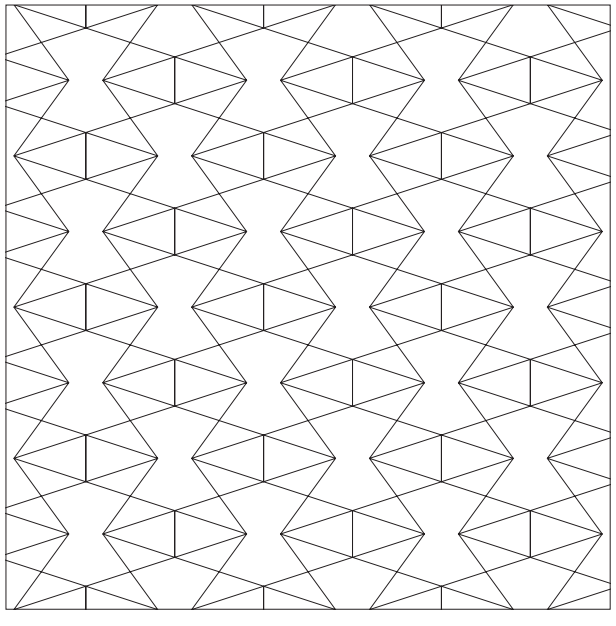
Pentagonal

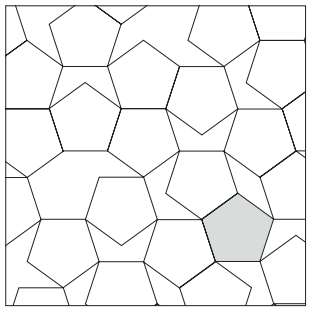
dezentral
linear
berühren / überschneiden

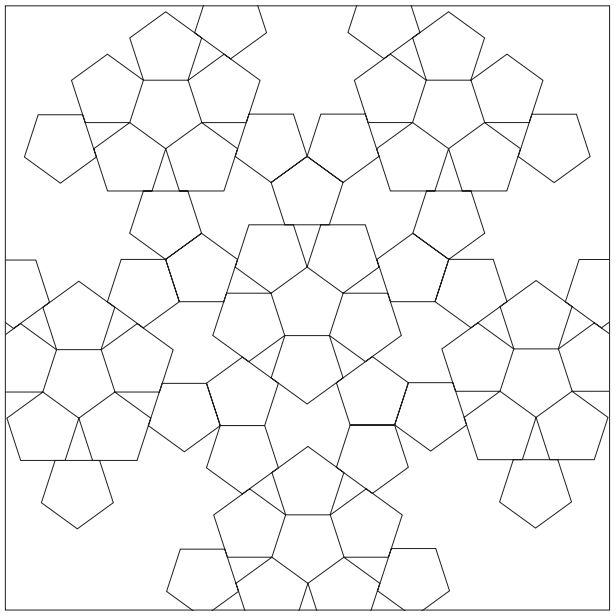
Binnengliederung

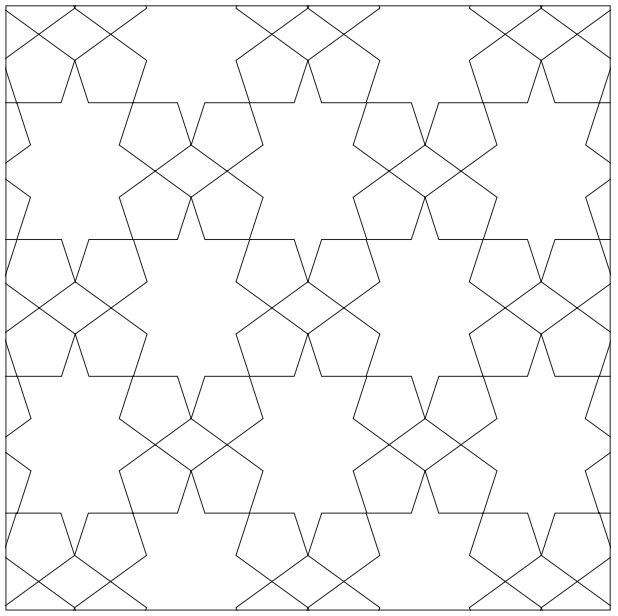








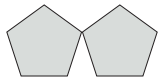




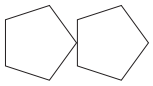
Pentagonal

zentral
berühren / überschneiden

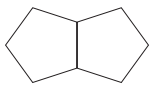
Punkt an Punkt

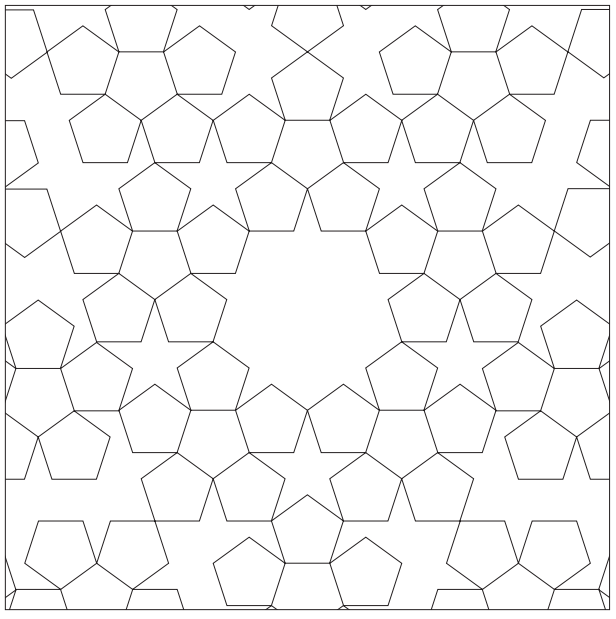


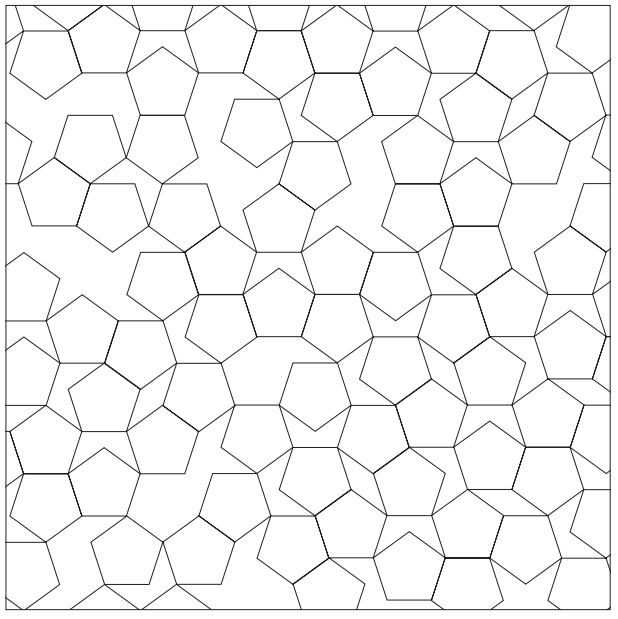
Punkt an Kante

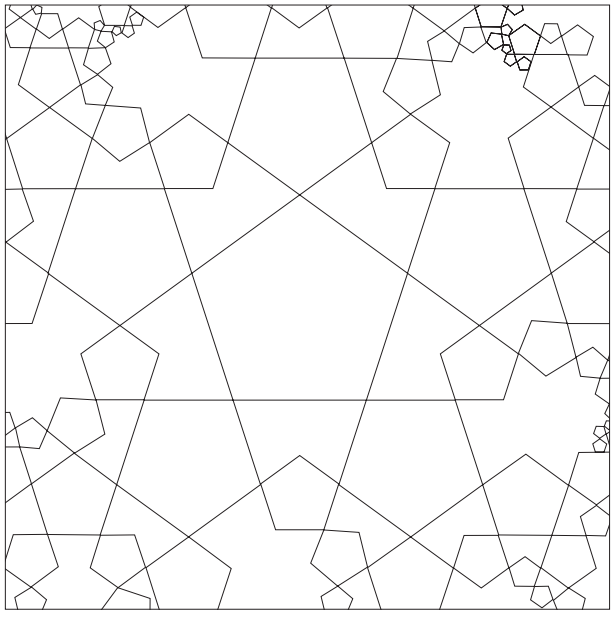


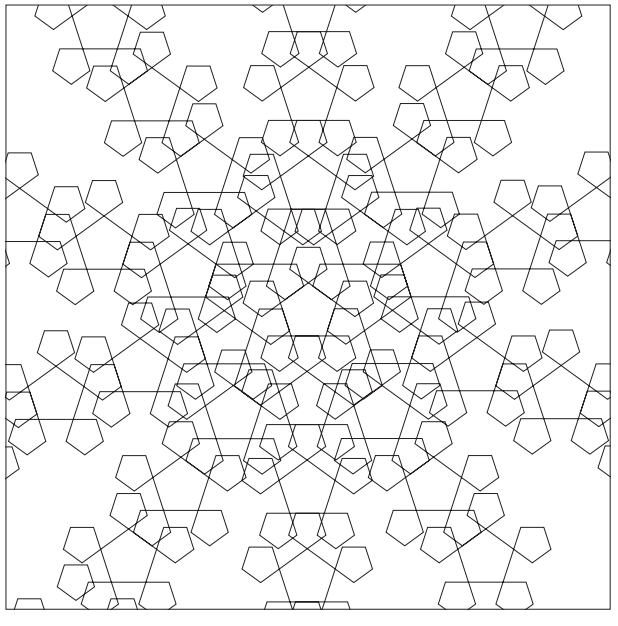
Kante an Kante

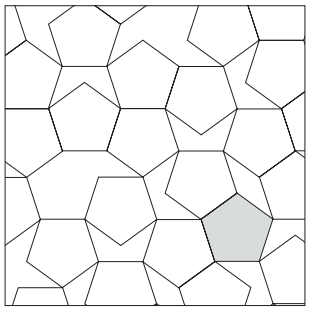


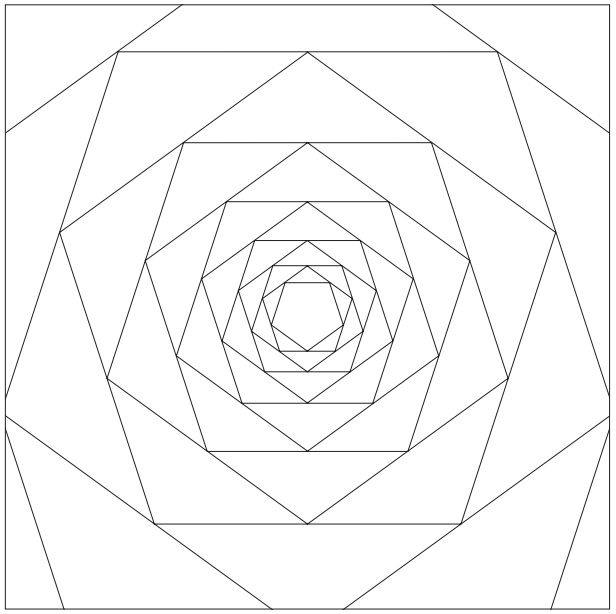


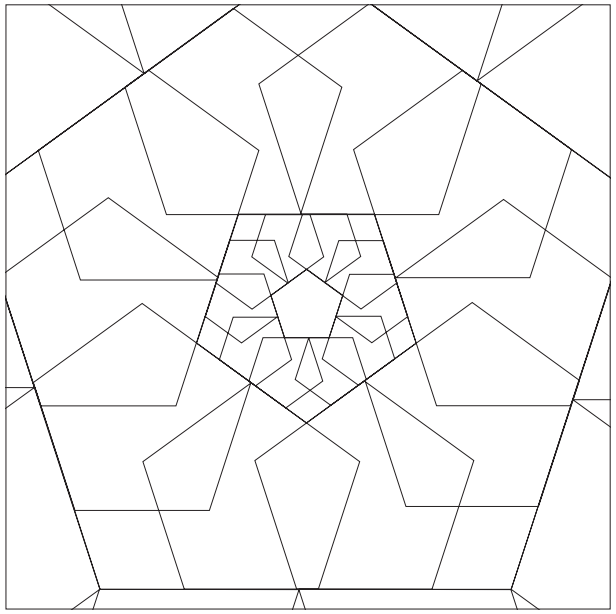








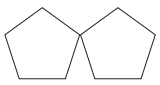




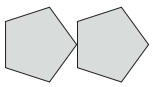
Pentagonal

zentral
berühren / überschneiden

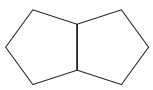
Punkt an Punkt

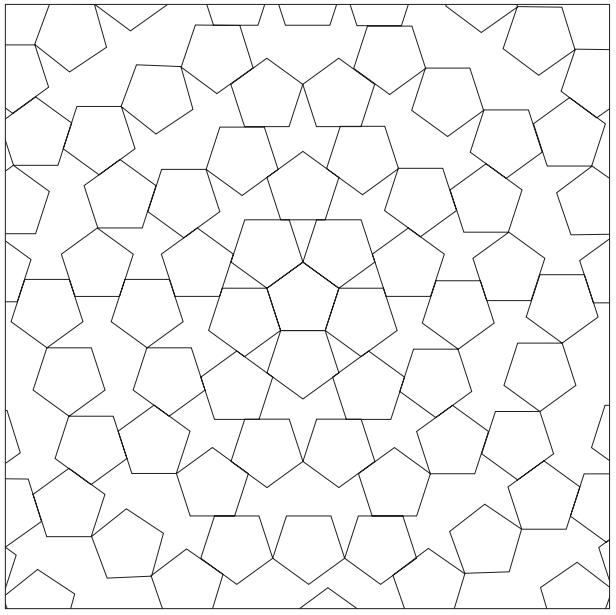


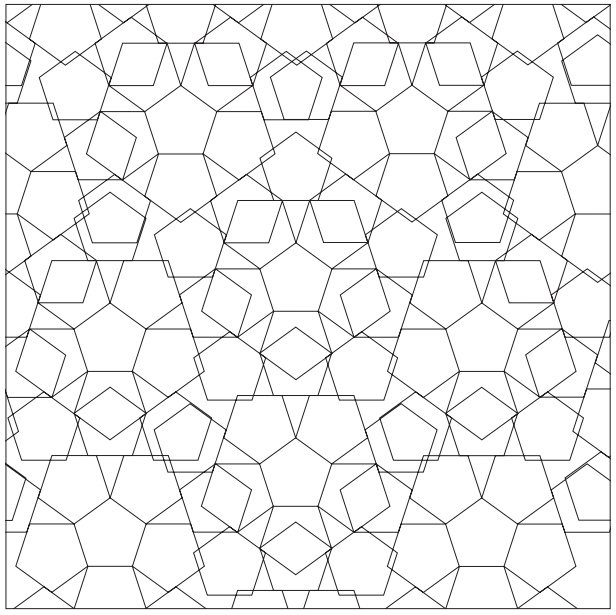
Punkt an Kante

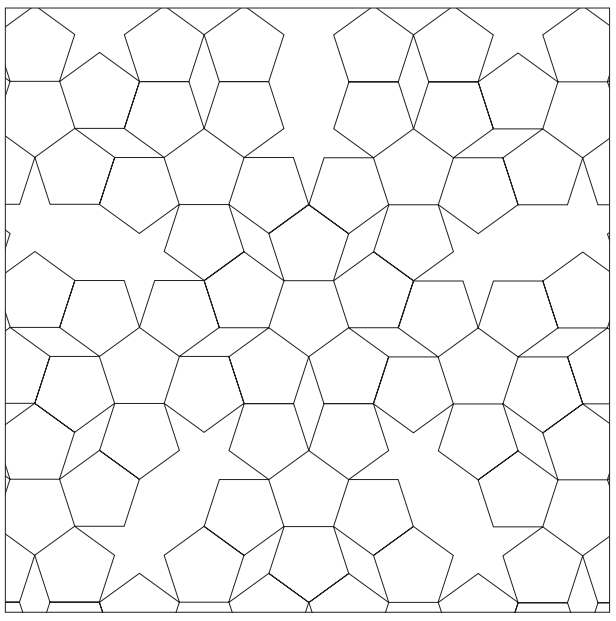


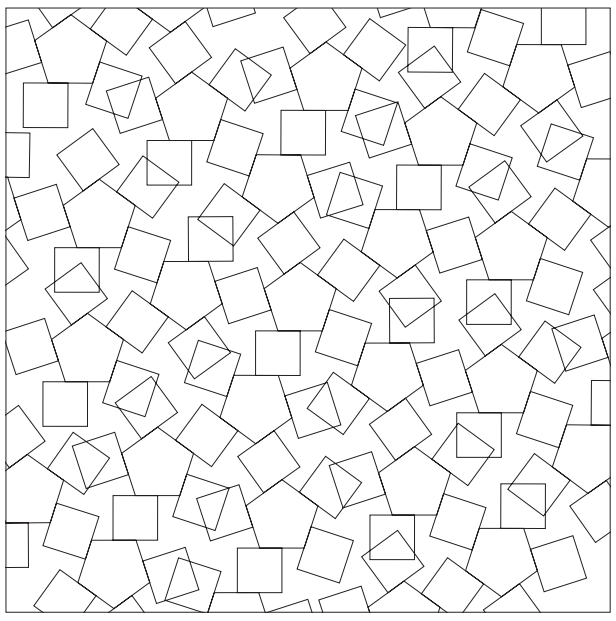
Kante an Kante

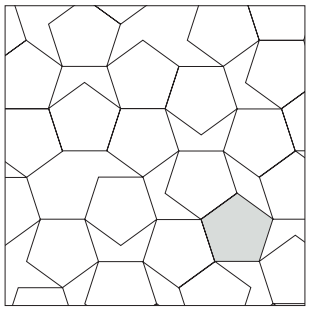








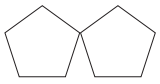




Pentagonal

zentral
berühren/ überschneiden

Punkt an Punkt



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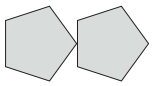

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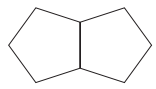
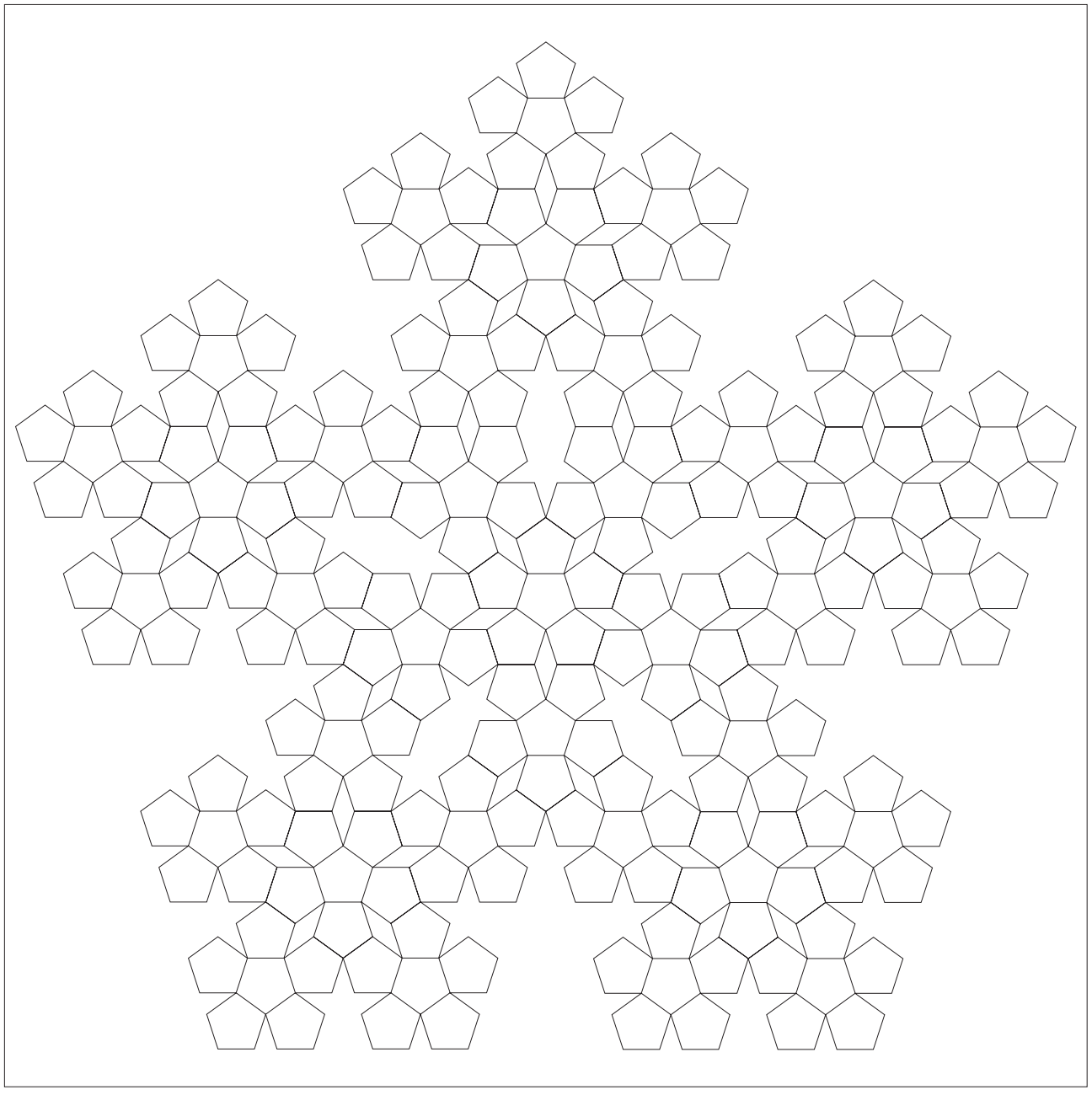
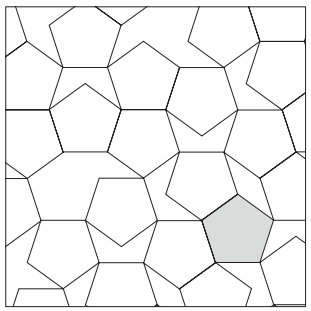


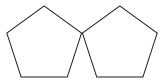




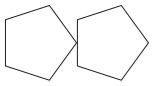
Pentagonal

zentral
berühren / überschneiden

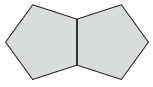
Punkt an Punkt

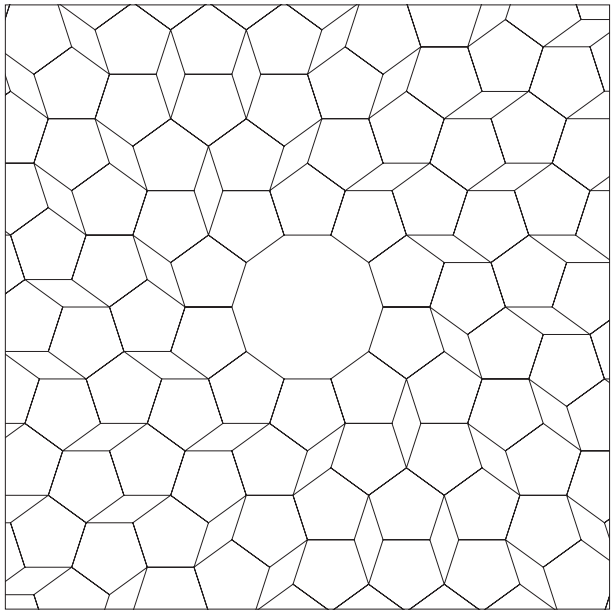


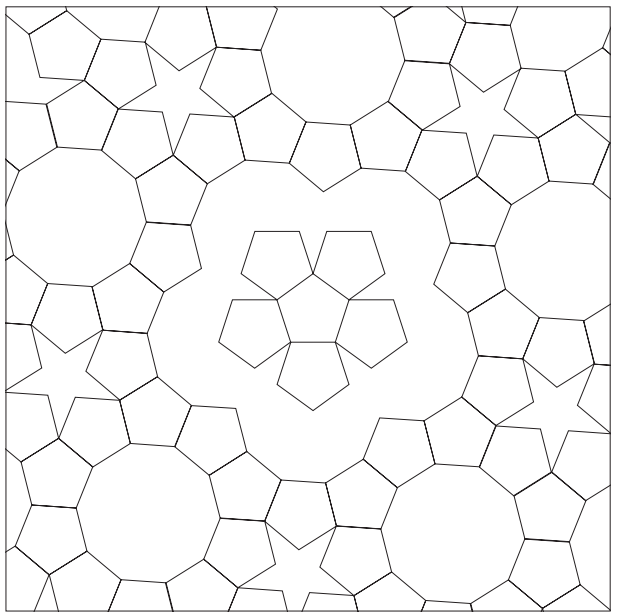
Punkt an Kante

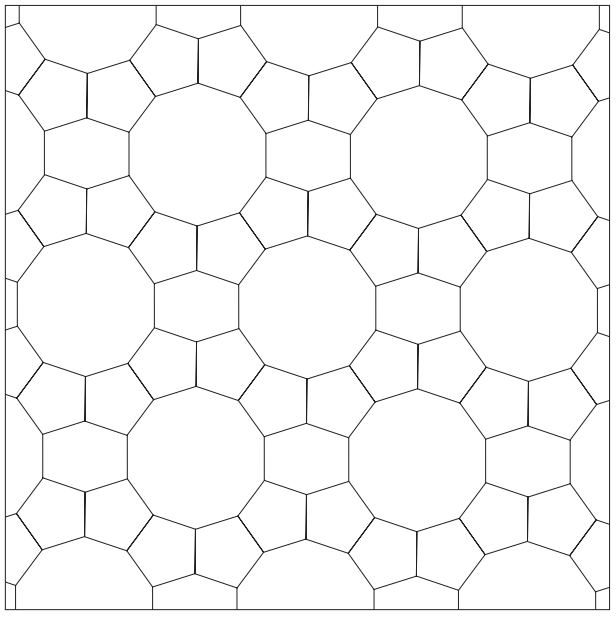


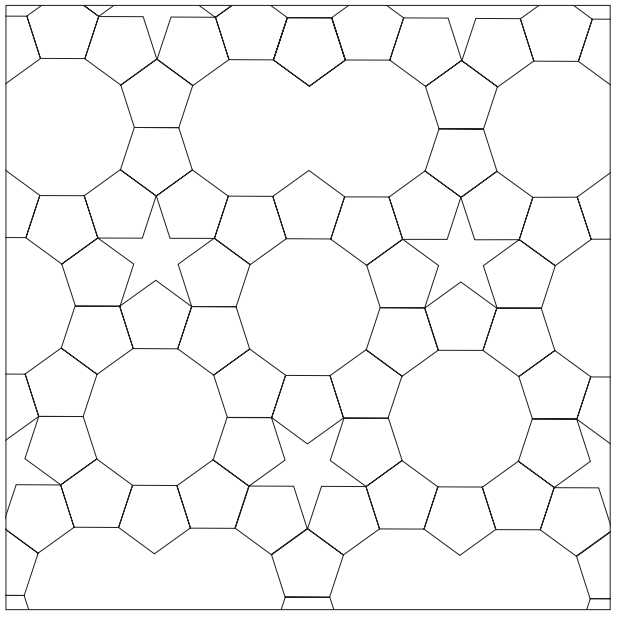
Kante an Kante

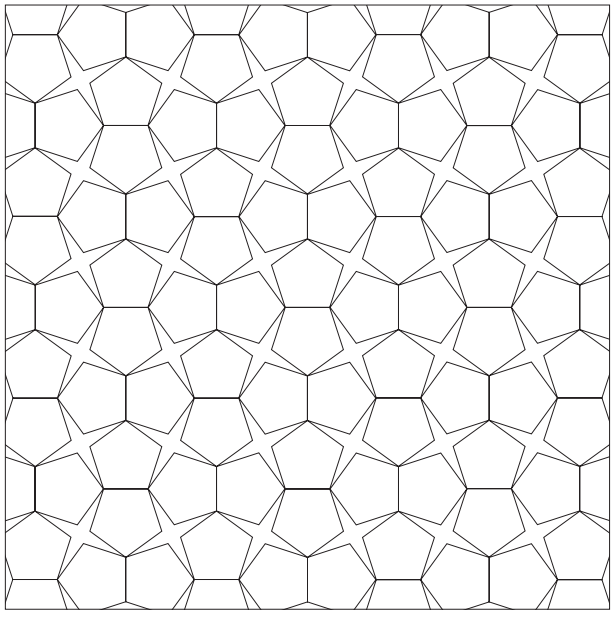


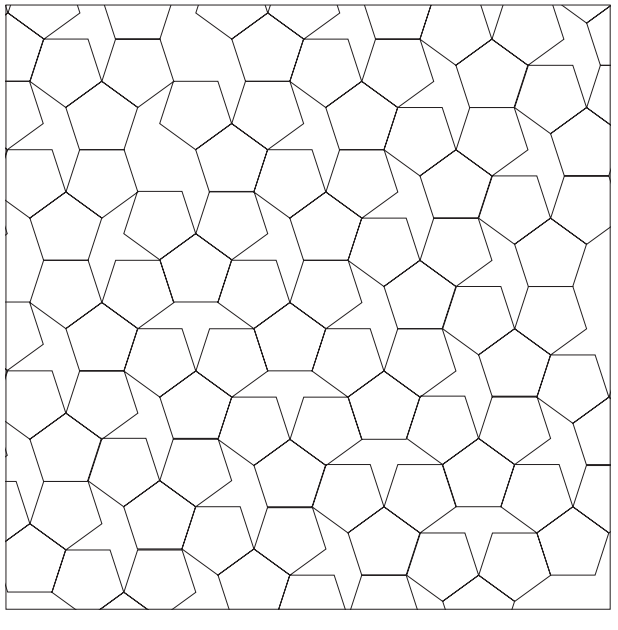


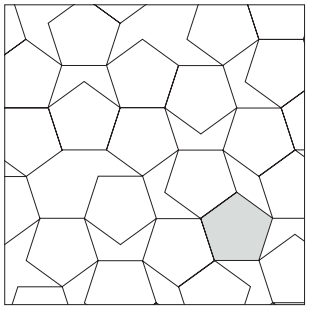


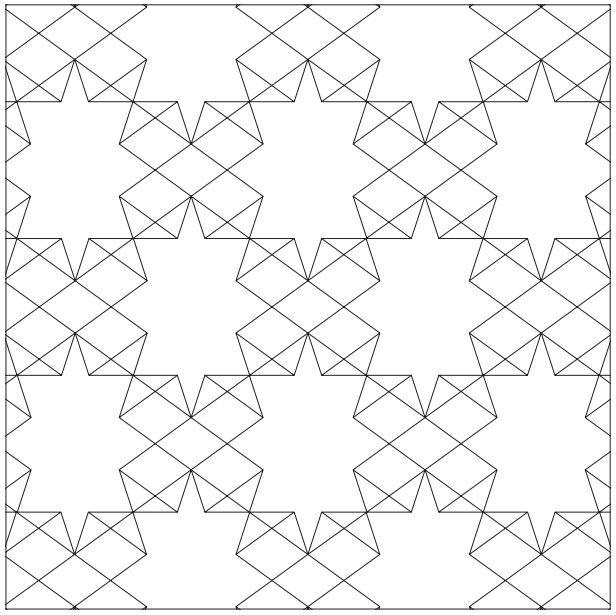








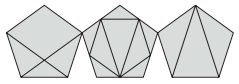


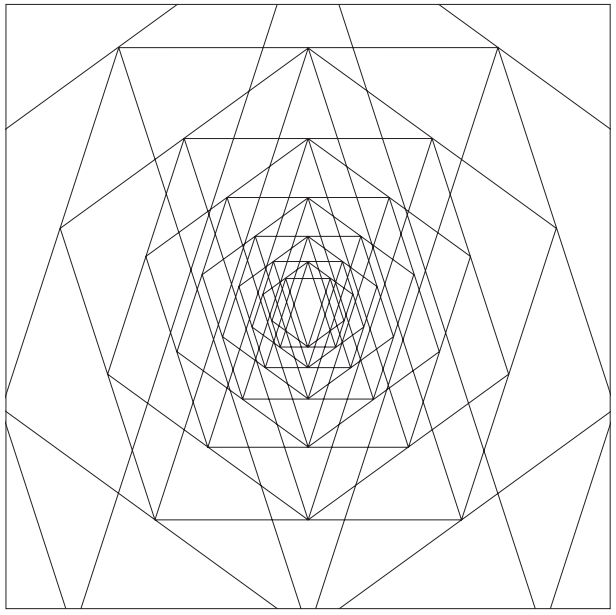


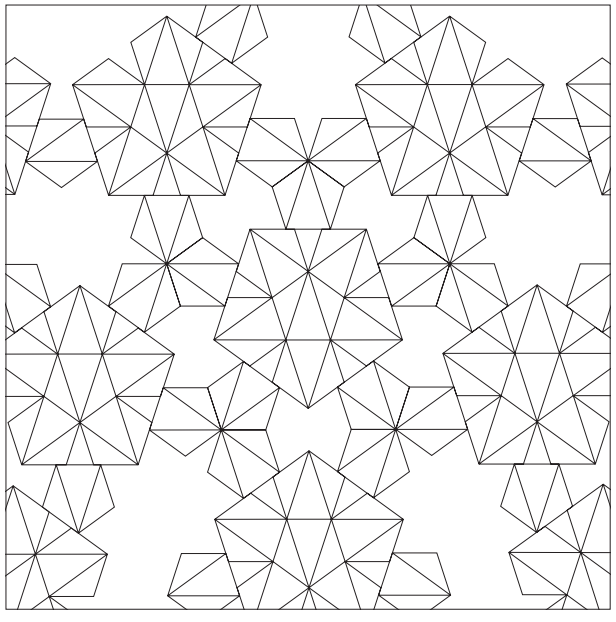
Pentagonal

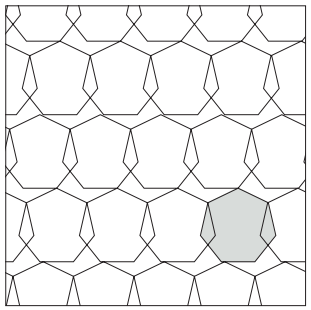
zentral
berühren / überschneiden

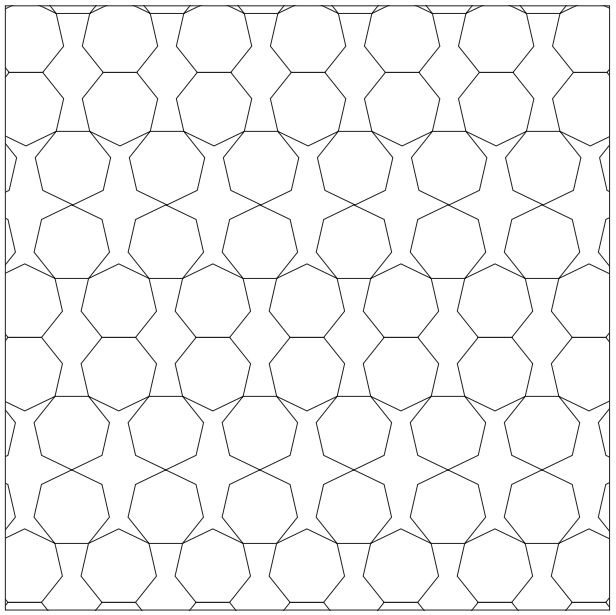
Binnengliederung

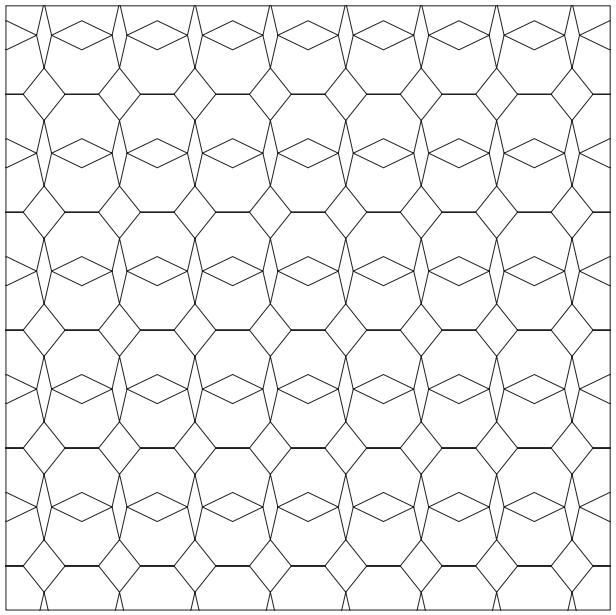








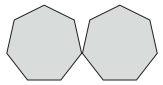




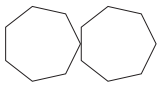
Heptagonal

dezentral
linear
berühren / überschneiden

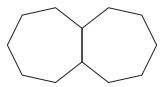
Punkt an Punkt

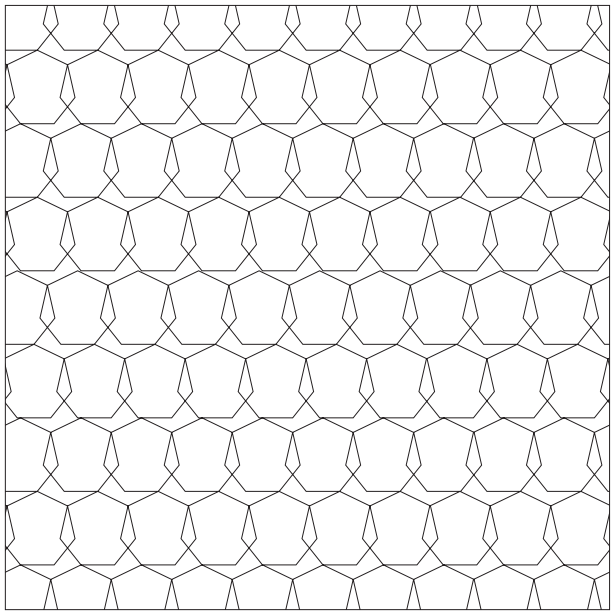


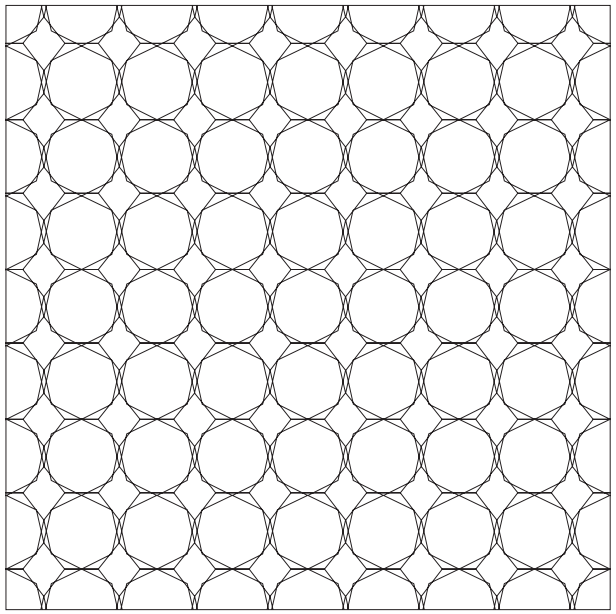
Punkt an Kante

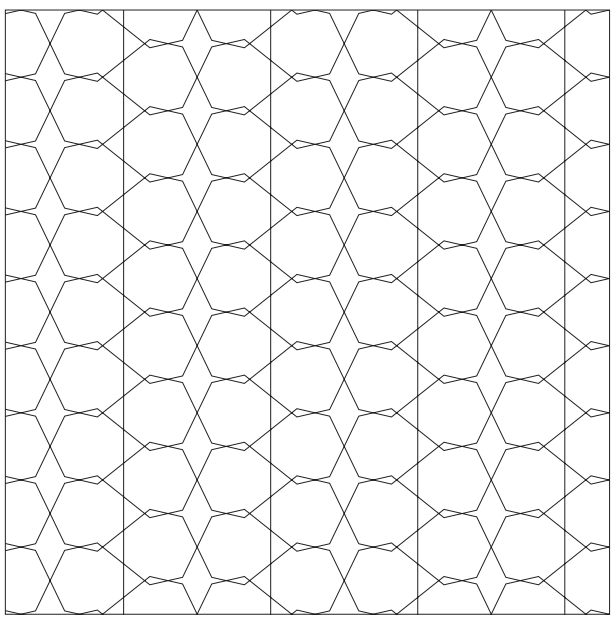


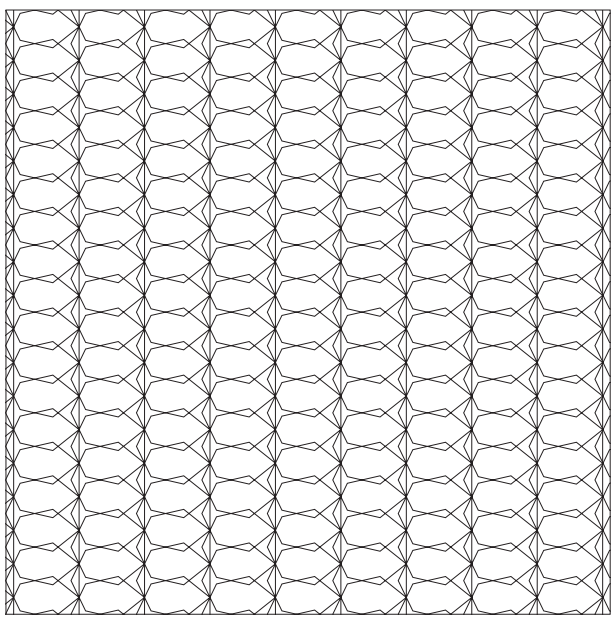
Kante an Kante

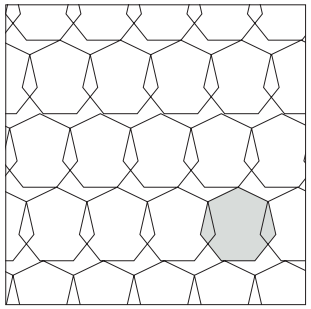








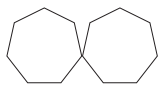




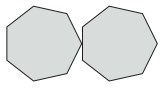
Heptagonal

dezentral
linear
berühren / überschneiden

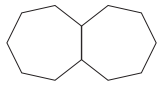
Punkt an Punkt

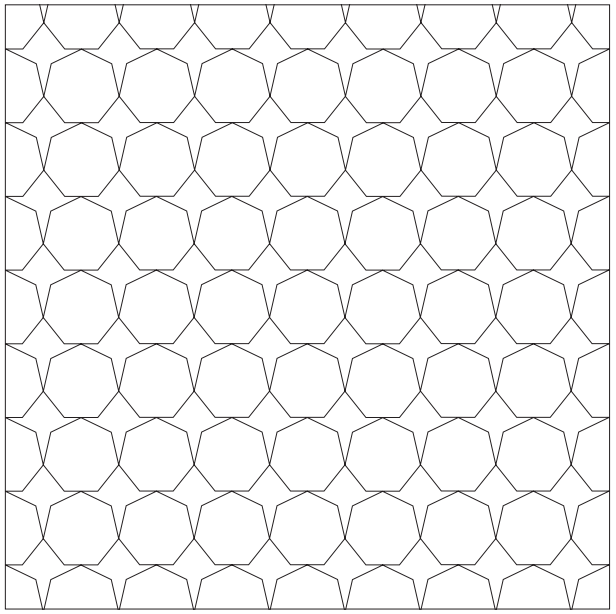


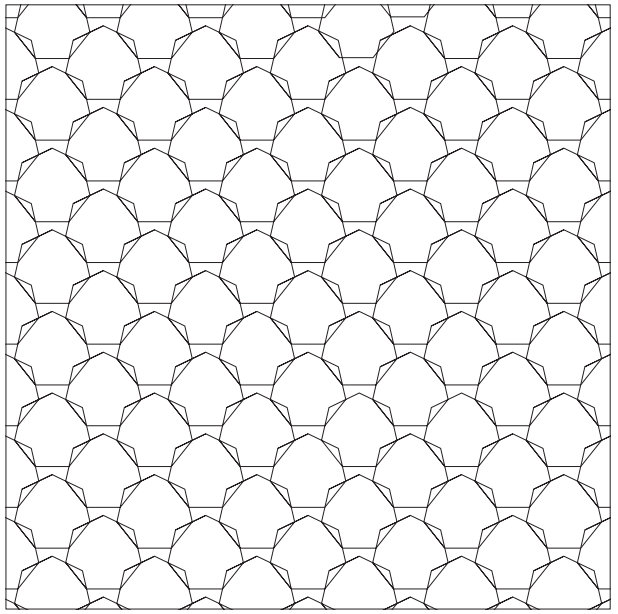
Punkt an Kante

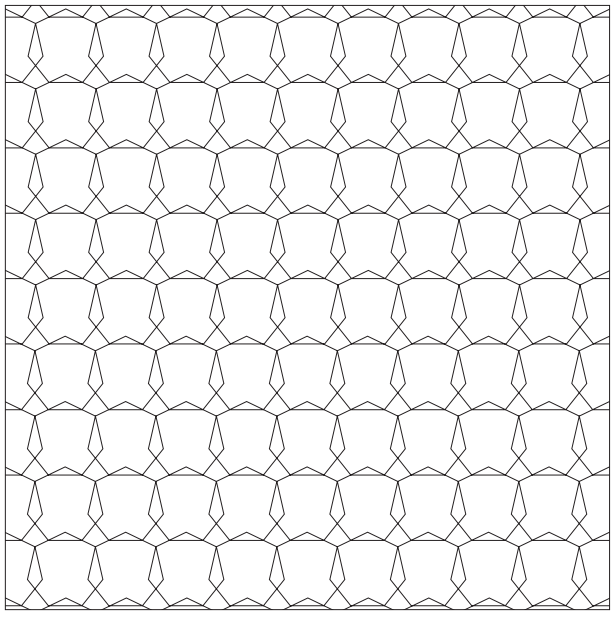


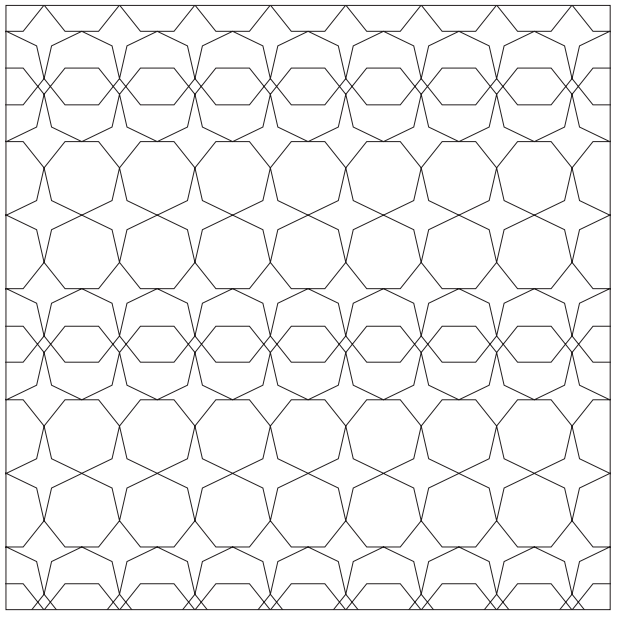
Kante an Kante

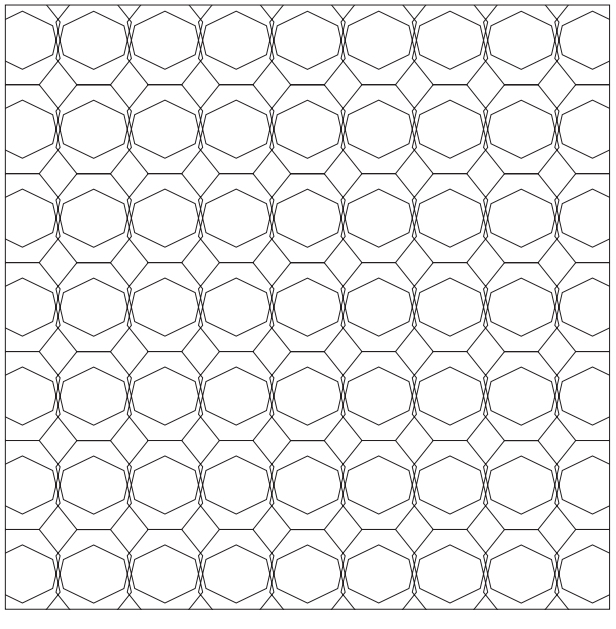


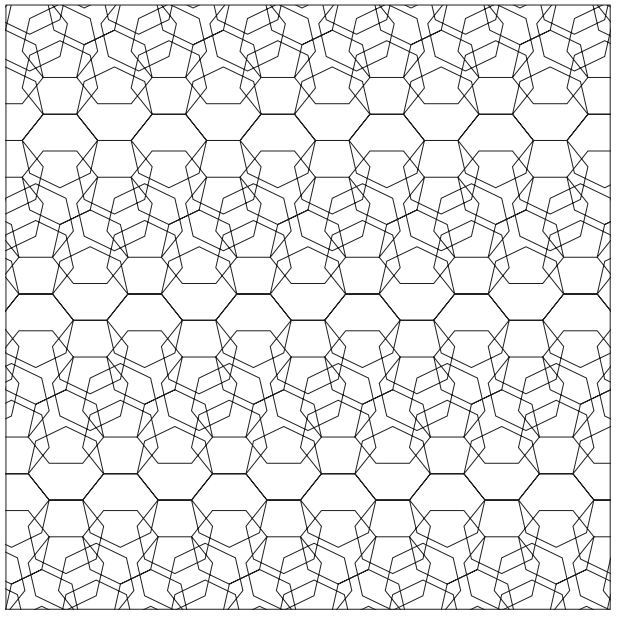


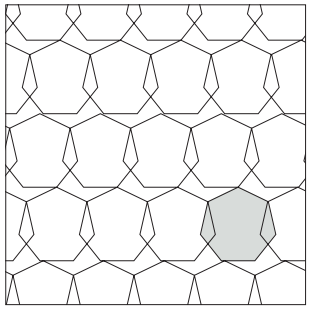








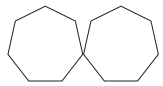




Heptagonal

dezentral
linear
berühren / überschneiden

Punkt an Punkt



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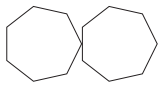
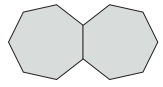
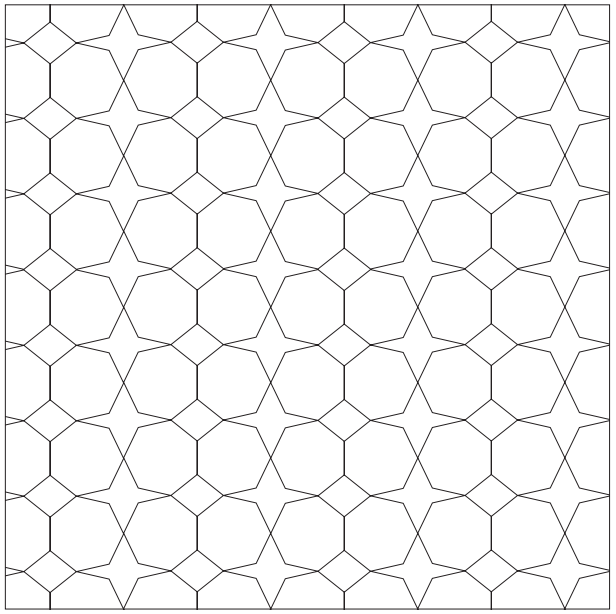
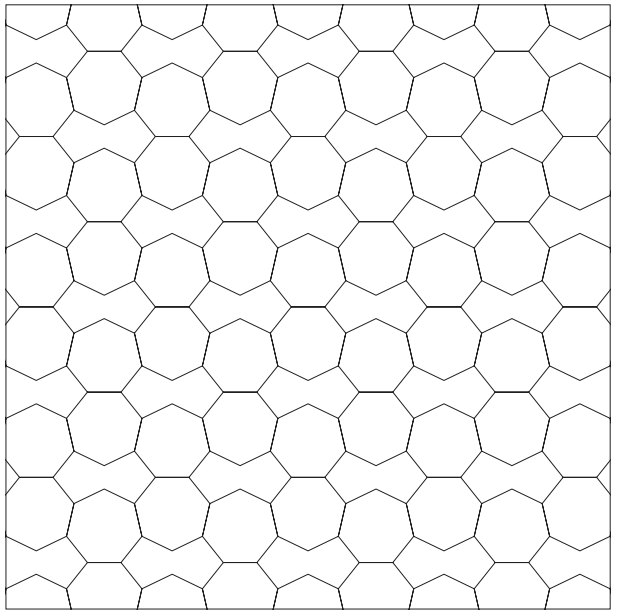
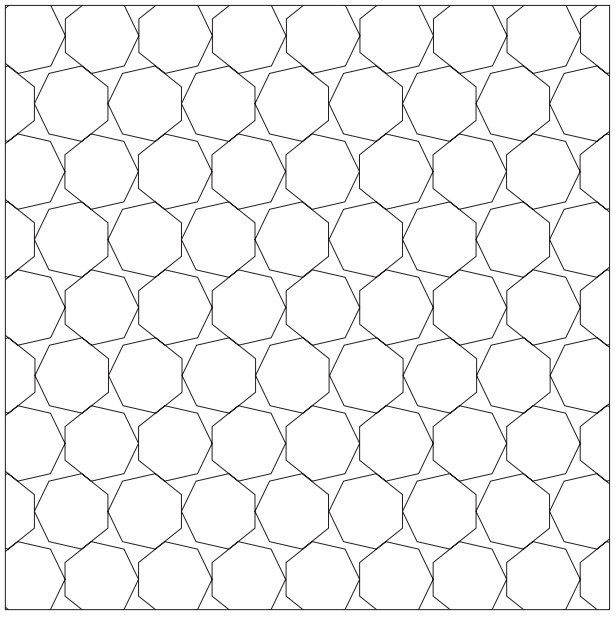


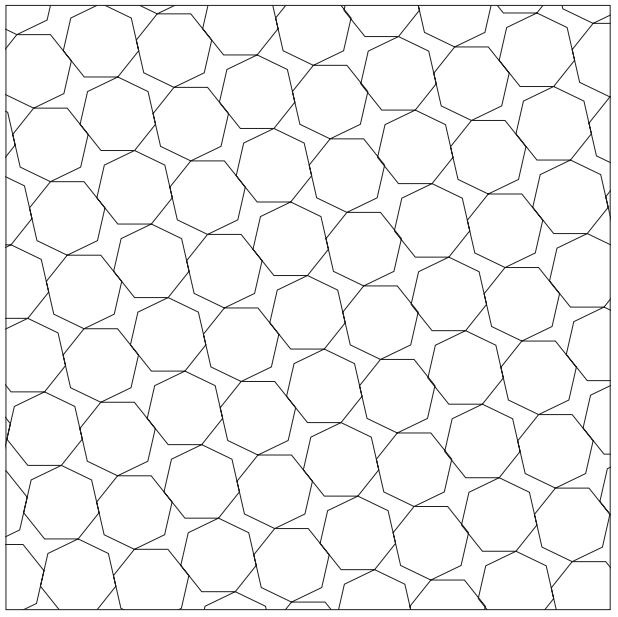
Kante an Kante

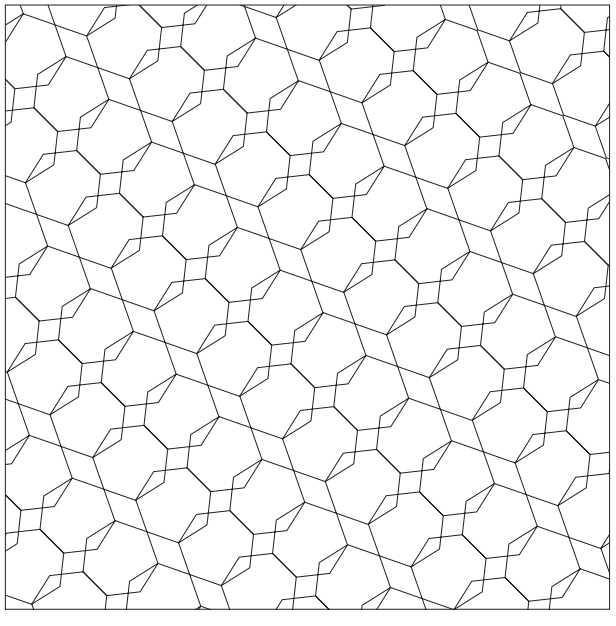


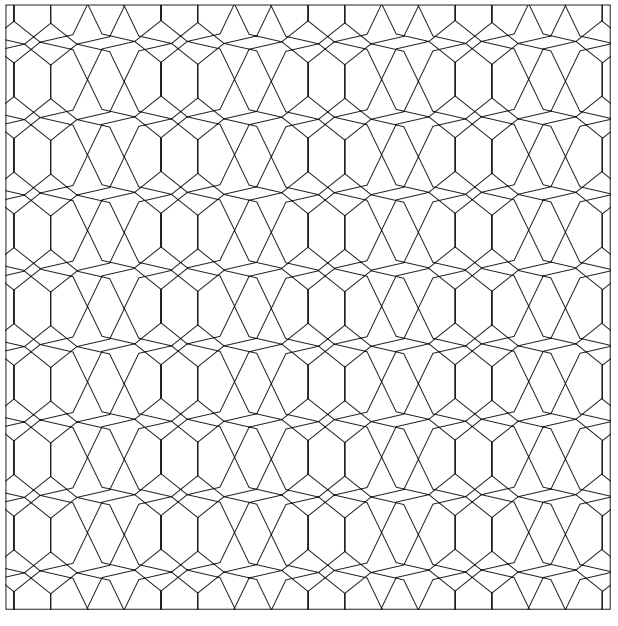


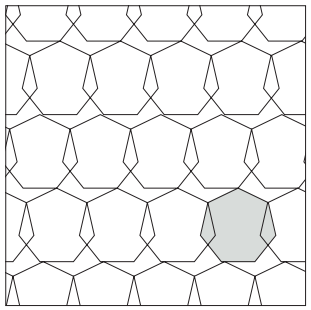


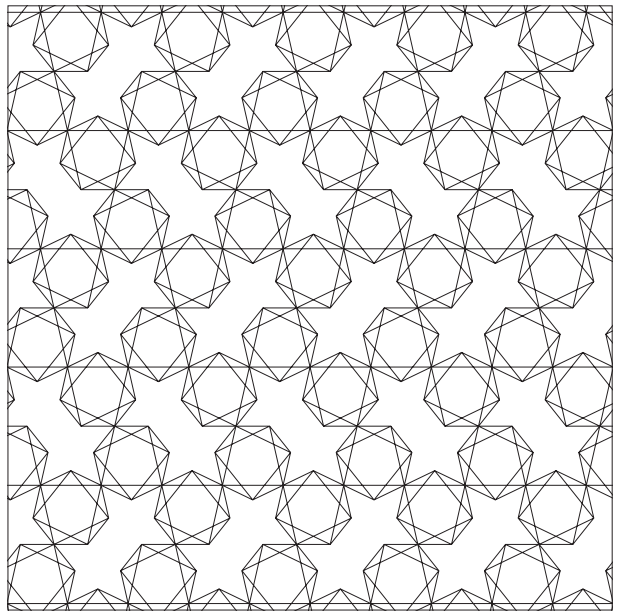








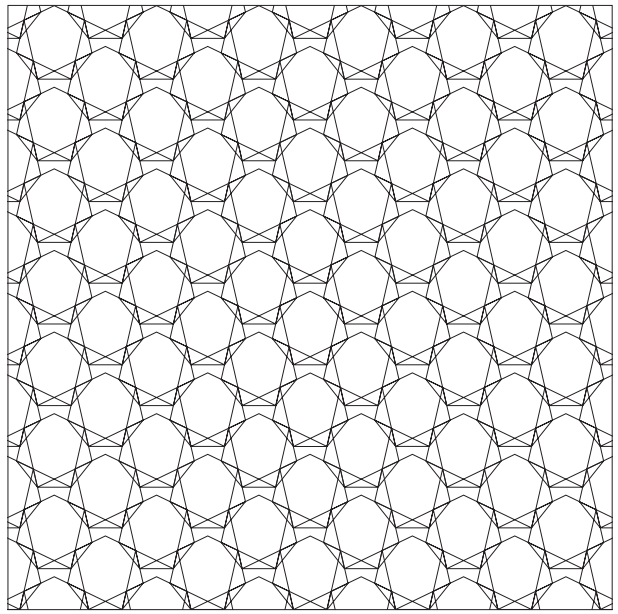


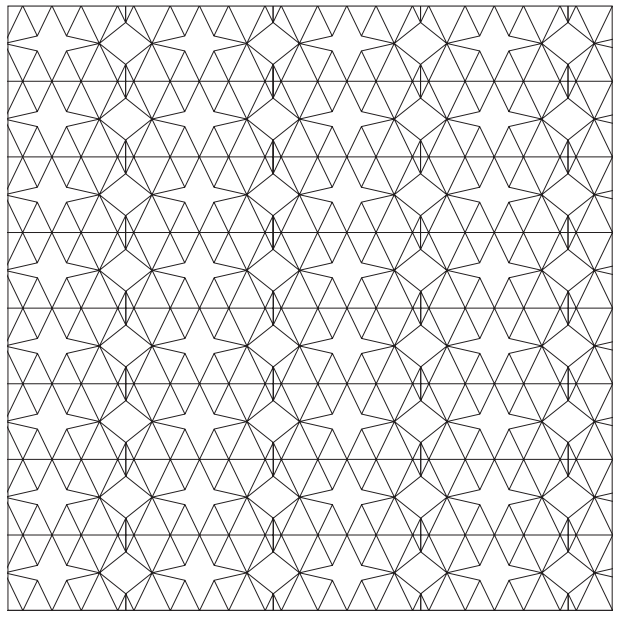


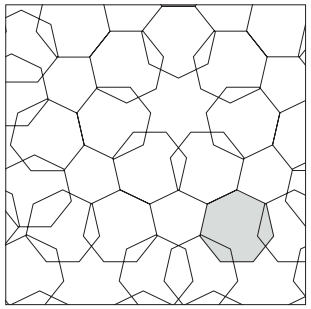
Heptagonal

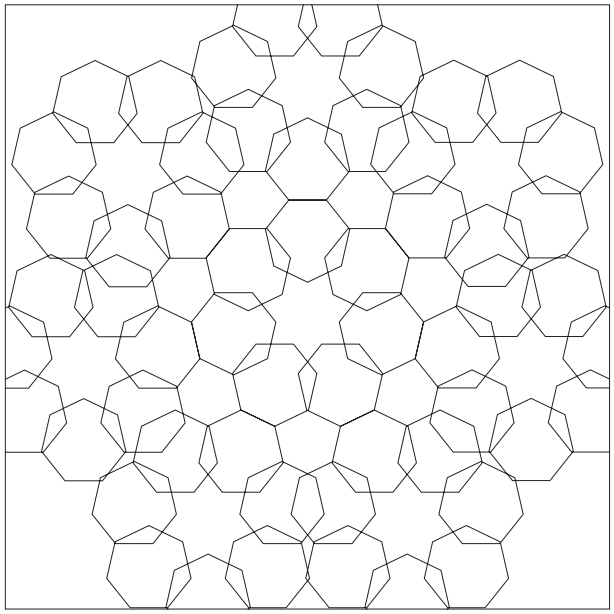
dezentral
berühren / überschneiden

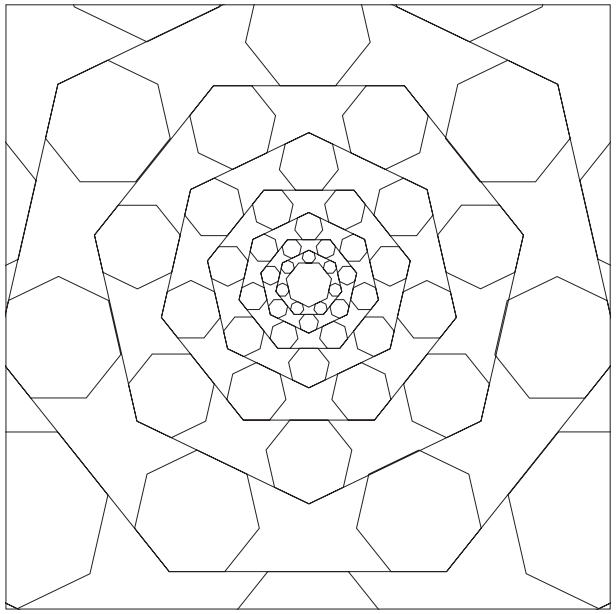
Binnengliederung







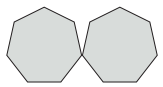




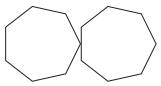
Heptagonal

zentral
berühren / überschneiden

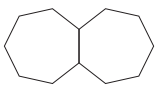
Punkt an Punkt

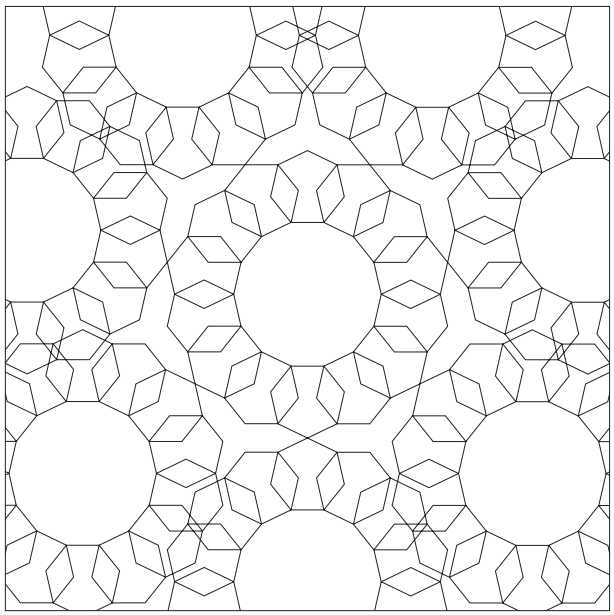


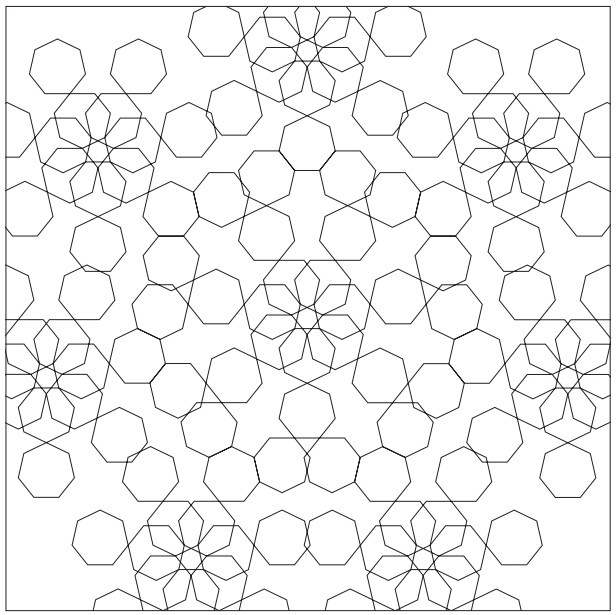
Punkt an Kante

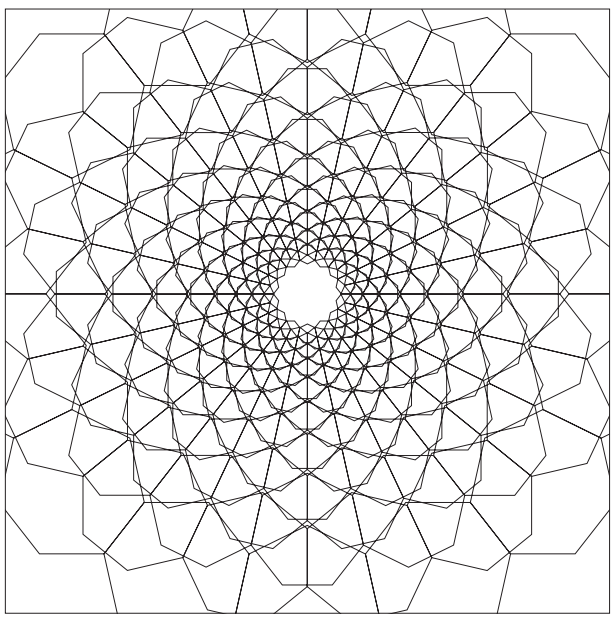


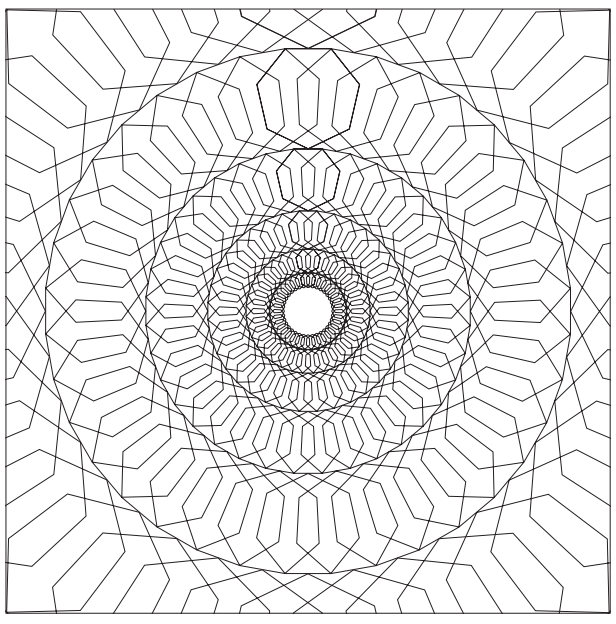
Kante an Kante

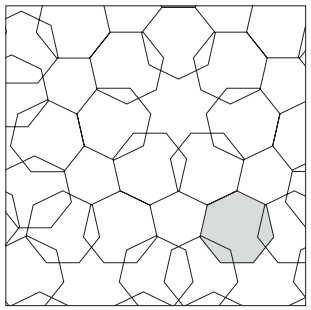


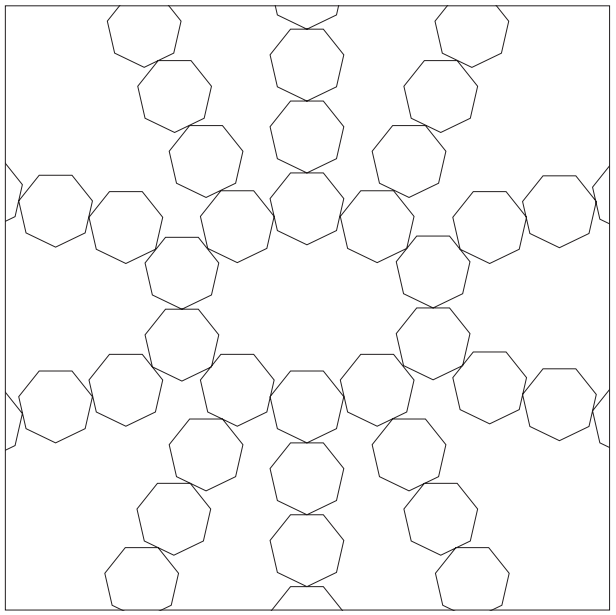


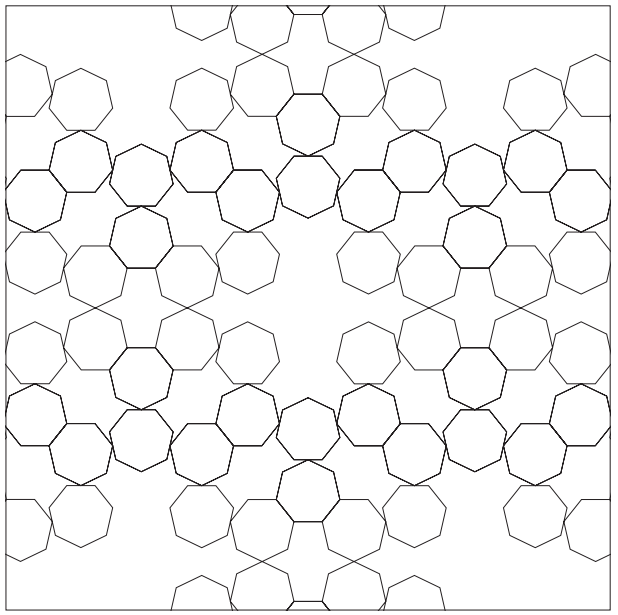








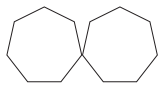




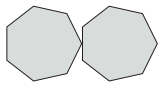
Heptagonal

zentral
berühren / überschneiden

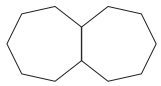
Punkt an Punkt

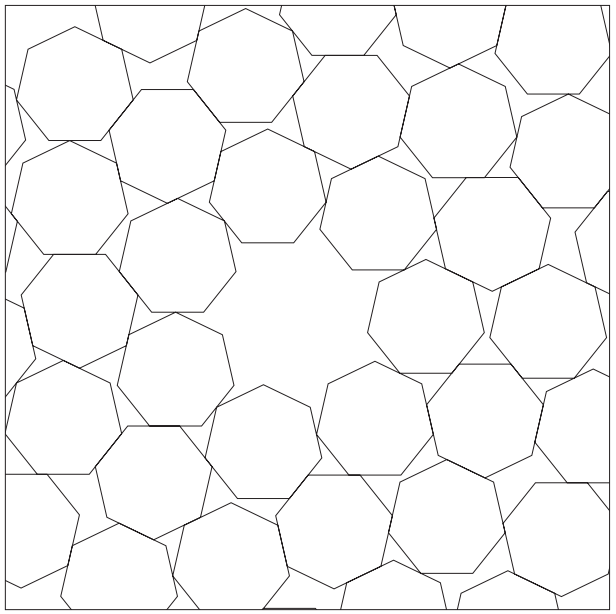


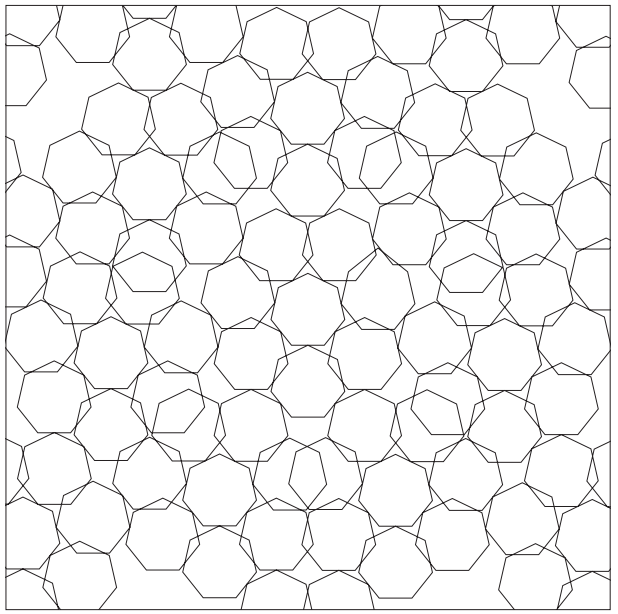
Punkt an Kante

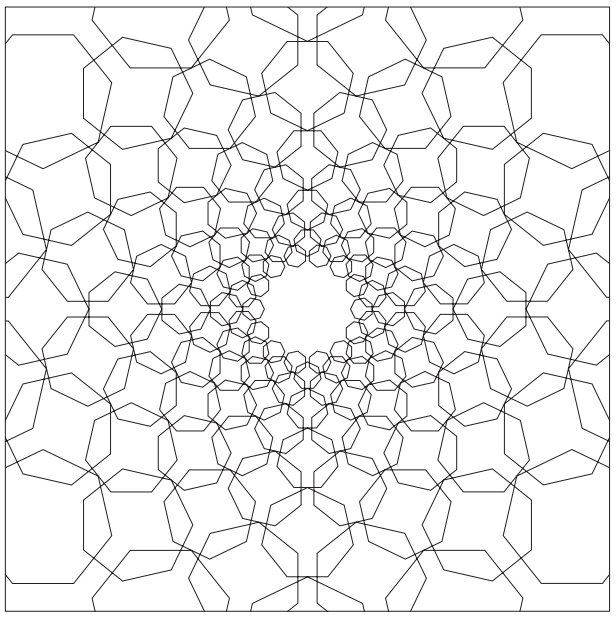


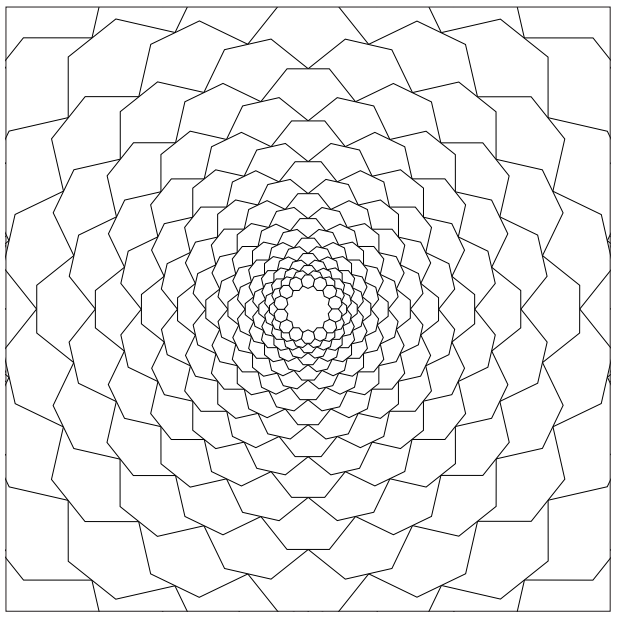
Kante an Kante

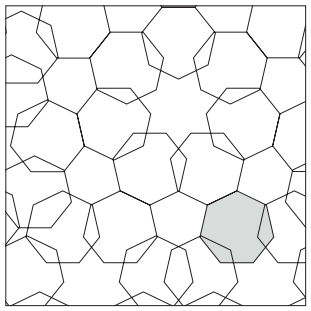








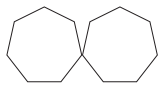




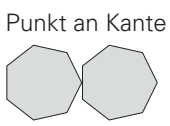
Heptagonal

zentral
berühren/ überschneiden

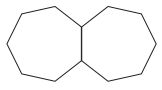
Punkt an Punkt

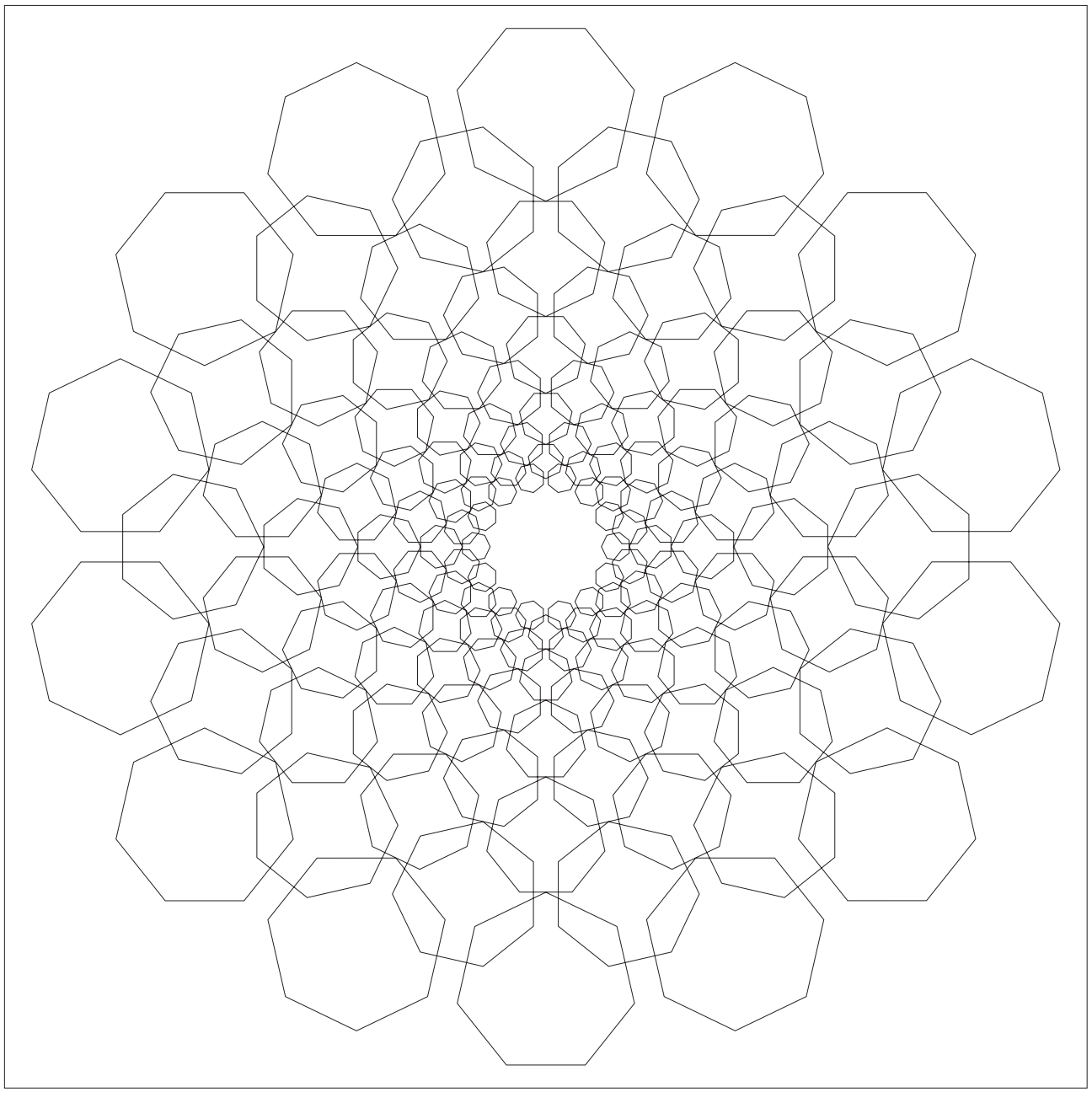


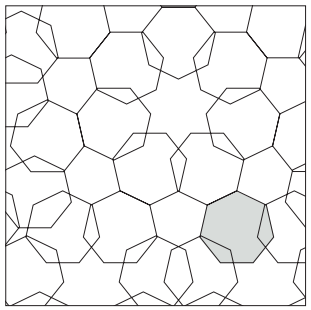
Punkt an Kante

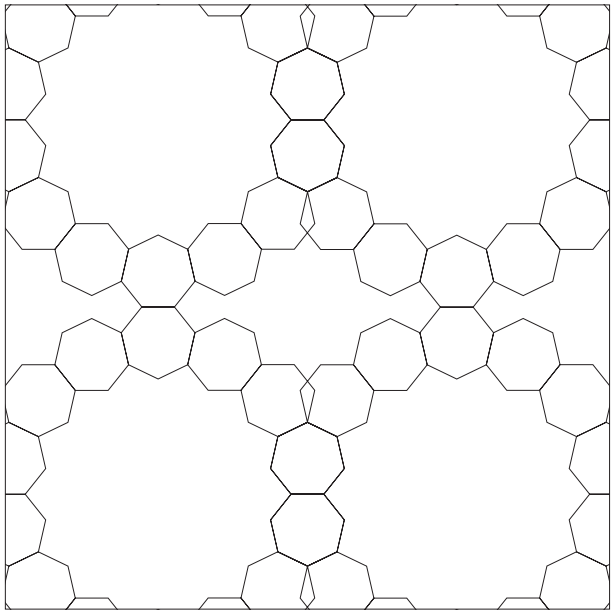


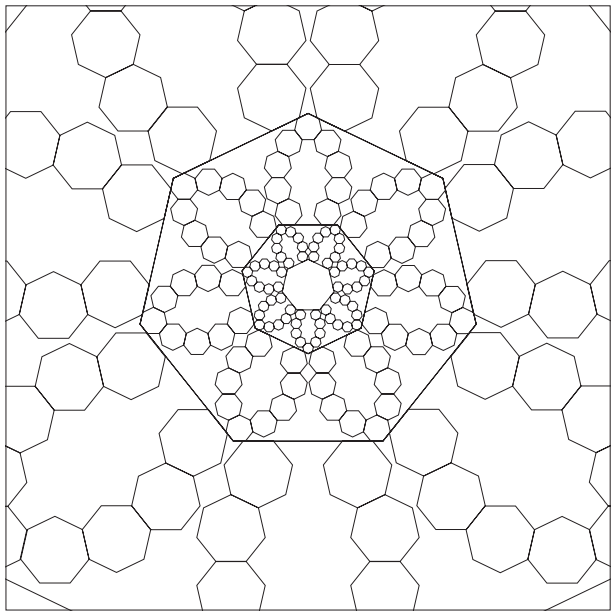
Kante an Kante







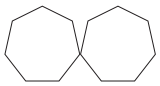




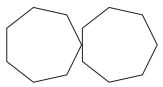
Heptagonal

zentral
berühren / überschneiden

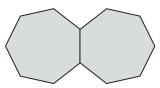
Punkt an Punkt

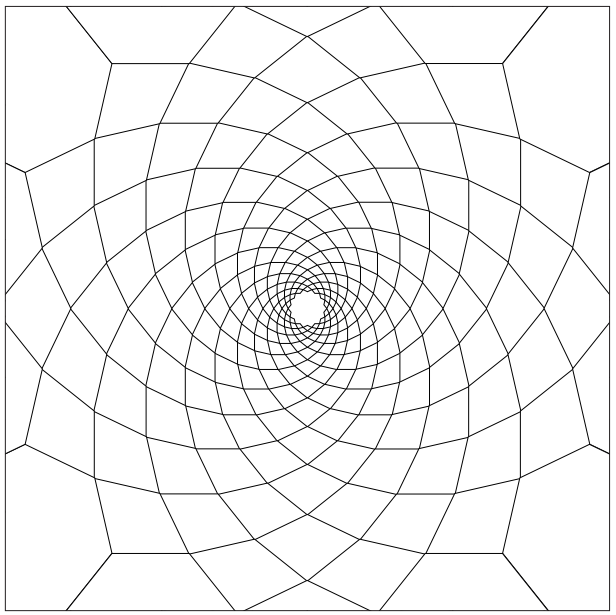


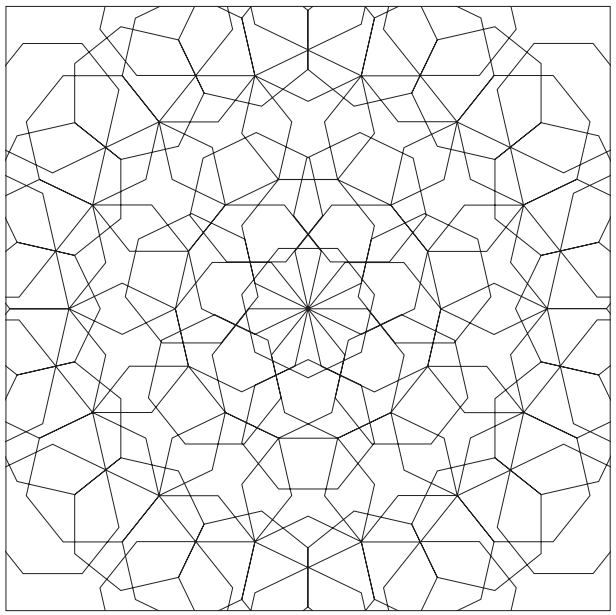
Punkt an Kante

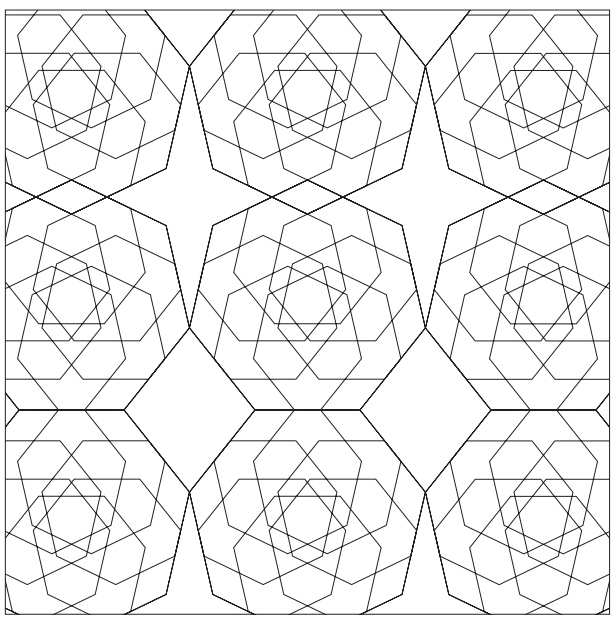


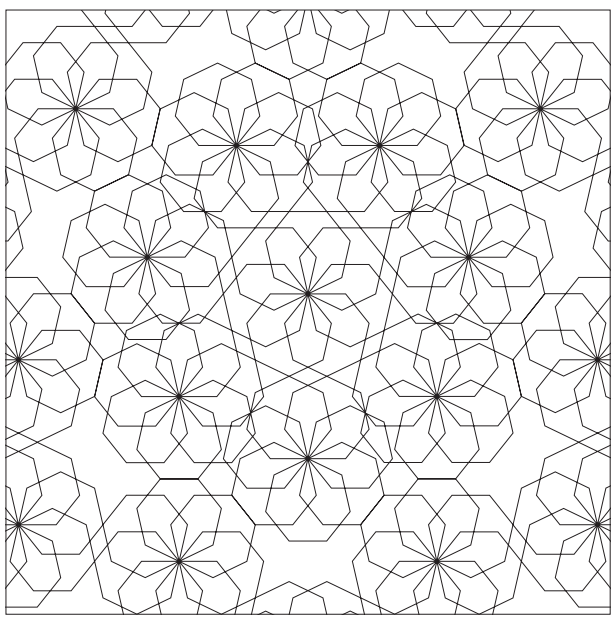
Kante an Kante

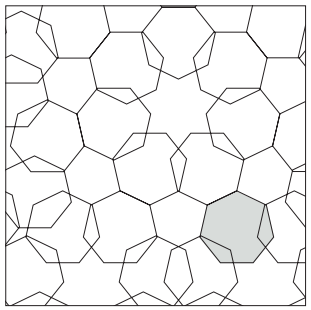


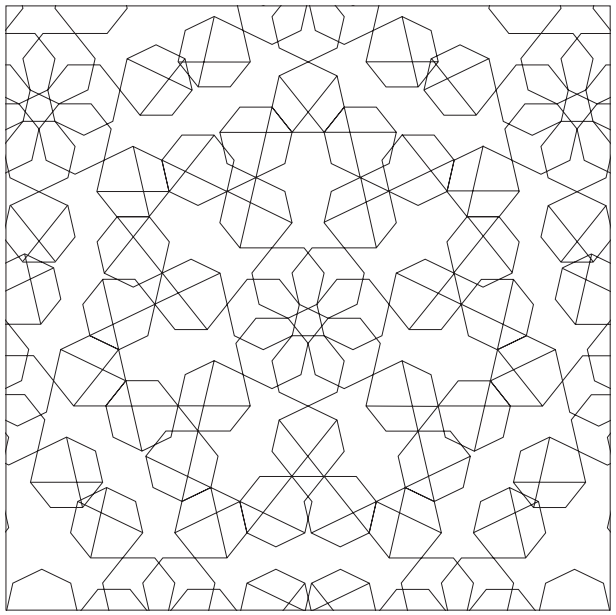








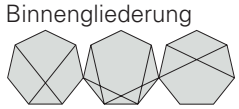


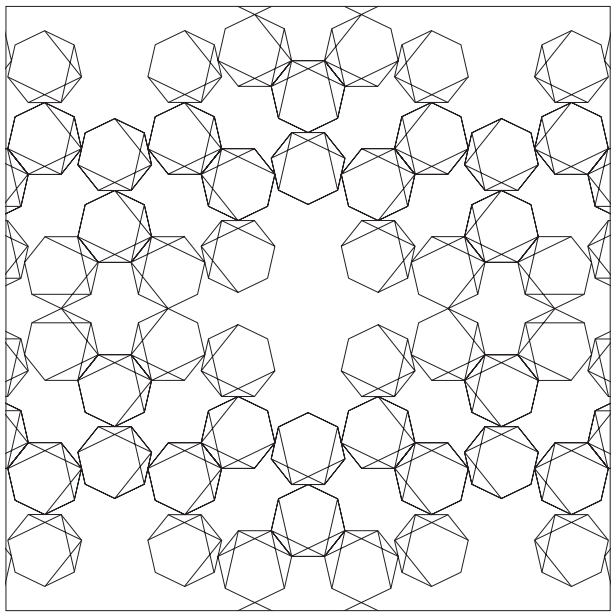


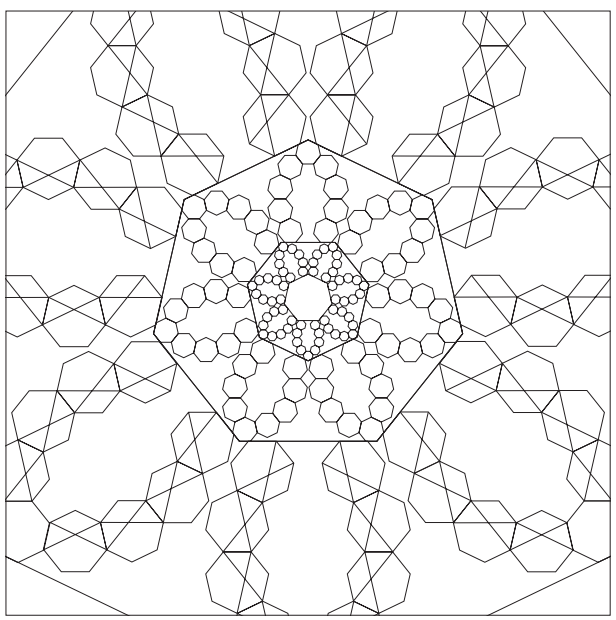
Heptagonal

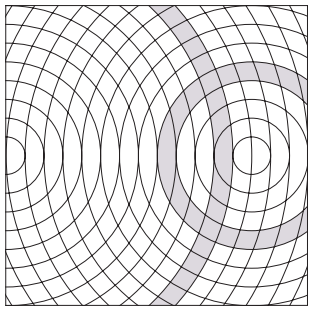
zentral
berühren / überschneiden

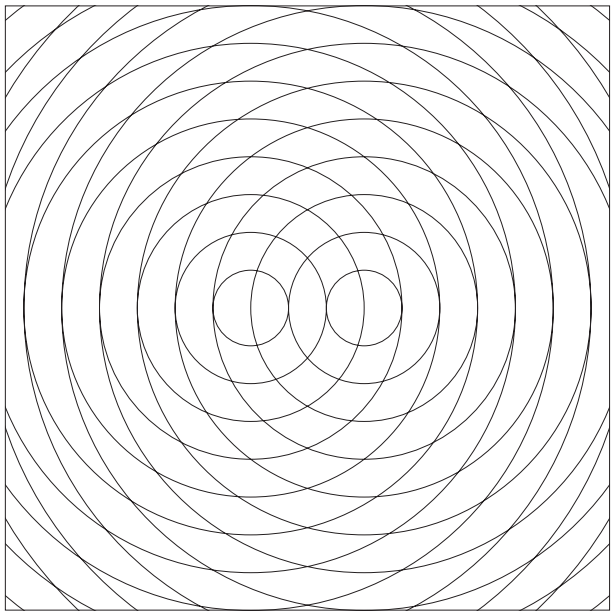
Binnengliederung

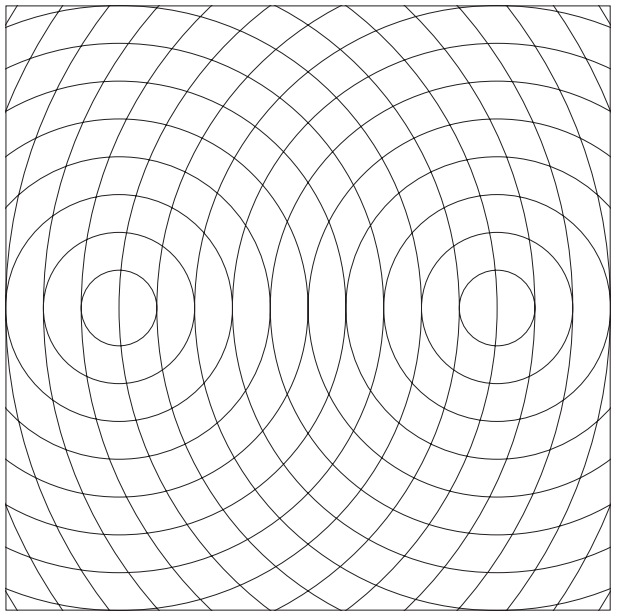






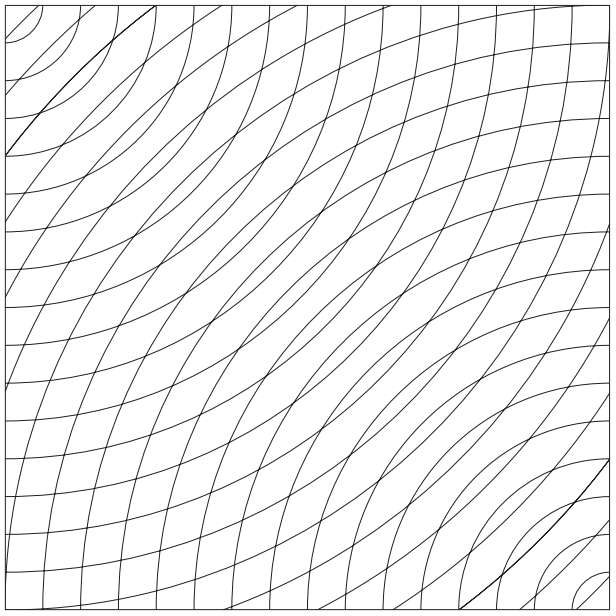


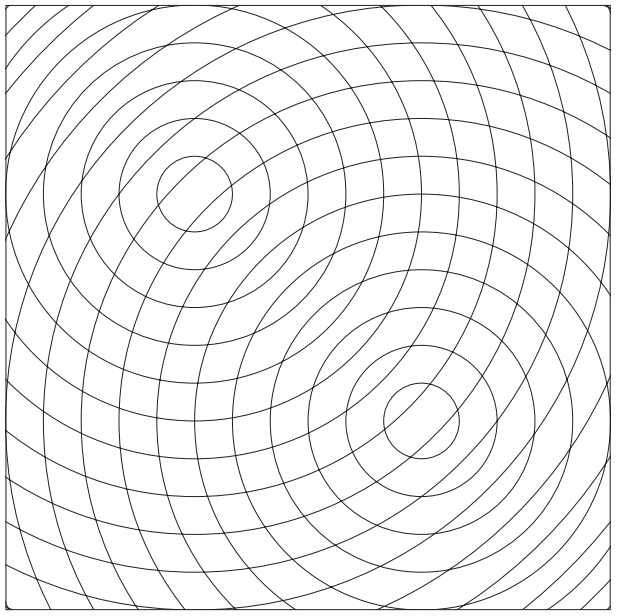




Kreisförmig

Zentrum verlagernd



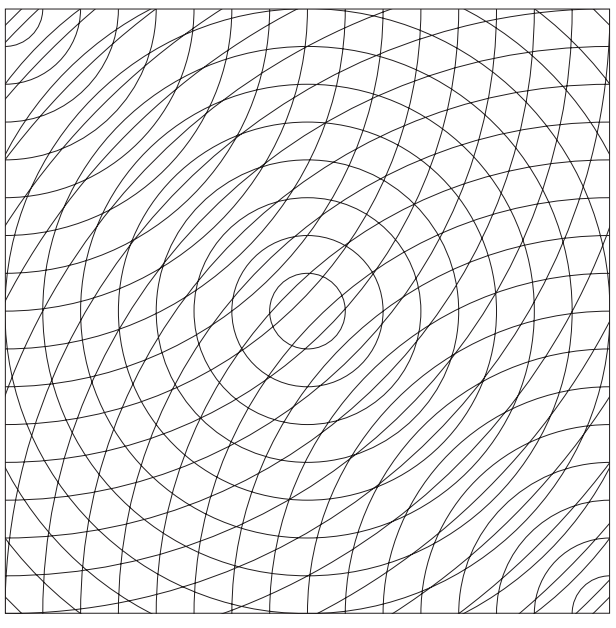


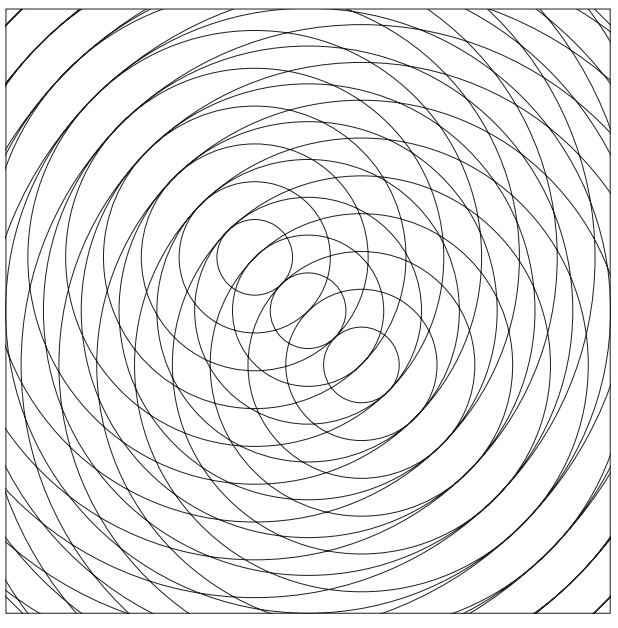
Gleichabständig

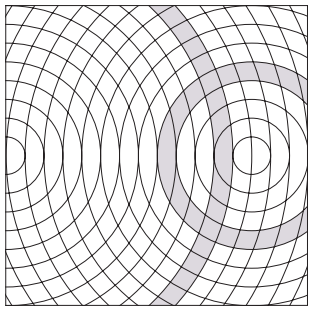
Ungleichabständig

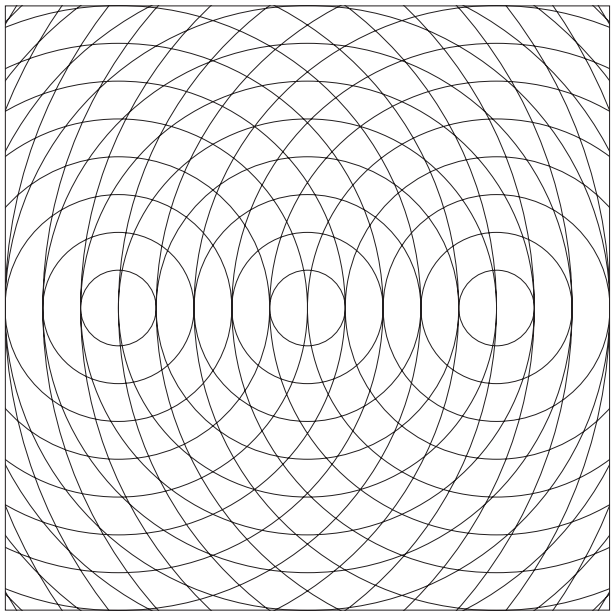
Verformt

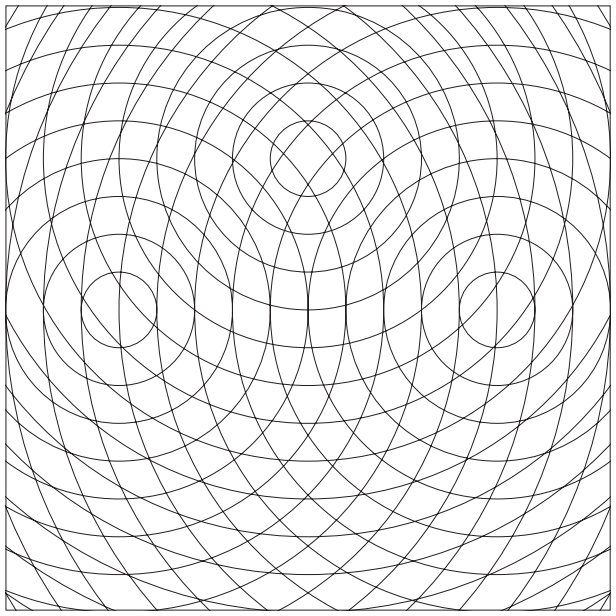
Ringbildend











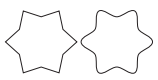
Kreisförmig

Zentrum verlagernd

Gleichabständig

Ungleichabständig

Verformt



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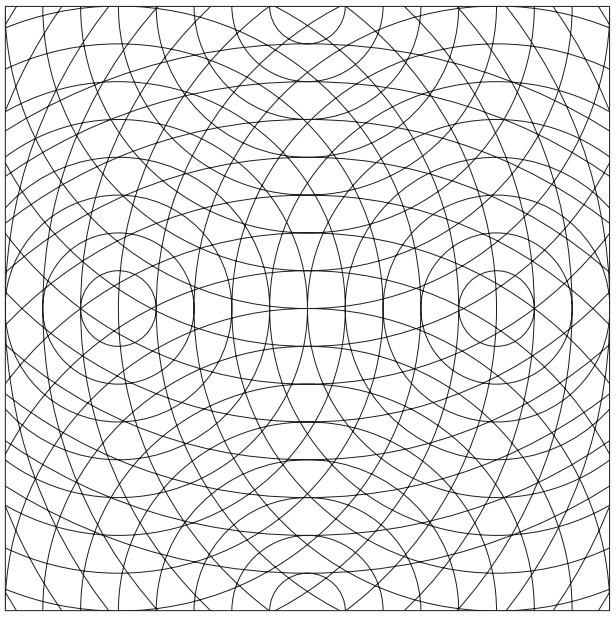
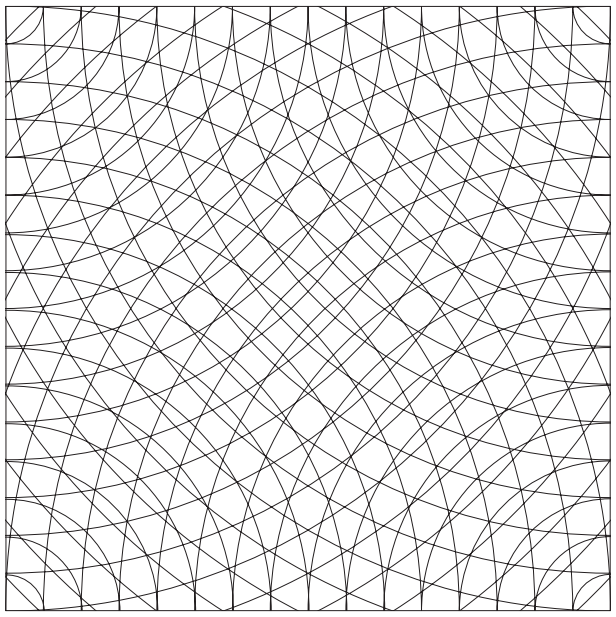
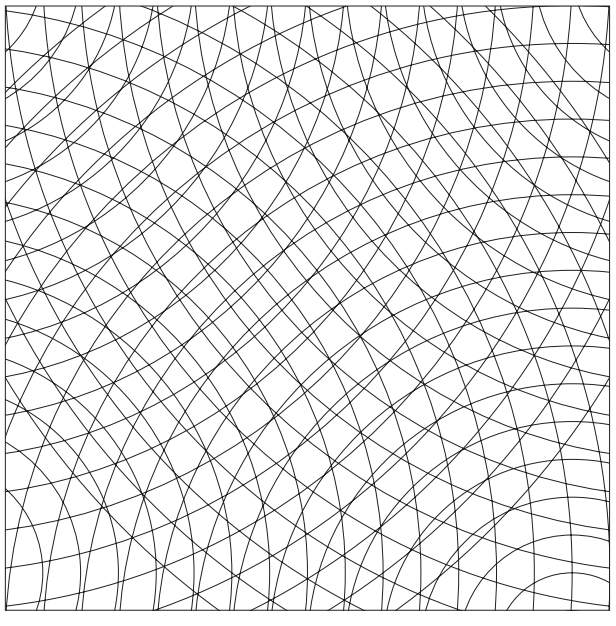
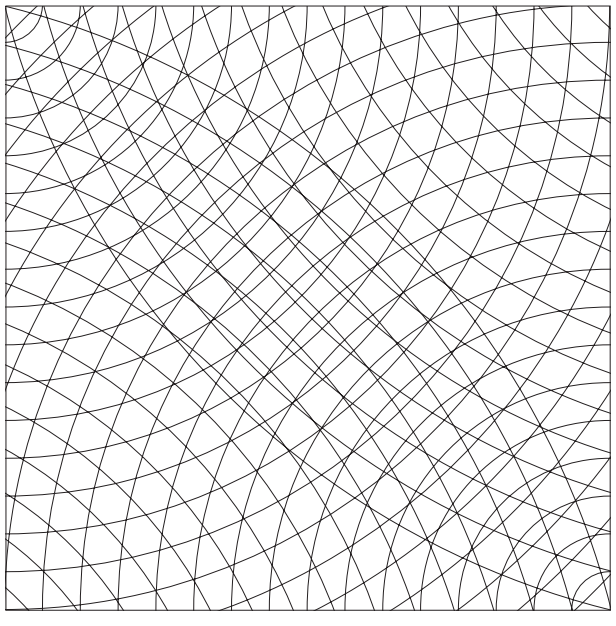
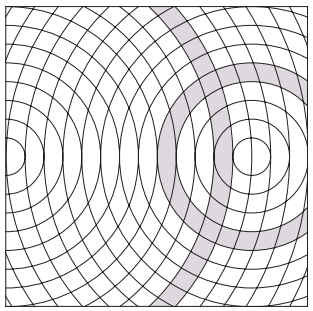
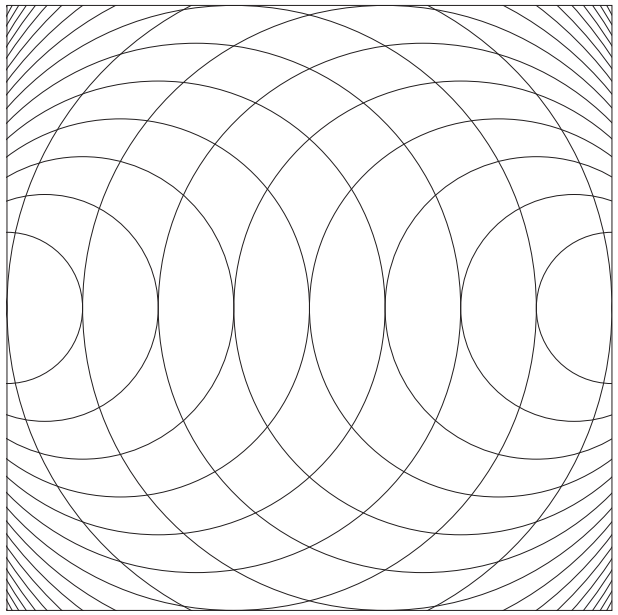


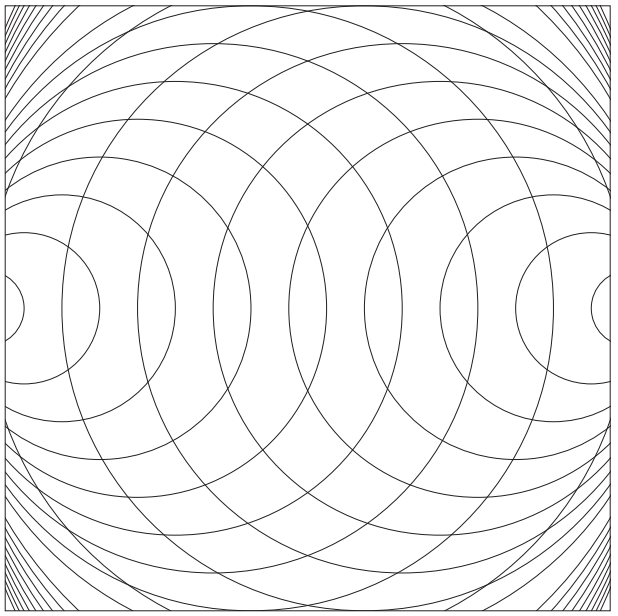












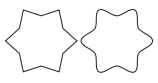
Kreisförmig

konzentrisch / exzentrisch

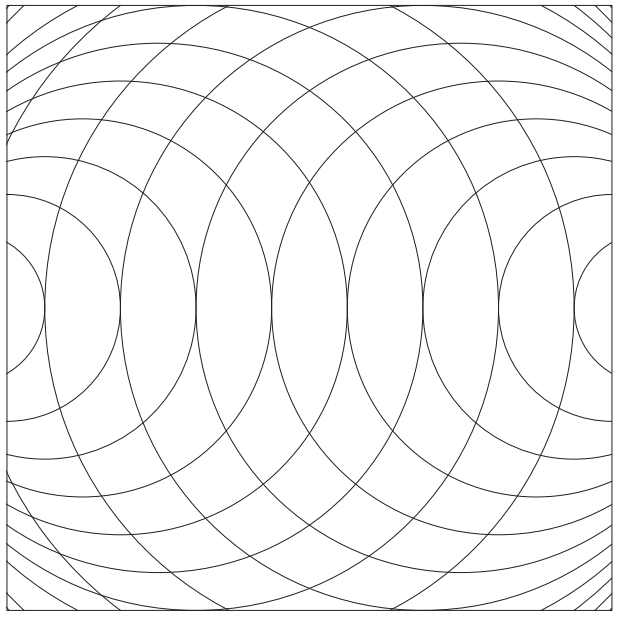
Gleichabständig

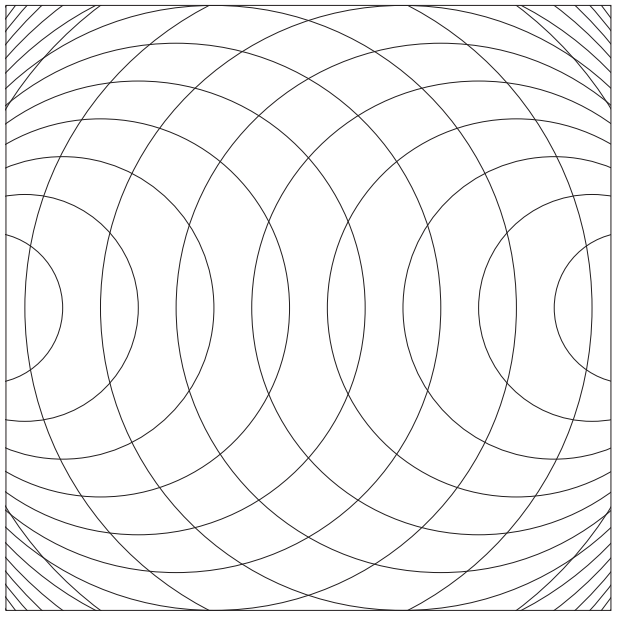
Ungleichabständig

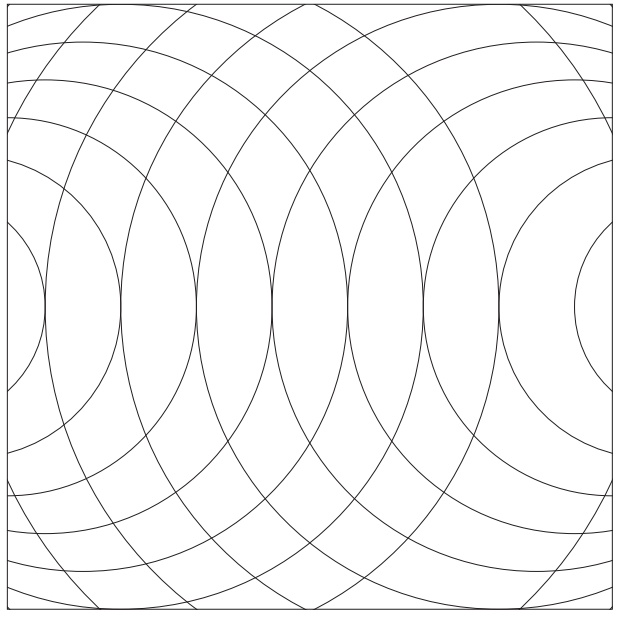
Verformt

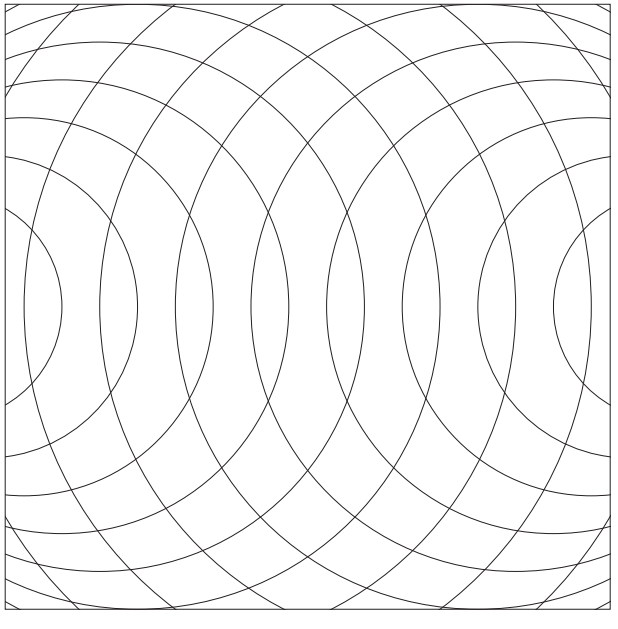


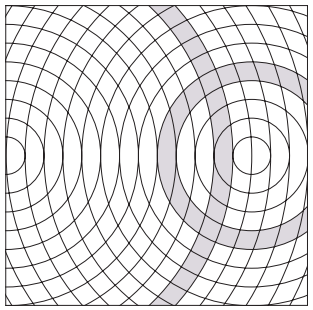
Ringbildend

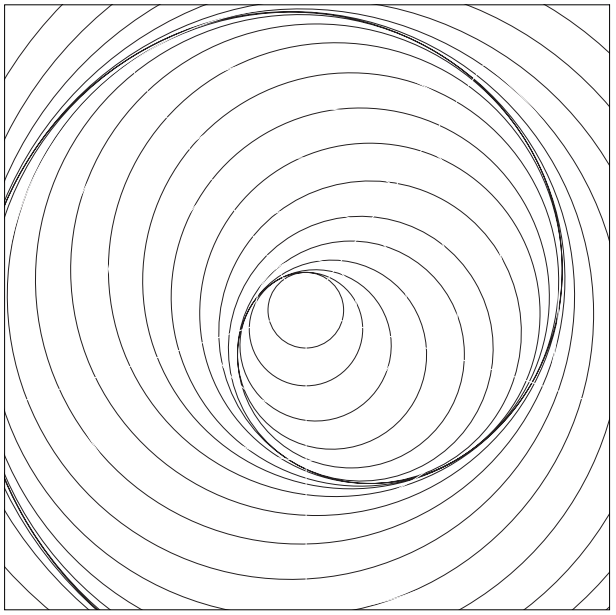


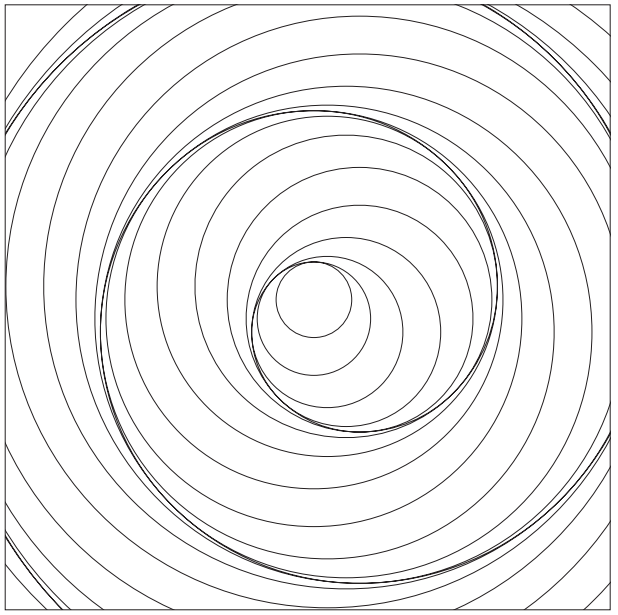












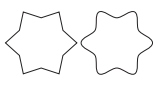
Kreisförmig

konzentrisch / exzentrisch

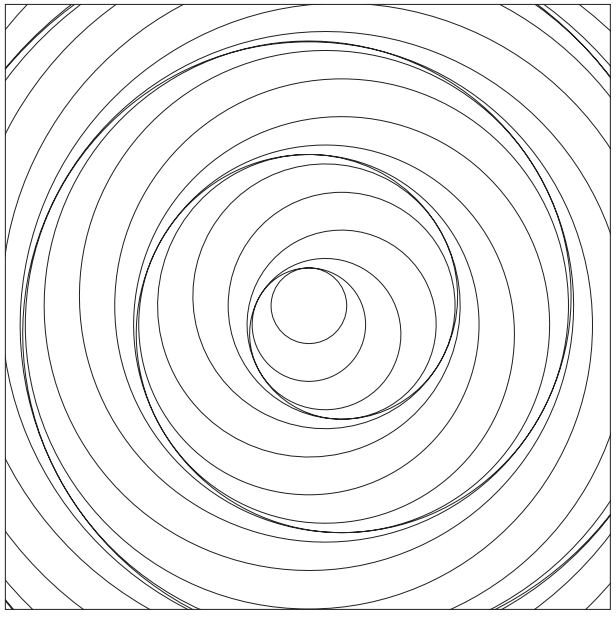
Gleichabständig

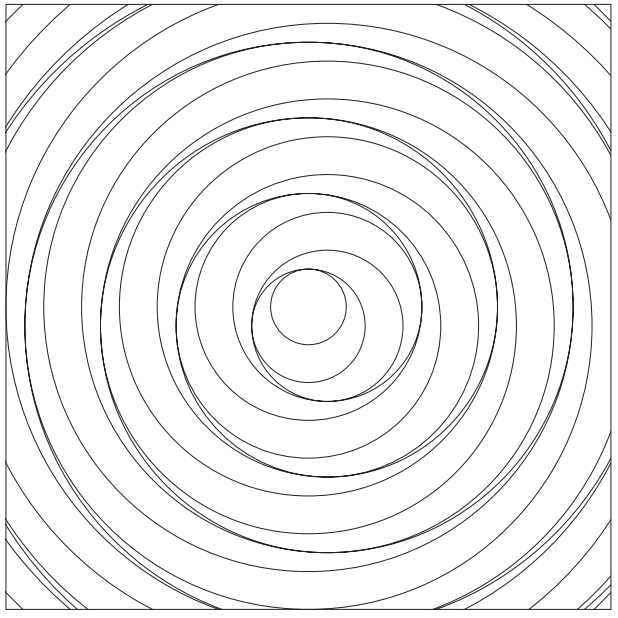
Ungleichabständig

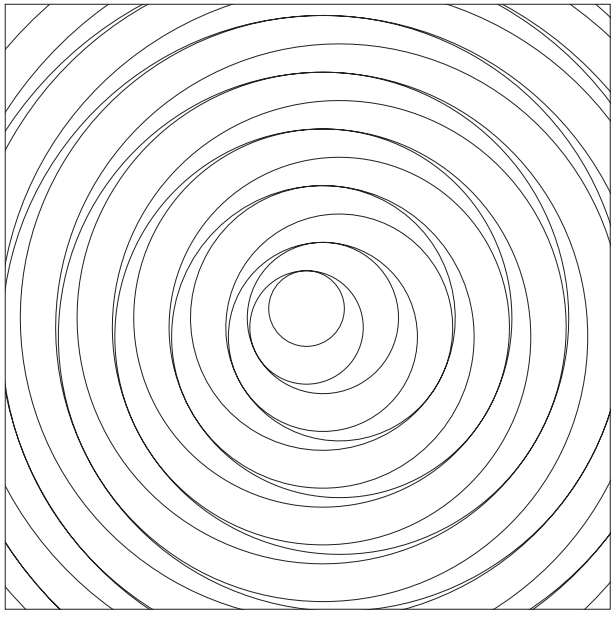
Verformt

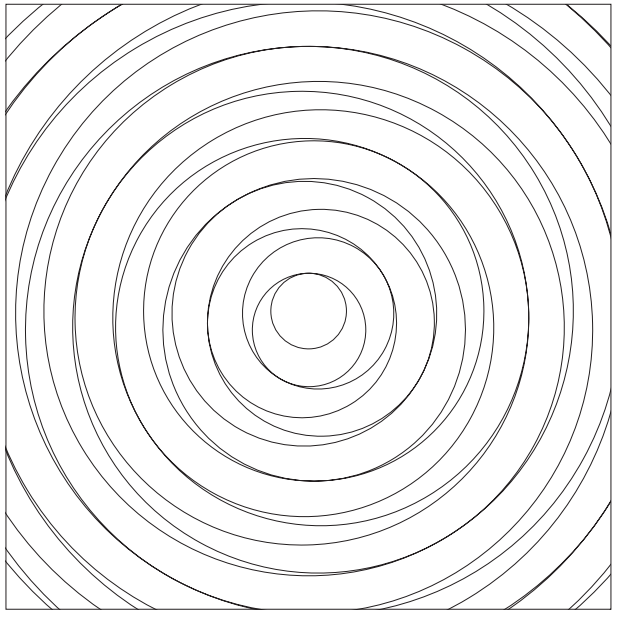


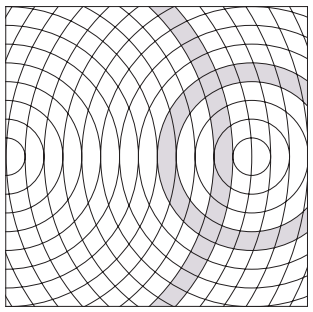
Ringbildend

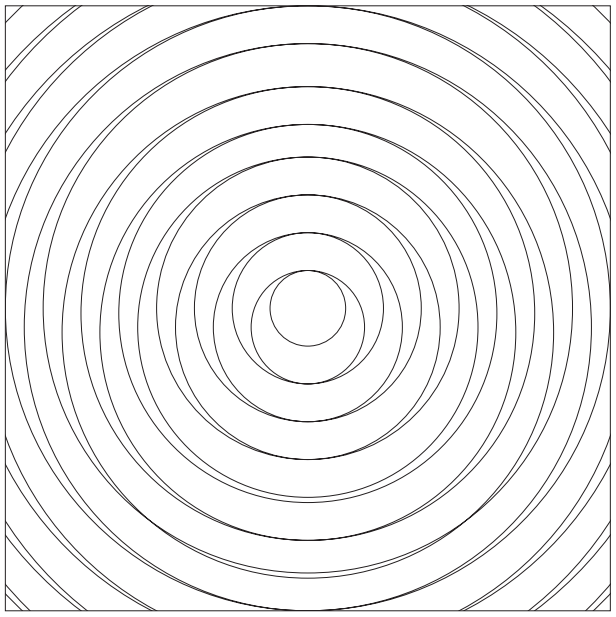


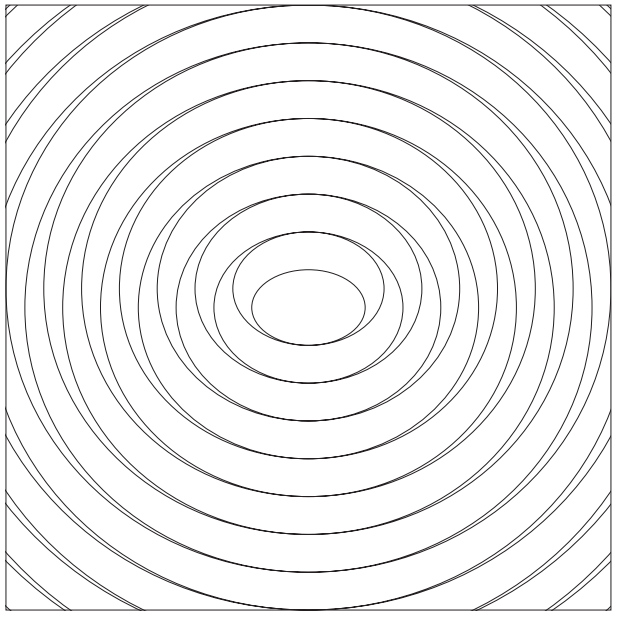












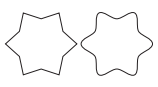
Kreisförmig

konzentrisch / exzentrisch

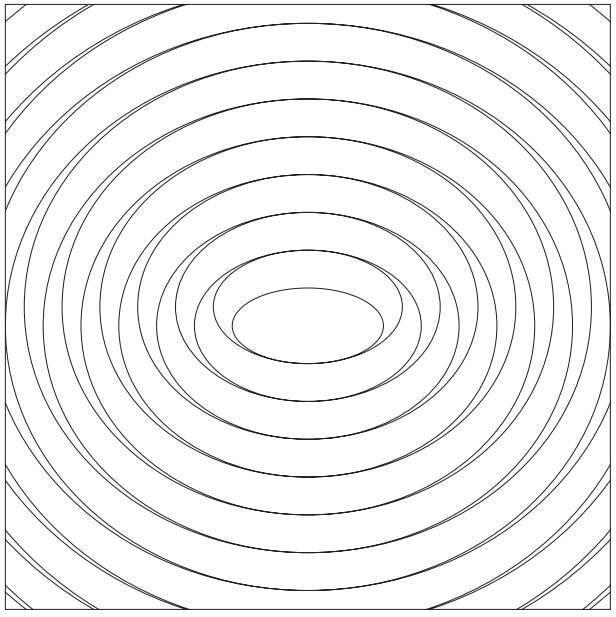
Gleichabständig

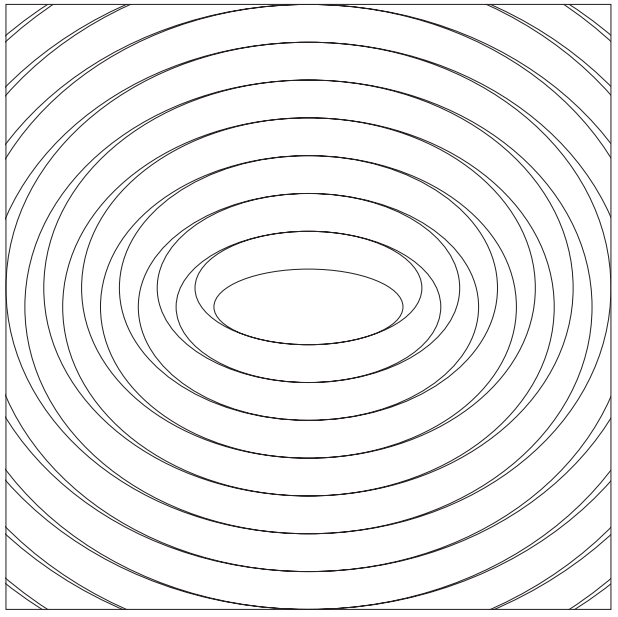
Ungleichabständig

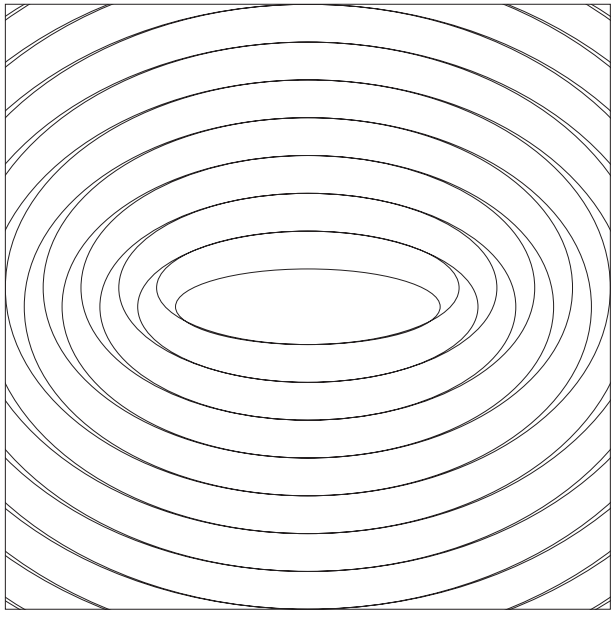
Verformt

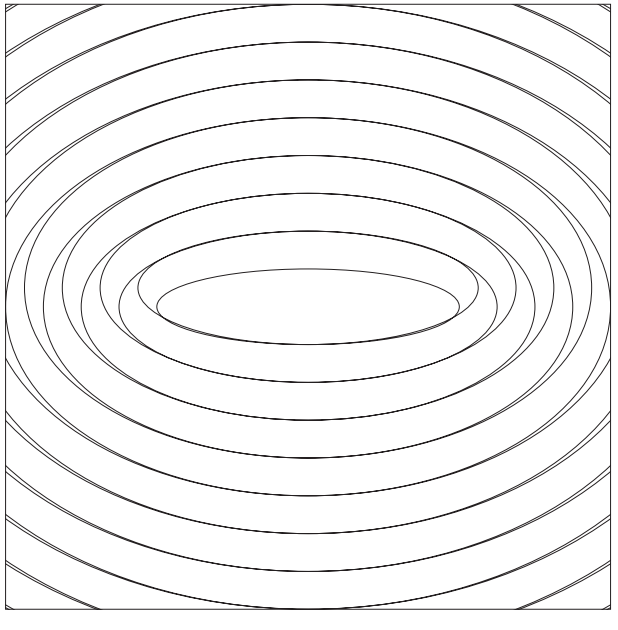


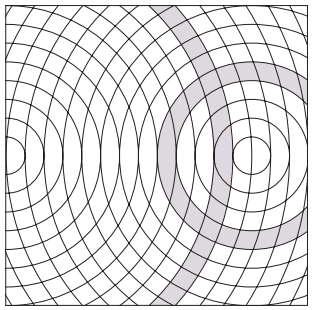
Ringbildend

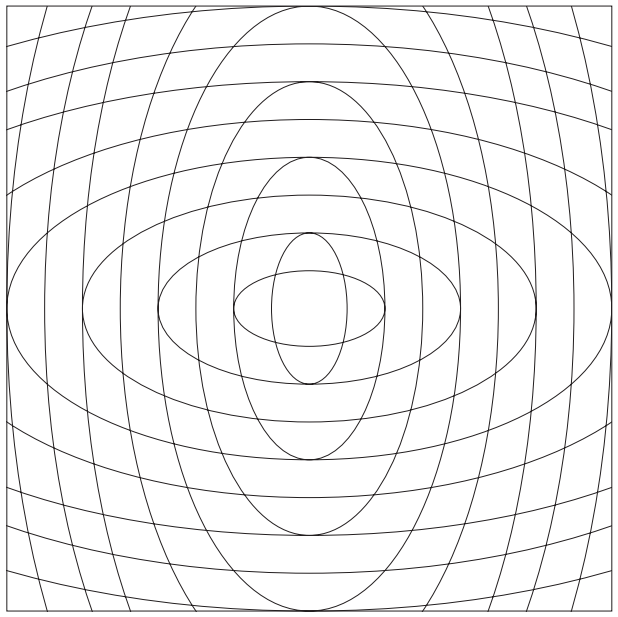












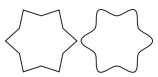
Kreisförmig

zentral
linear
berühren/ überschneiden

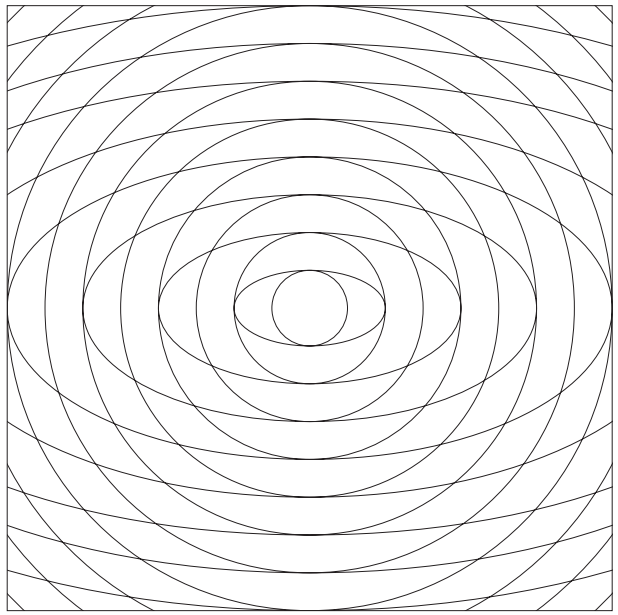
Gleichabständig

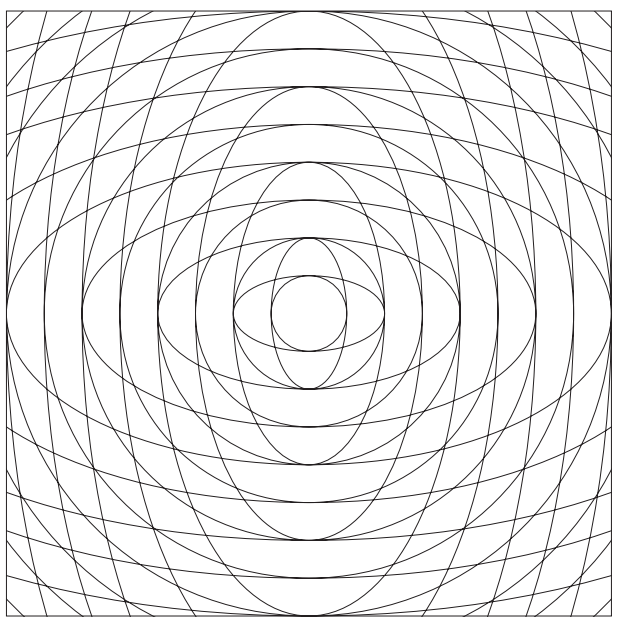
Ungleichabständig

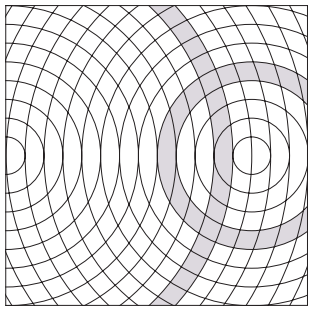
Verformt

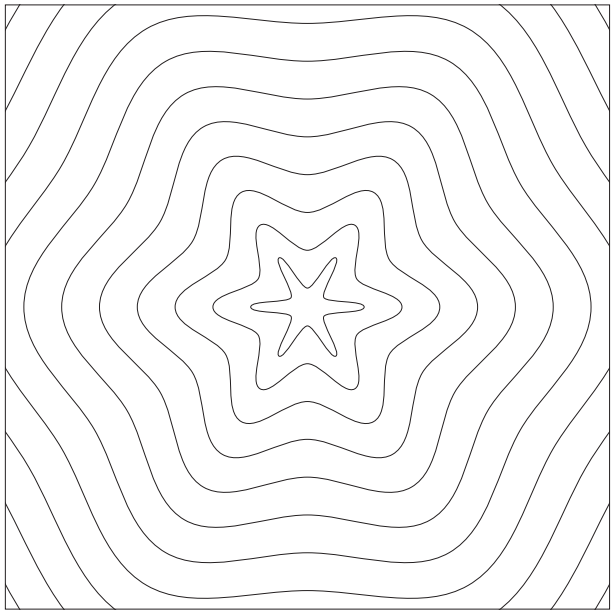


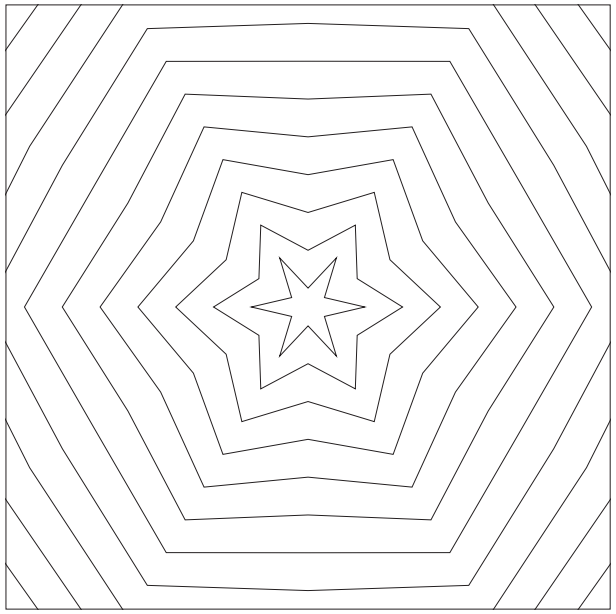
Ringbildend









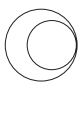


Kreisförmig

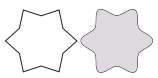
Primärformen gekrümmt / geknickt

Gleichabständig

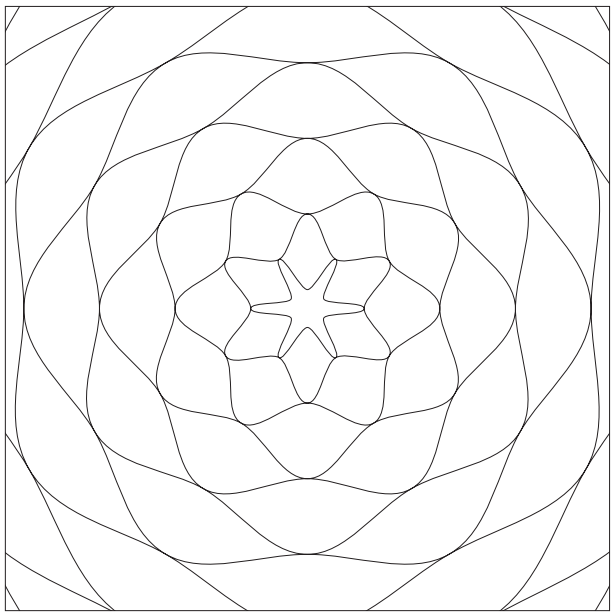
Ungleichabständig

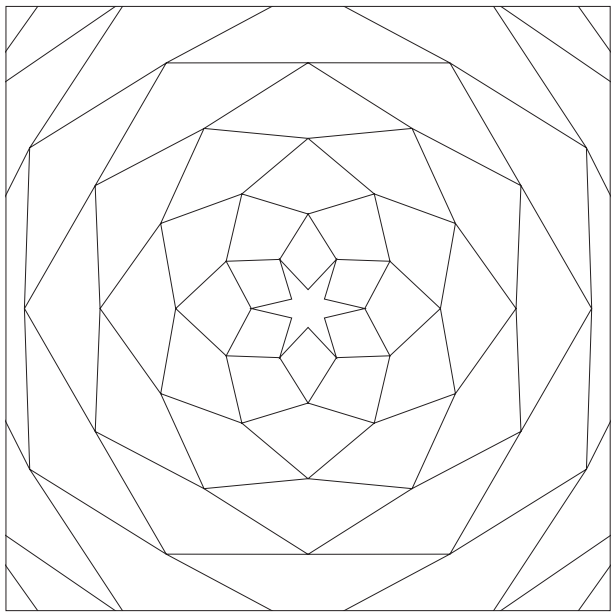


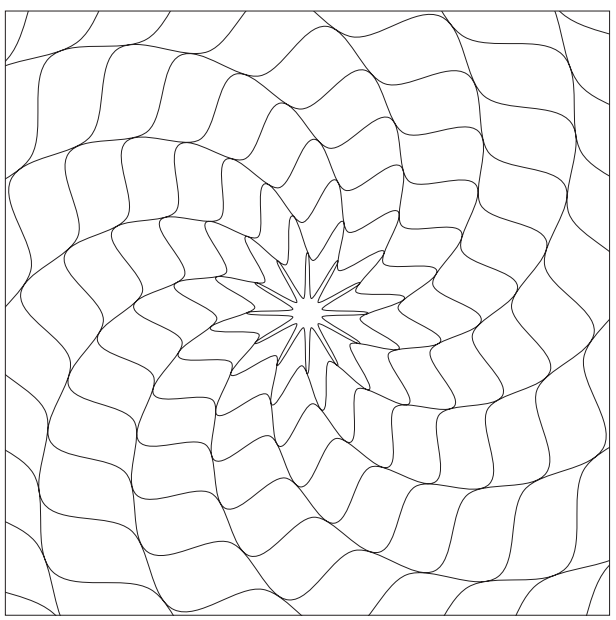
Verformt

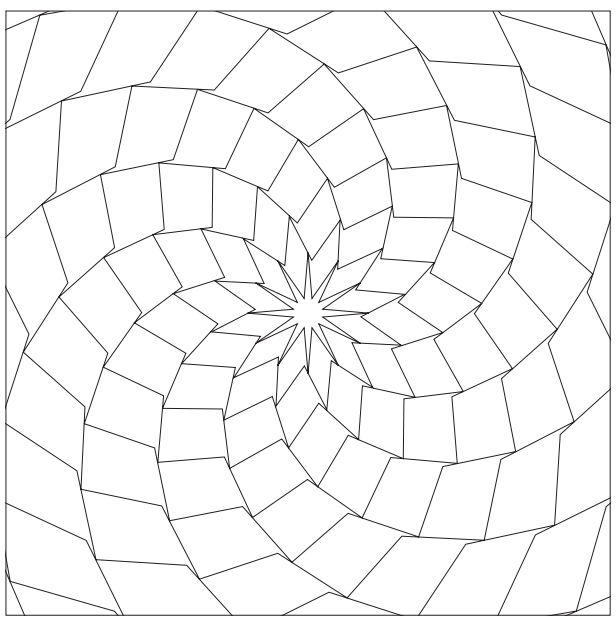


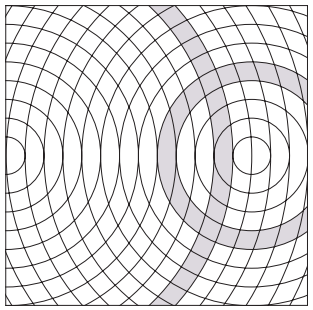
Ringbildend

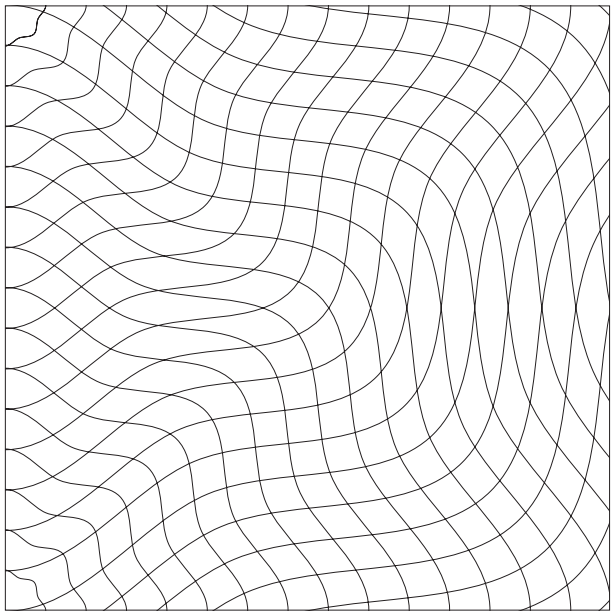


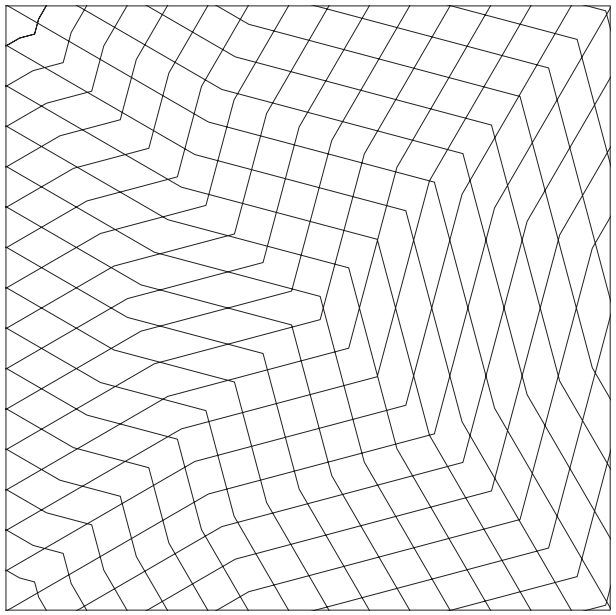












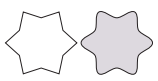
Kreisförmig

Primärformen gekrümmt / geknickt

Gleichabständig

Ungleichabständig

Verformt



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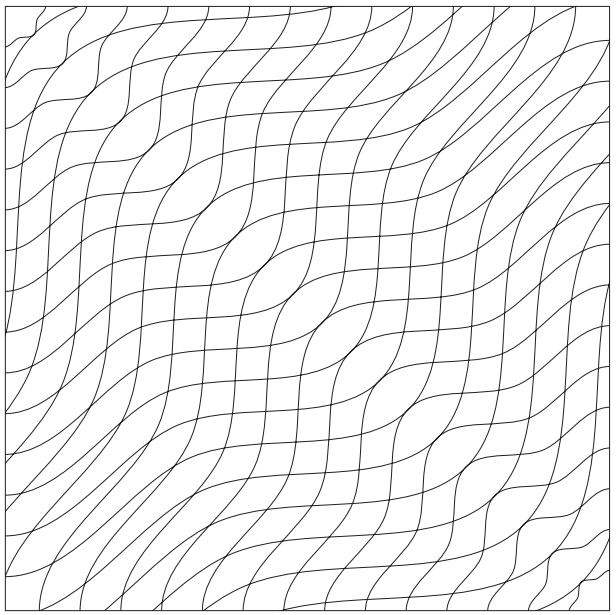
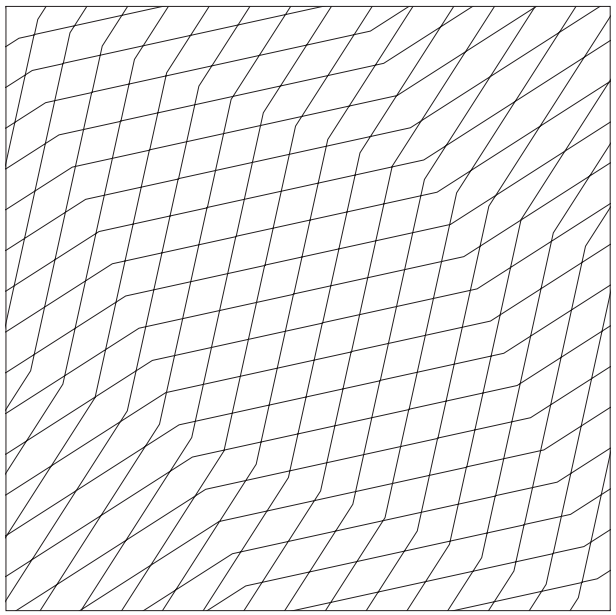
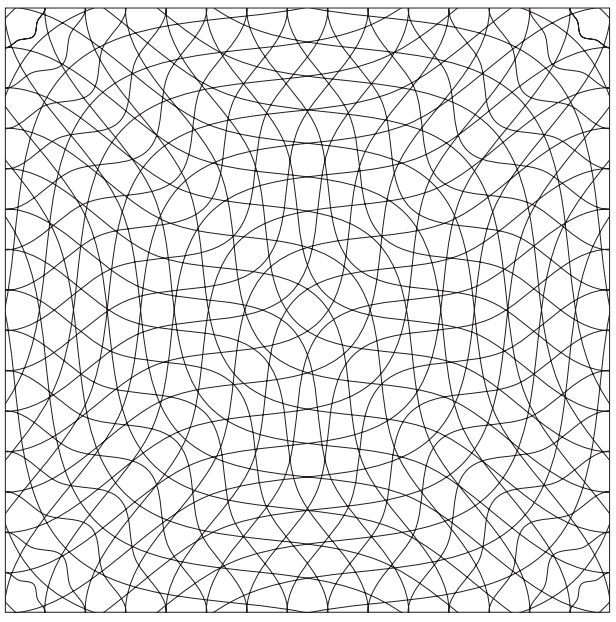
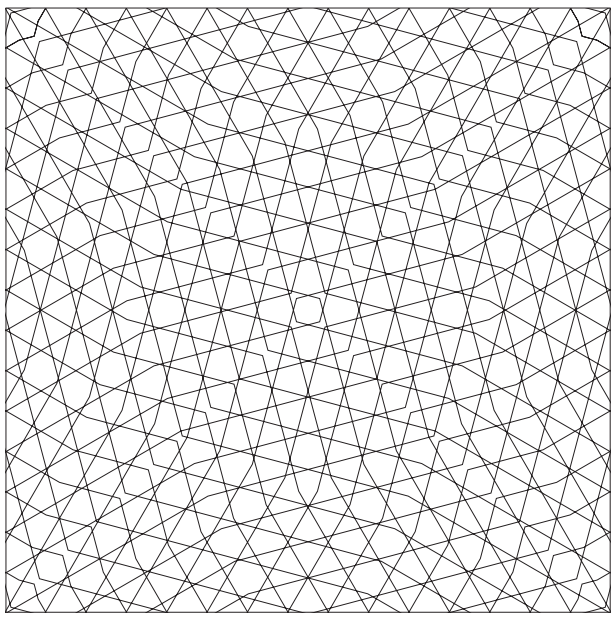
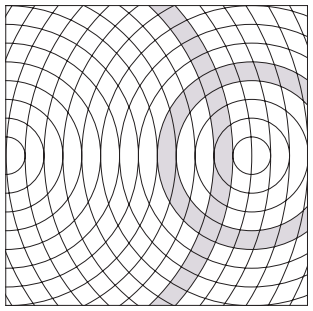
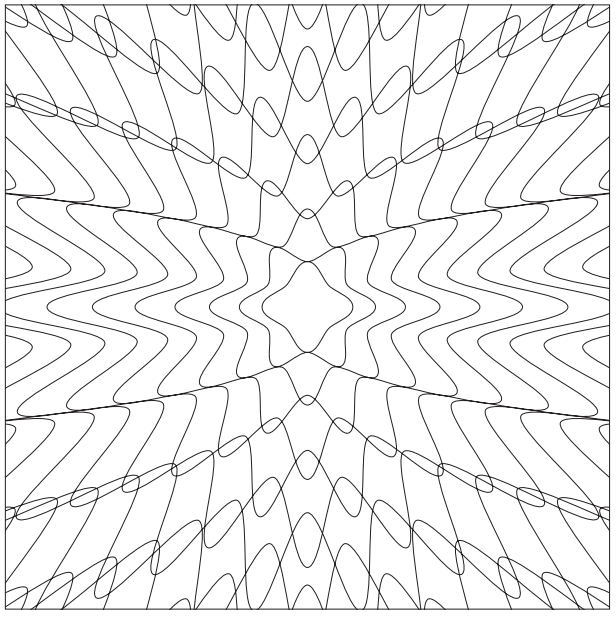


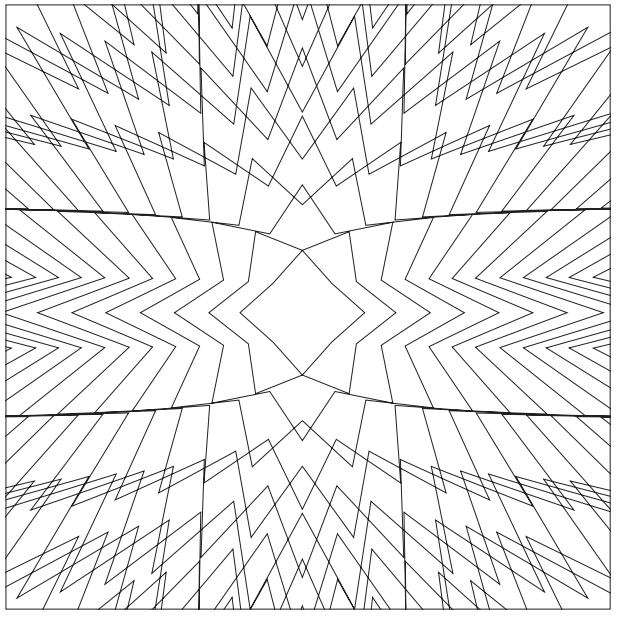












Kreisförmig

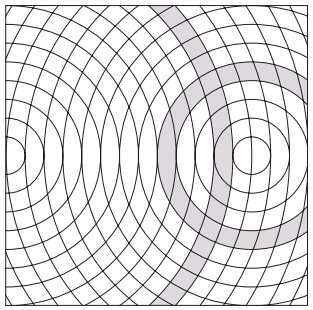
Primärformen gekrümmt / geknickt

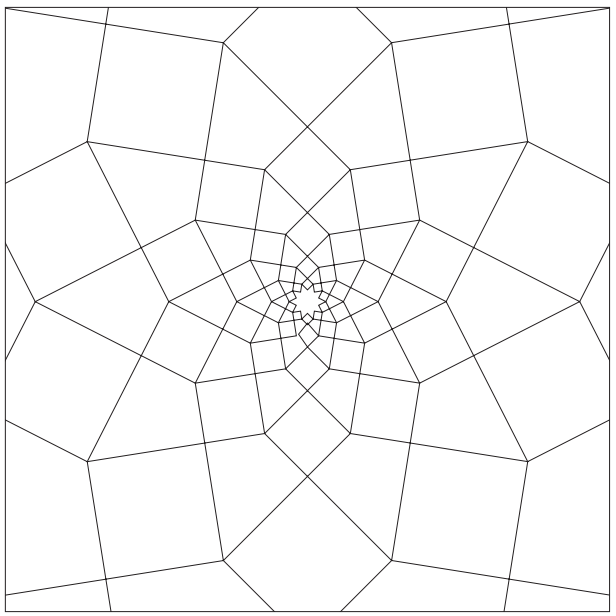
Gleichabständig

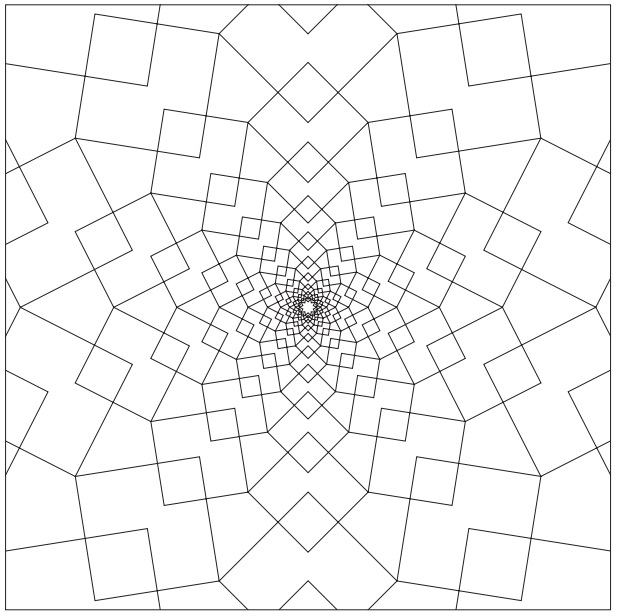
Ungleichabständig

Verformt

Ringbildend







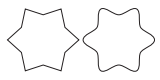
Kreisförmig

dynamische Strukturbildung

Gleichabständig

Ungleichabständig

Verformt



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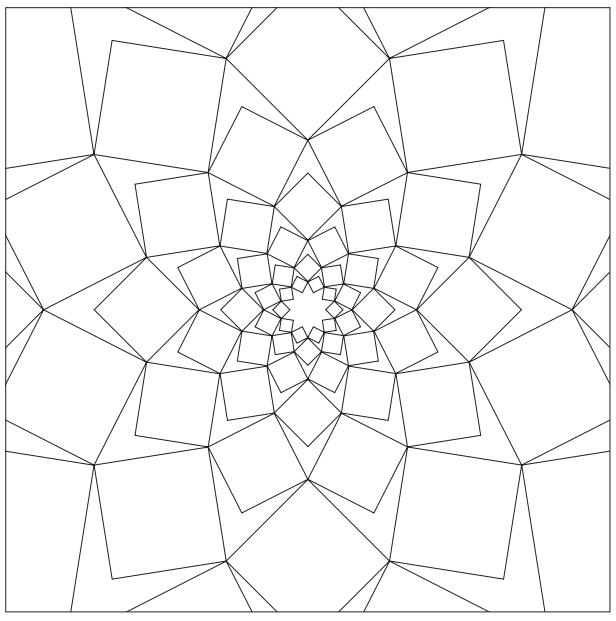
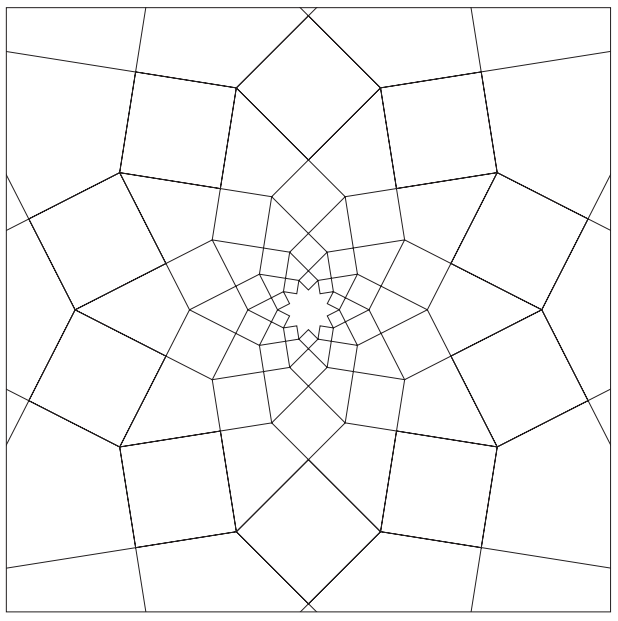
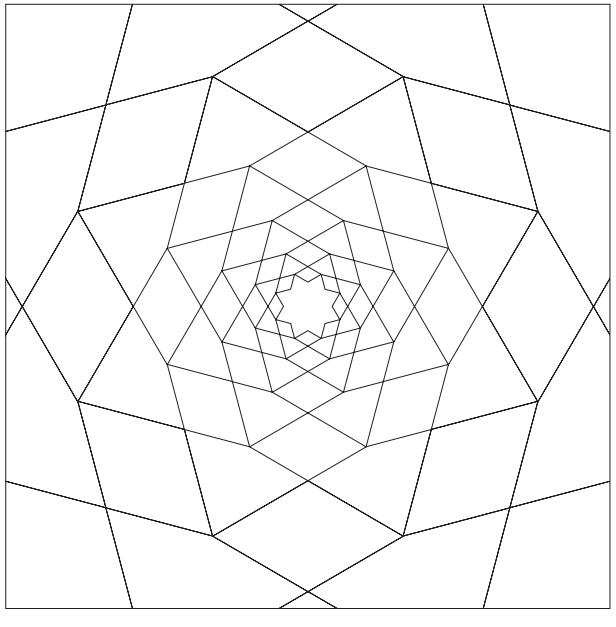
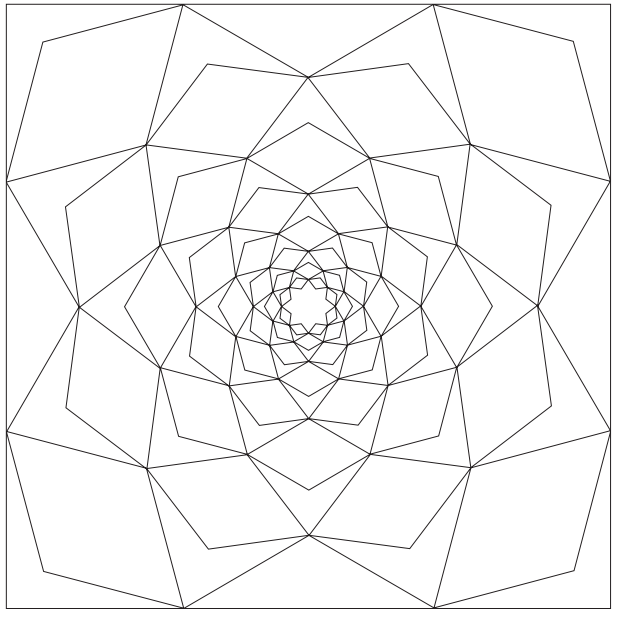
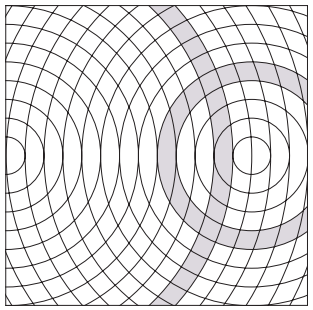
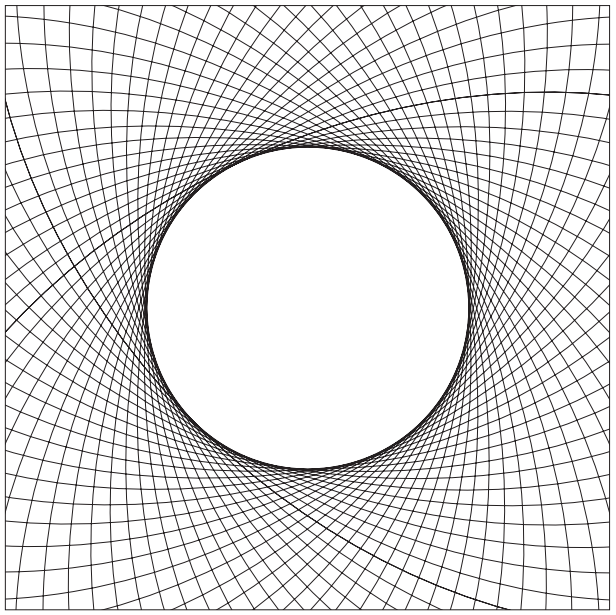


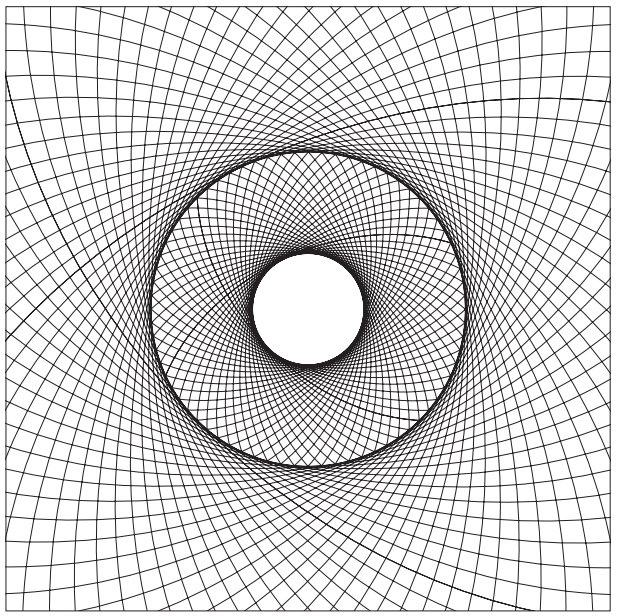












Kreisförmig

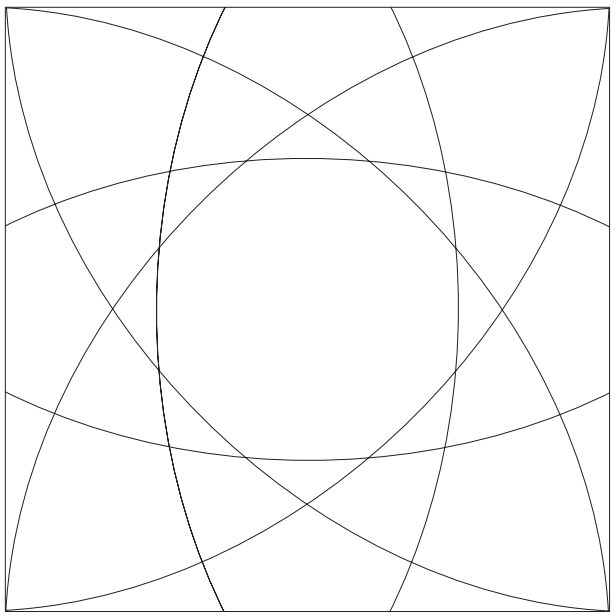
dynamische Strukturbildung

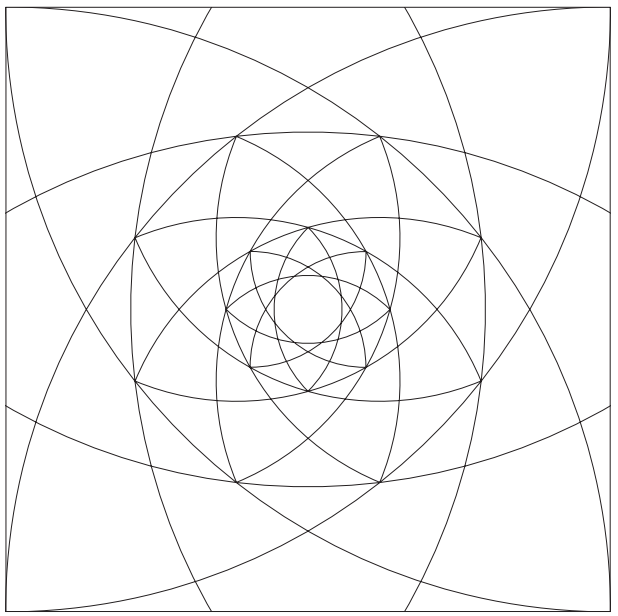
Gleichabständig

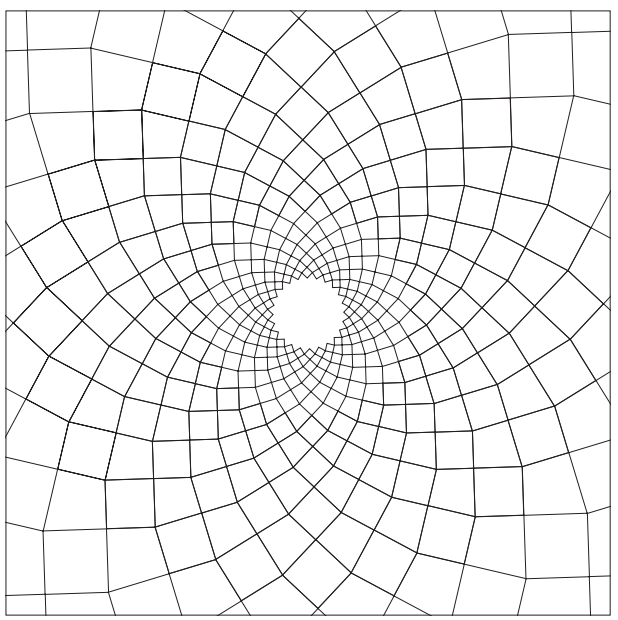
Ungleichabständig

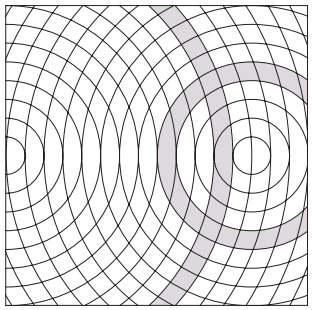
Verformt

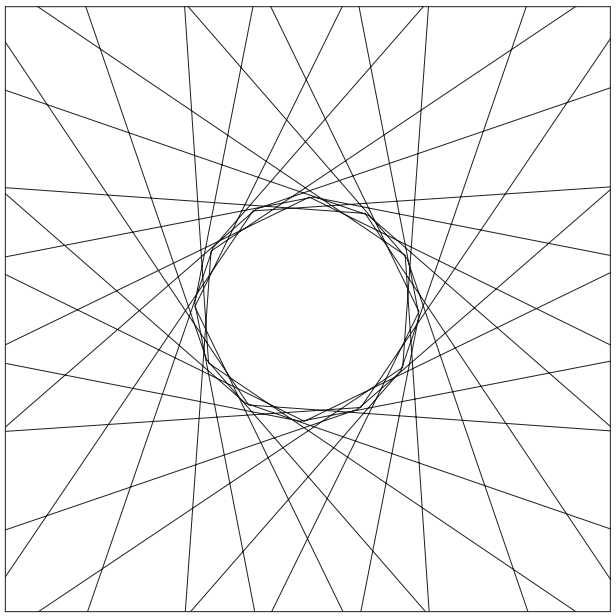
Ringbildend

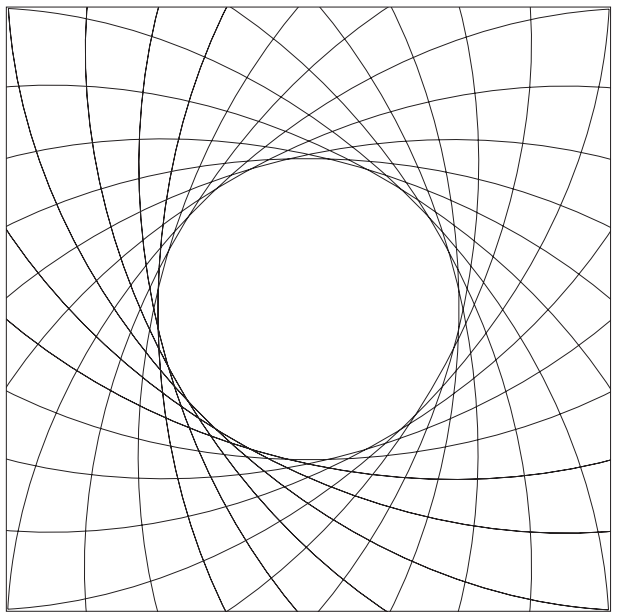












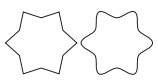
Kreisförmig

dynamische Strukturbildung

Gleichabständig

Ungleichabständig

Verformt



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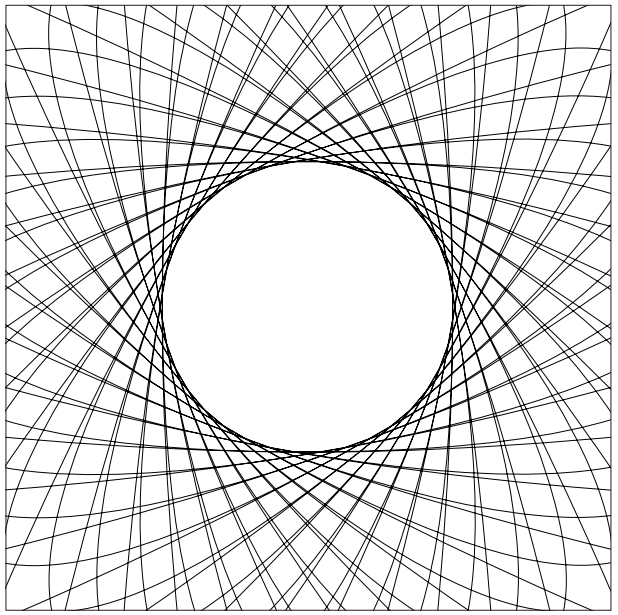
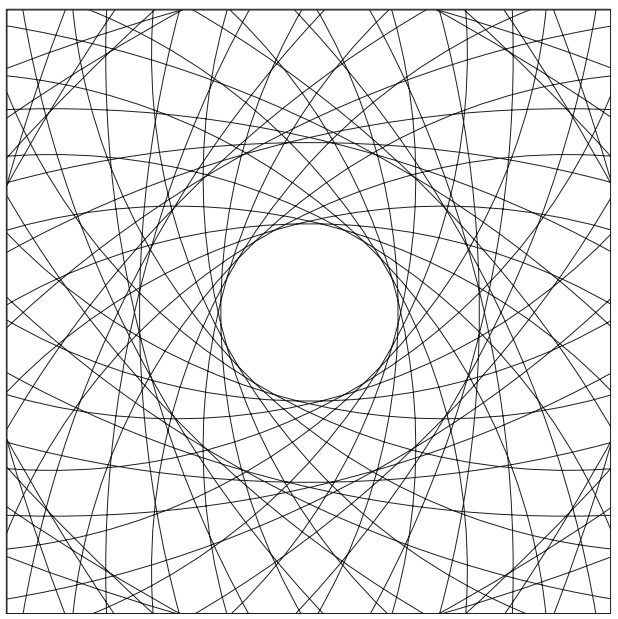
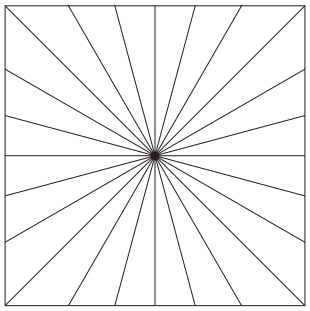
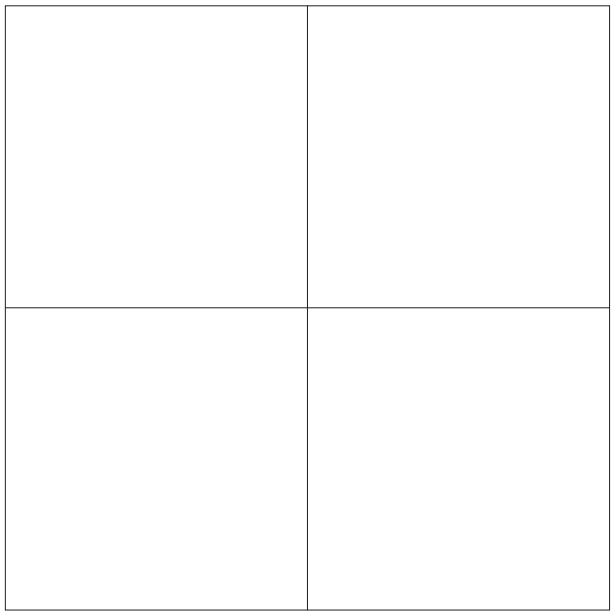
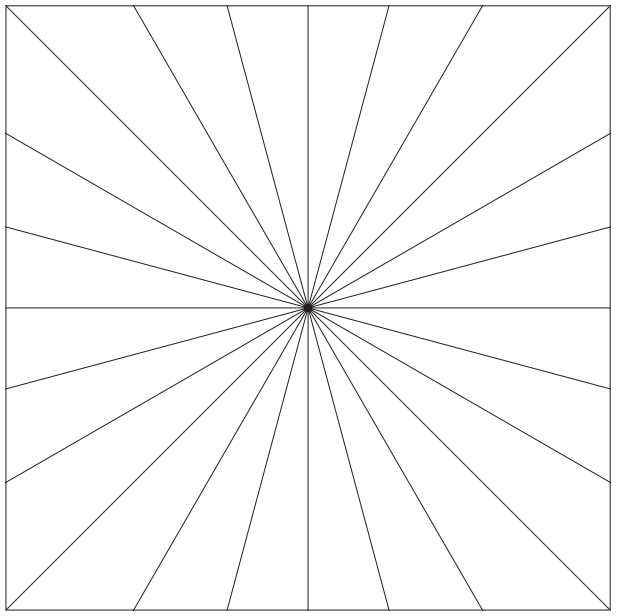




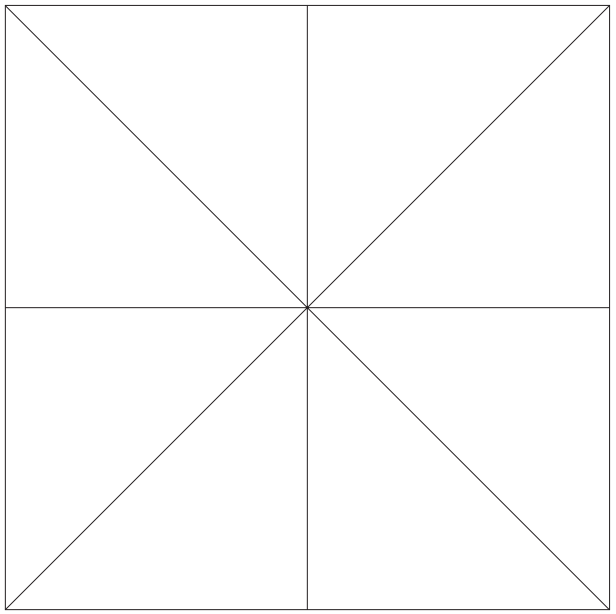


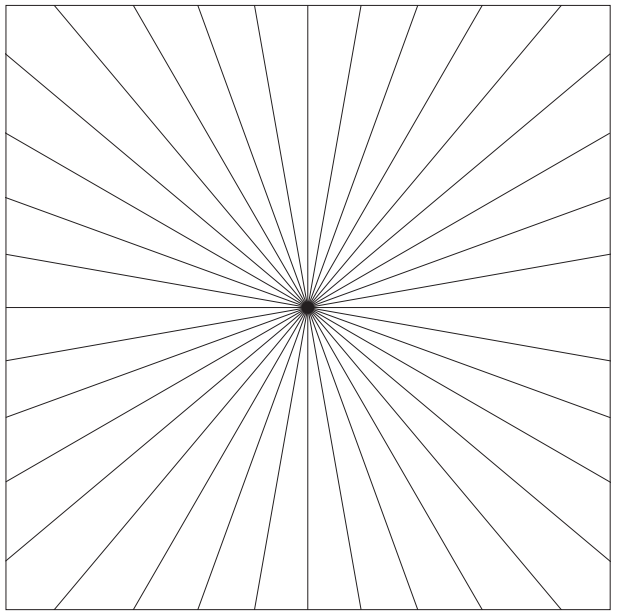


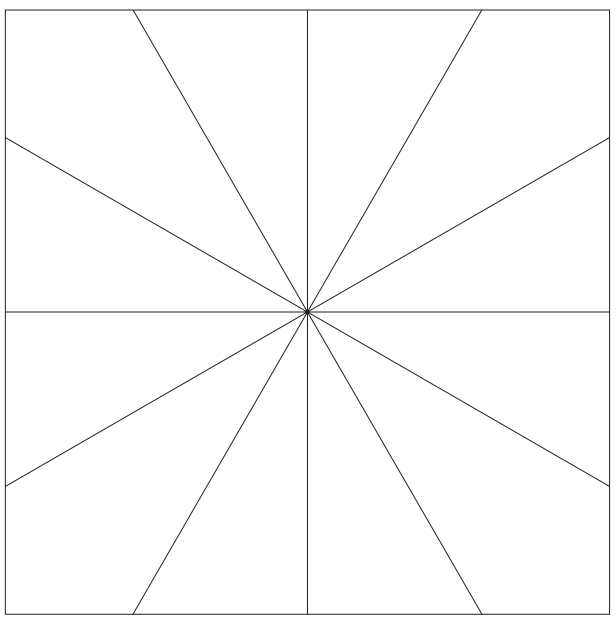


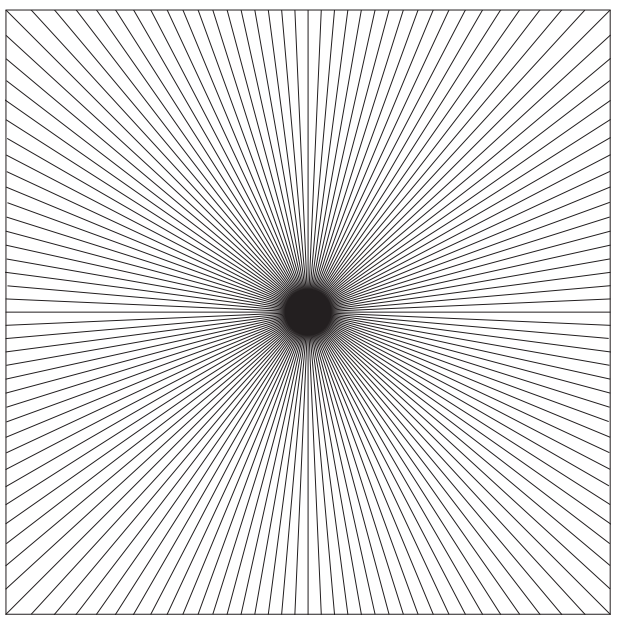
Strahlenbildend

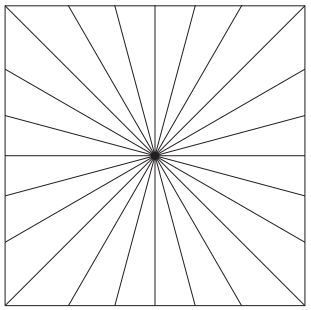
Zunahme der Intensität durch Erhöhung der Anzahl der Linien

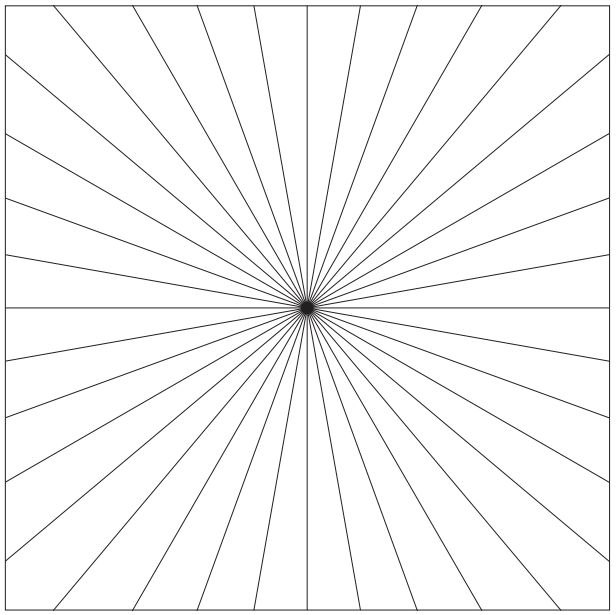


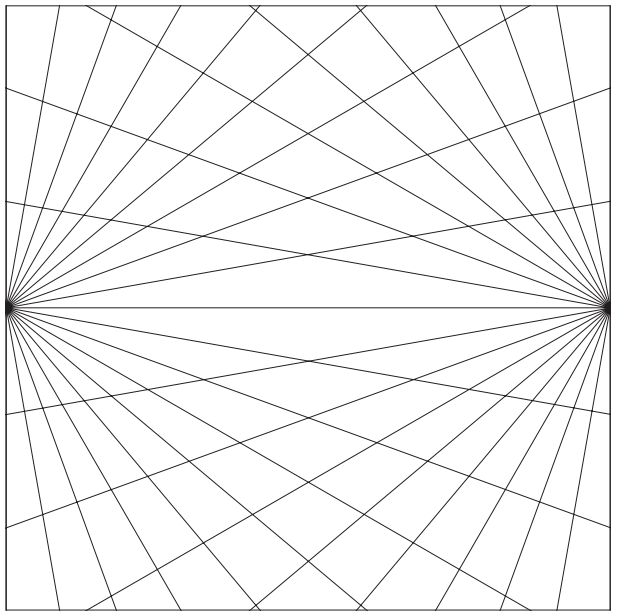






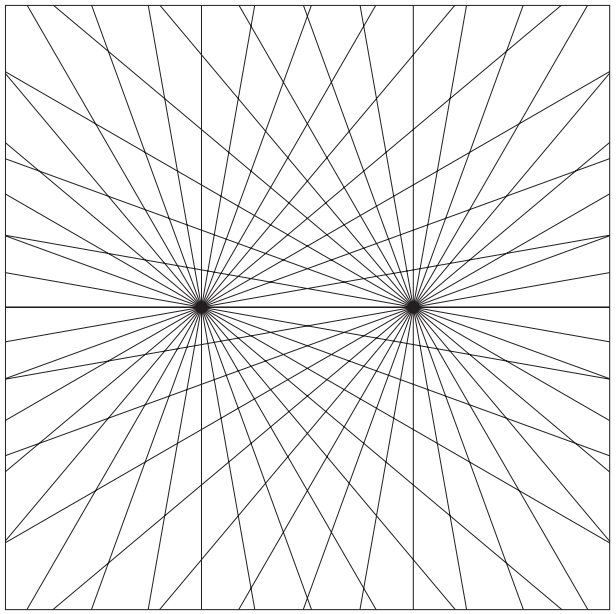


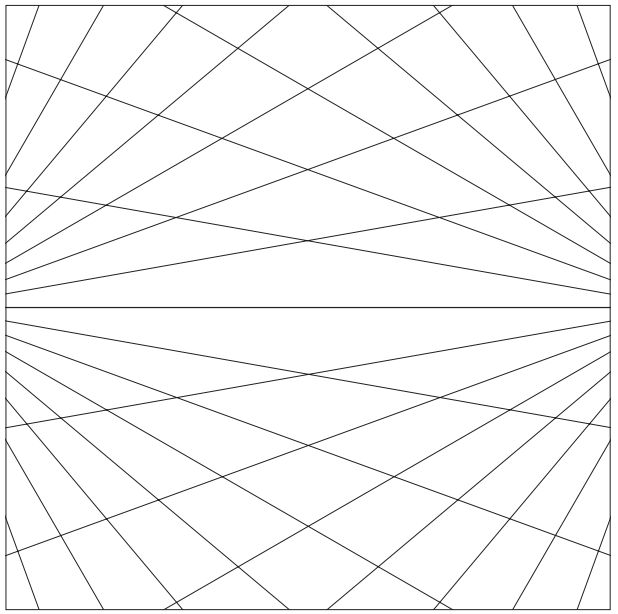


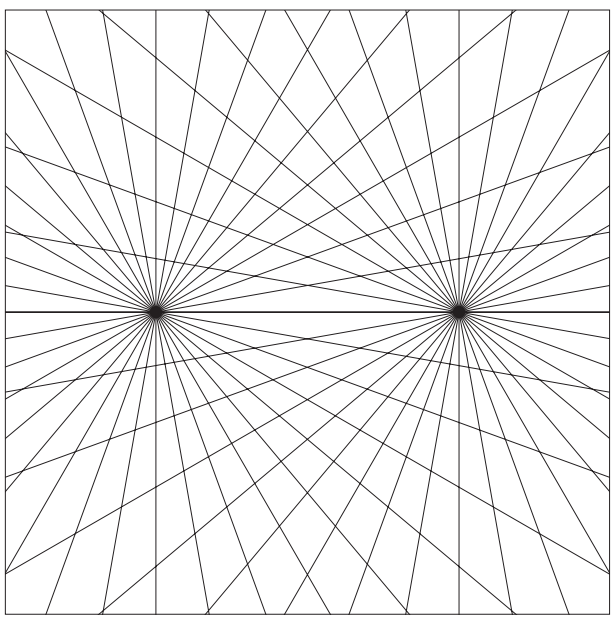


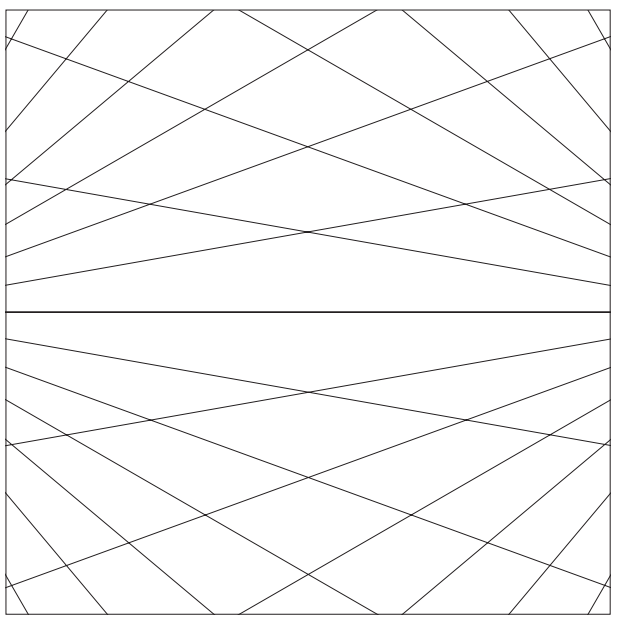
Strahlenbildend

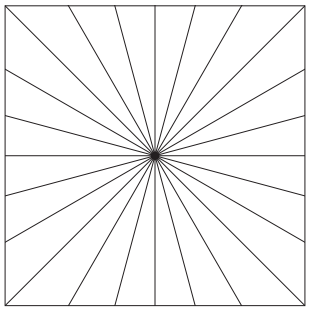
strahlbildend
gleichwinklig
von konzentrisch
zu exzentrisch

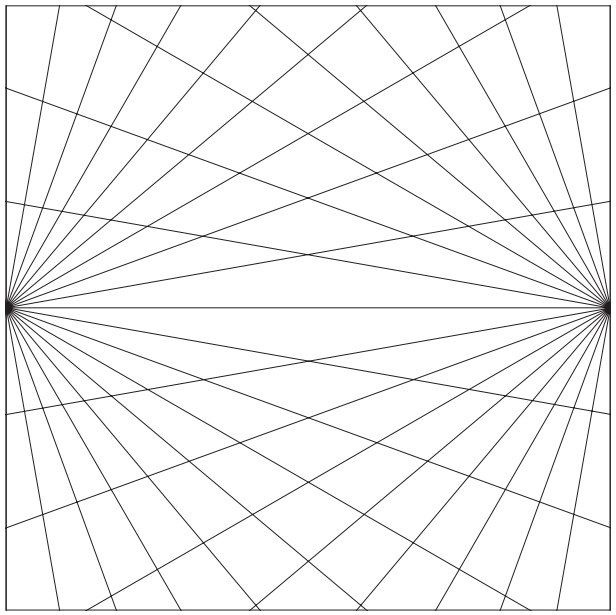






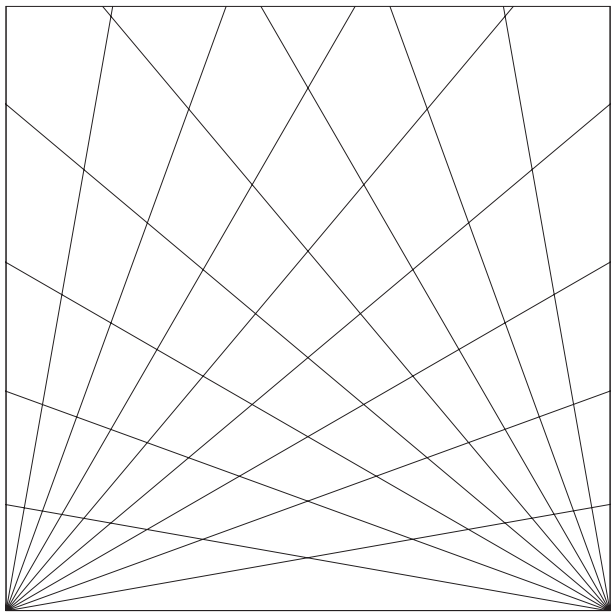


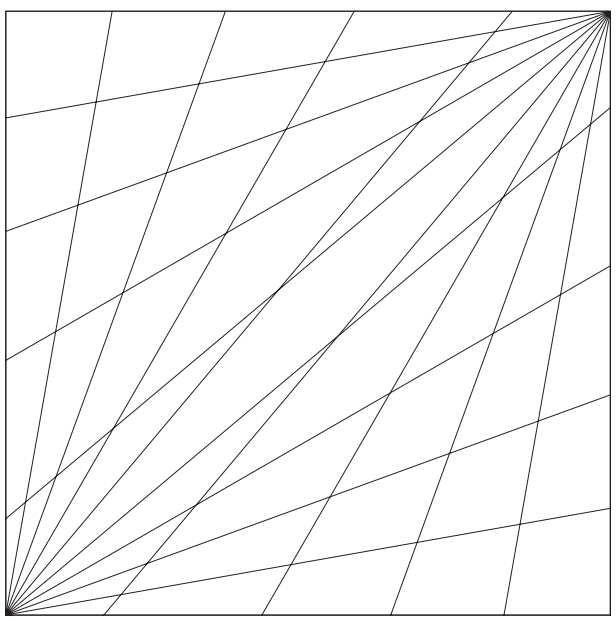


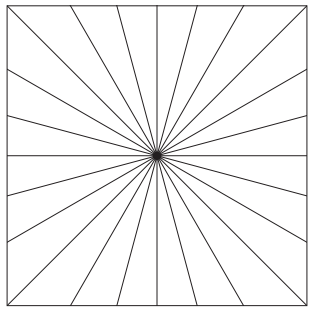


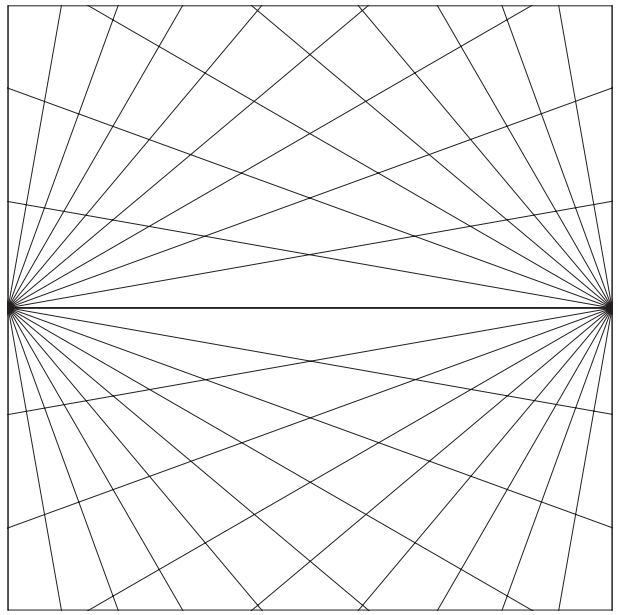
Strahlenbildend/gleichwinklig

Überlagerung mit verschiedenen
Bezugspunkten - zweifach



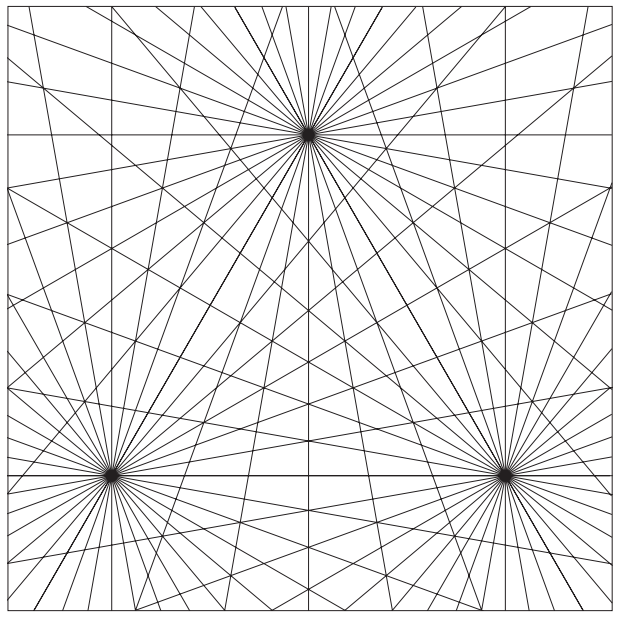


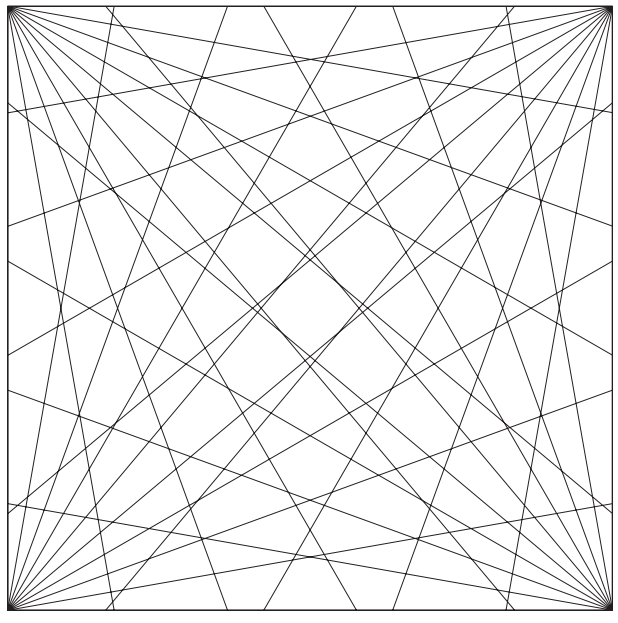


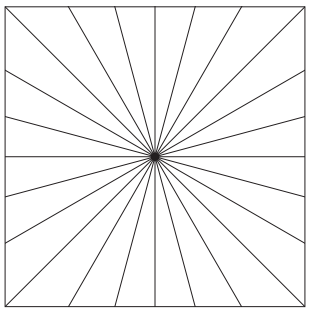


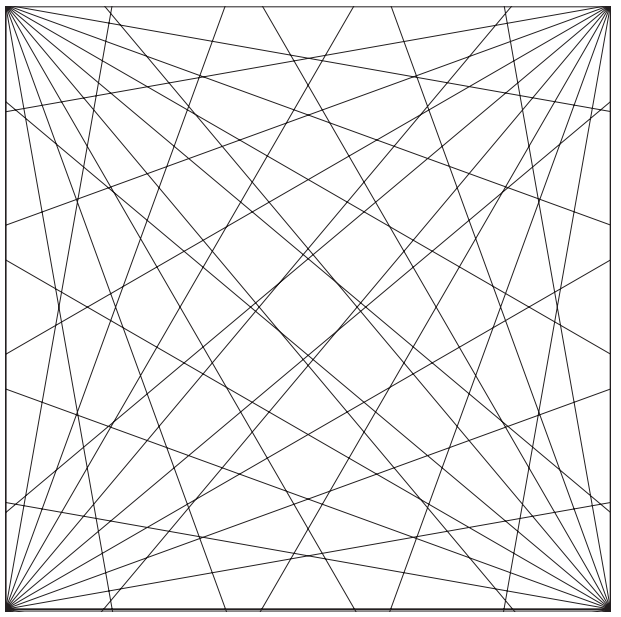
Strahlenbildend/gleichwinklig

Überlagerung mit verschiedenen
Bezugspunkten - ansteigende Anzahlw



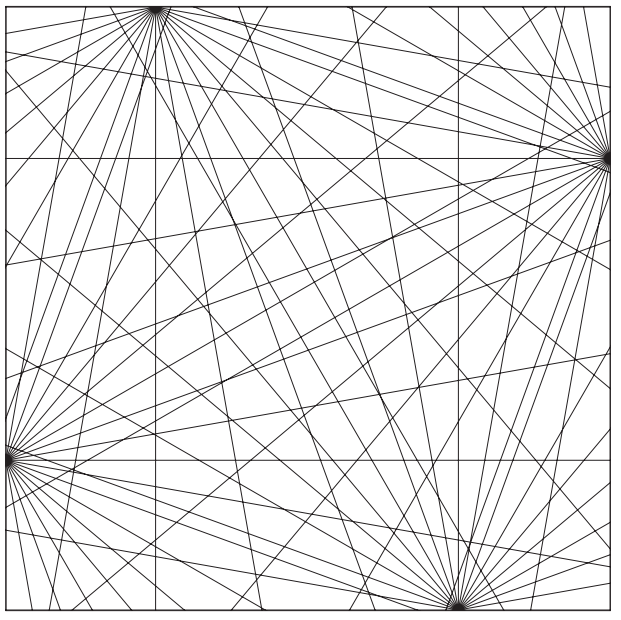


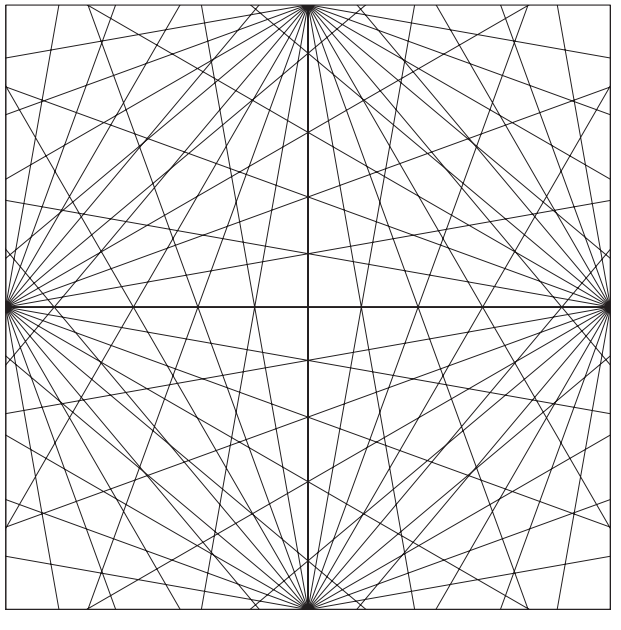


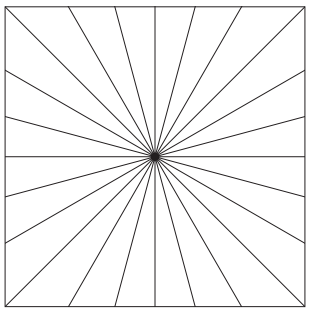


Strahlenbildend/gleichwinklig

Überlagerung mit verschiedenen
Bezugspunkten - vierfach



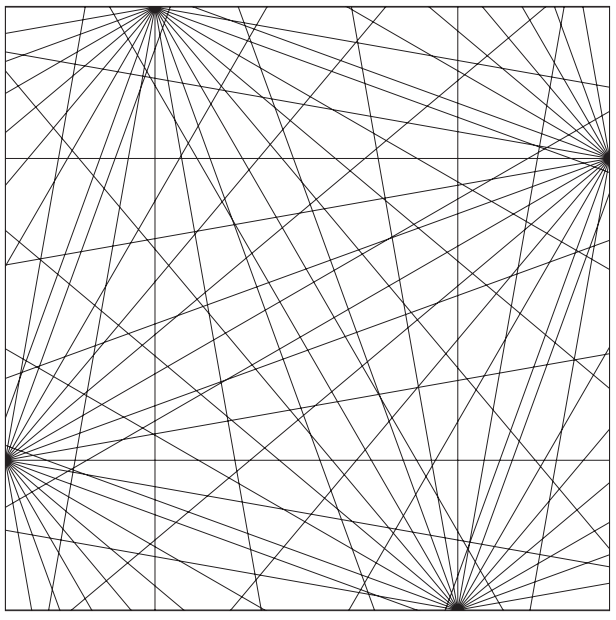


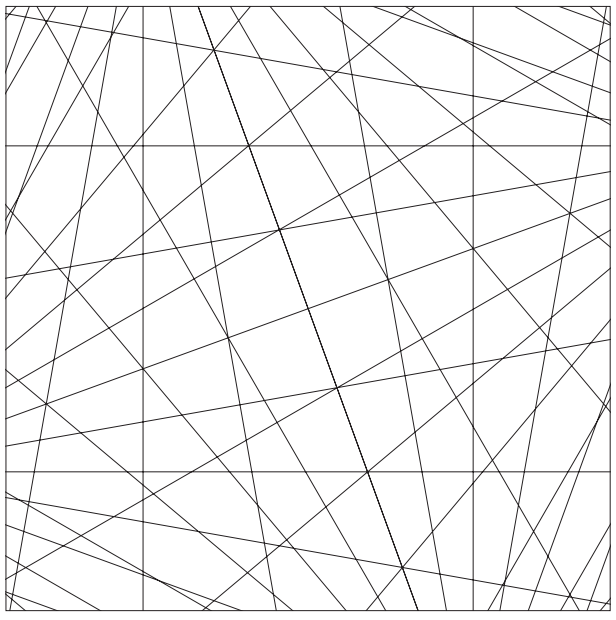


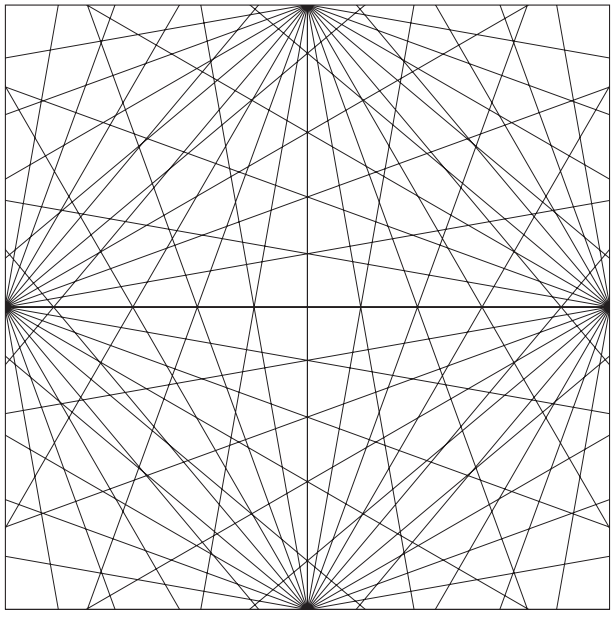
Strahlenbildend/gleichwinklig

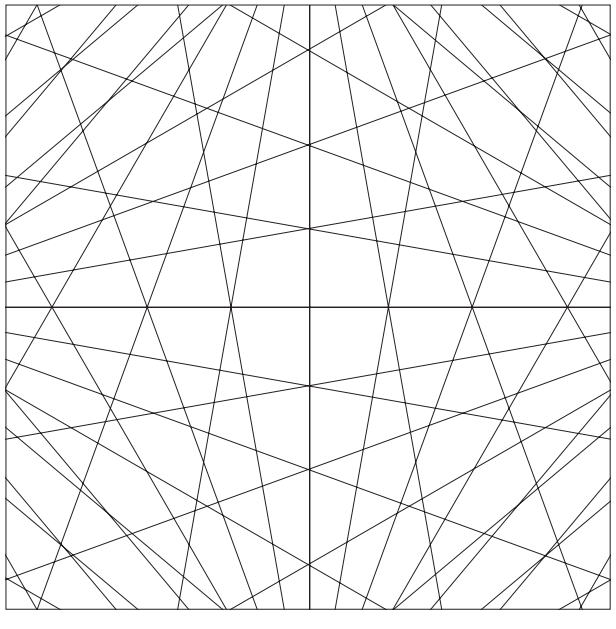
Überlagerung mit verschiedenen
Bezugspunkten - vierfach

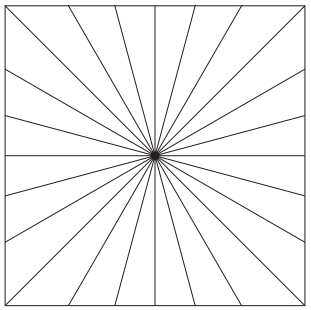
Verlagerung der Bezugspunkte nach außen

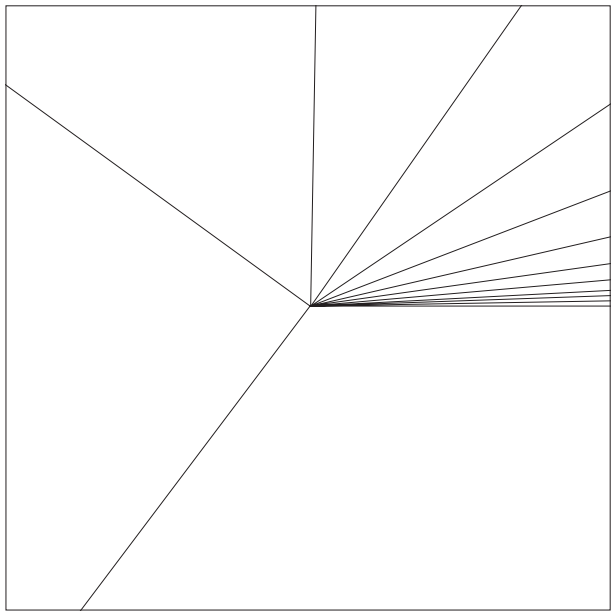








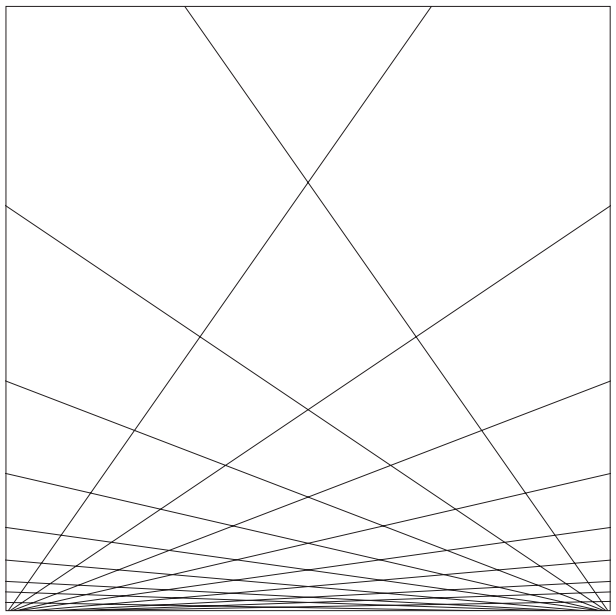


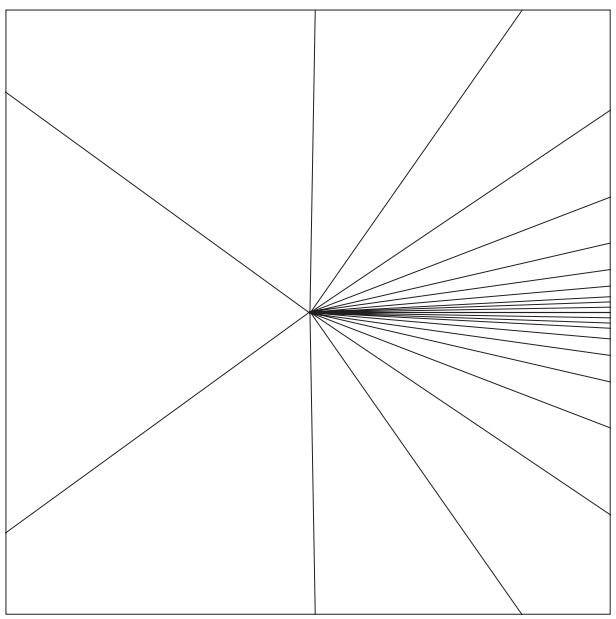


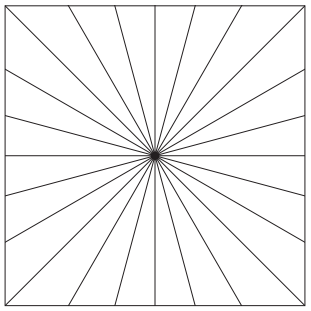
Strahlenbildend/ungleichwinklig

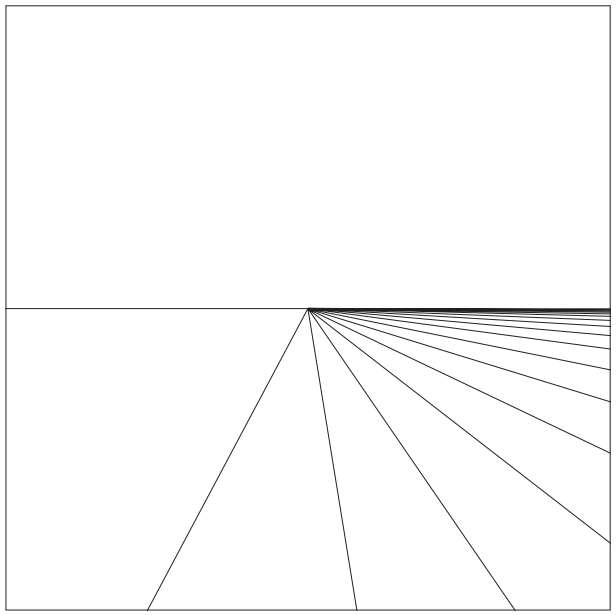
progressiv von konzentrisch zu exzentrisch

nach Fibonacci



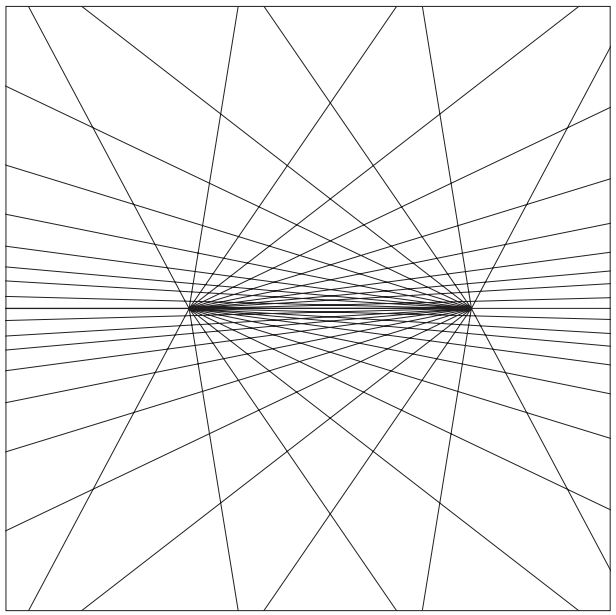


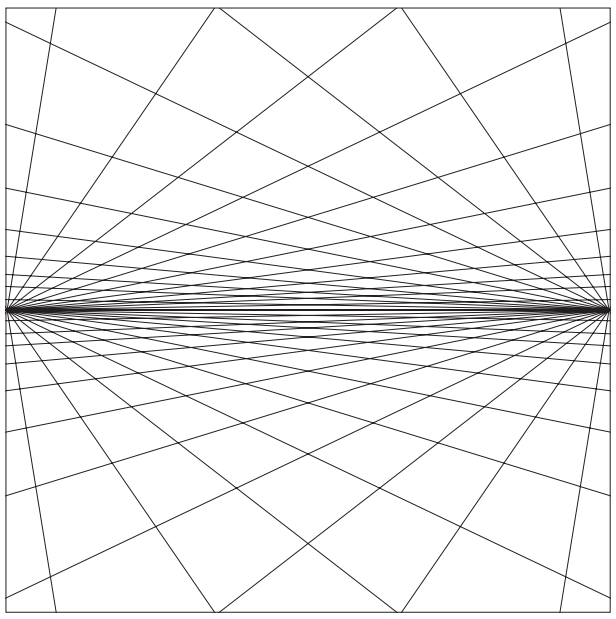


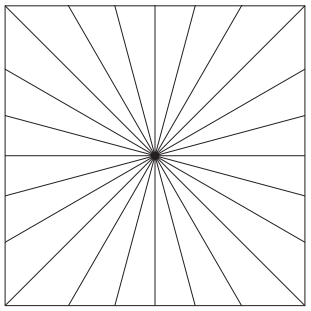


Strahlenbildend/ungleichwinklig

progressiv von konzentrisch zu exzentrisch



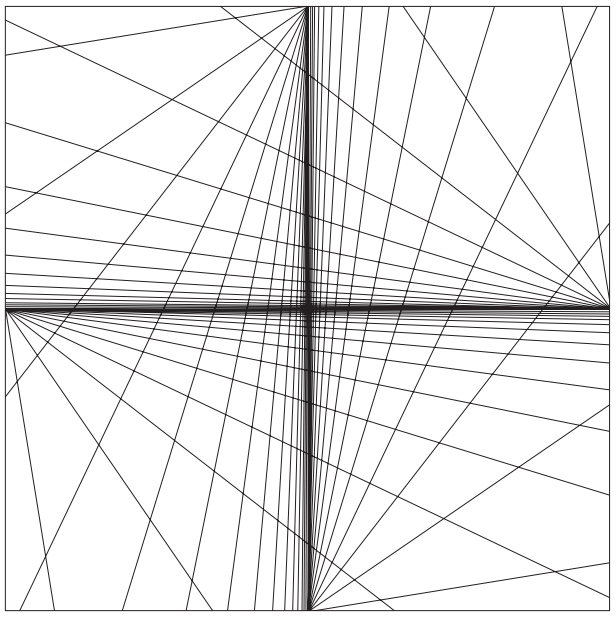


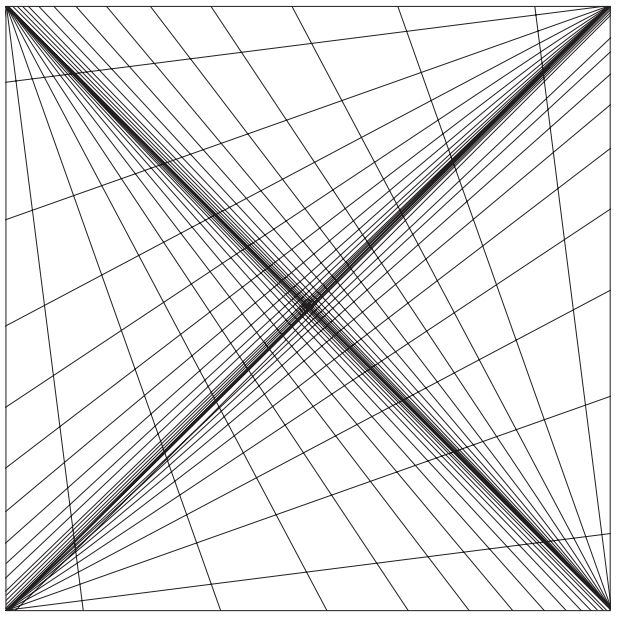


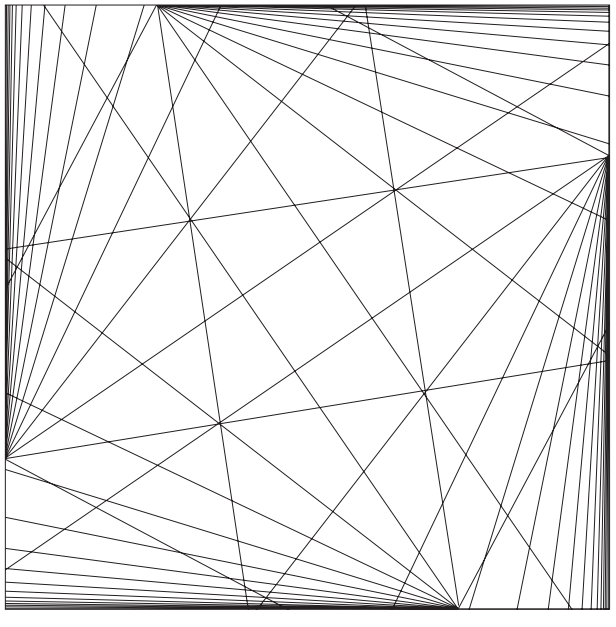
Strahlenbildend/ungleichwinklig

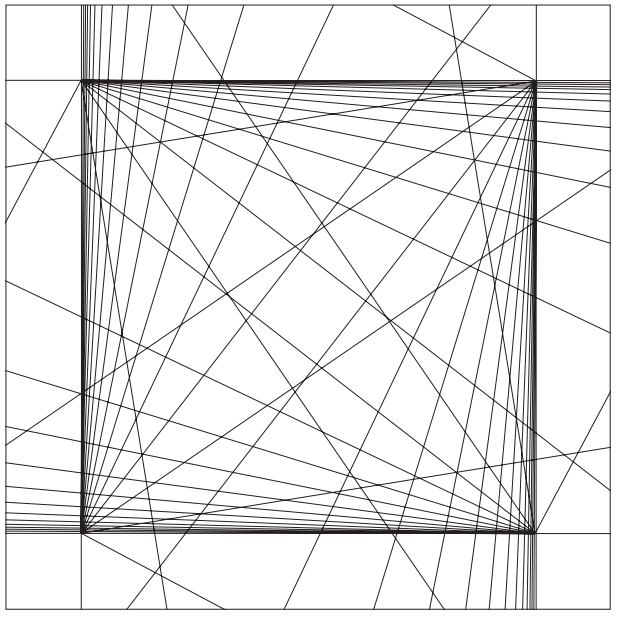
progressiv von konzentrisch zu exzentrisch

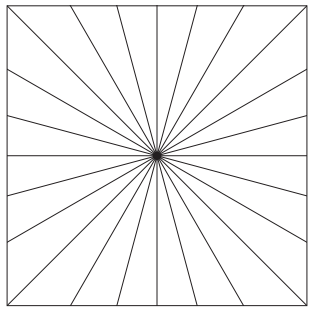
Überlagerung mit verschiedenen
Bezugspunkten - vierfach

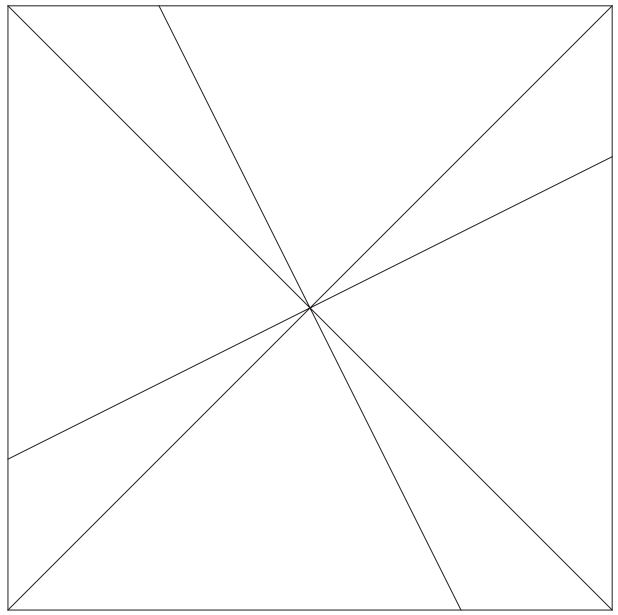






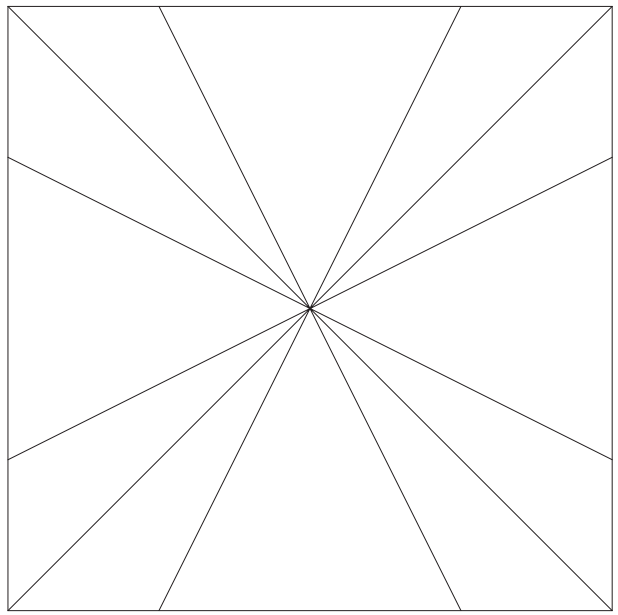


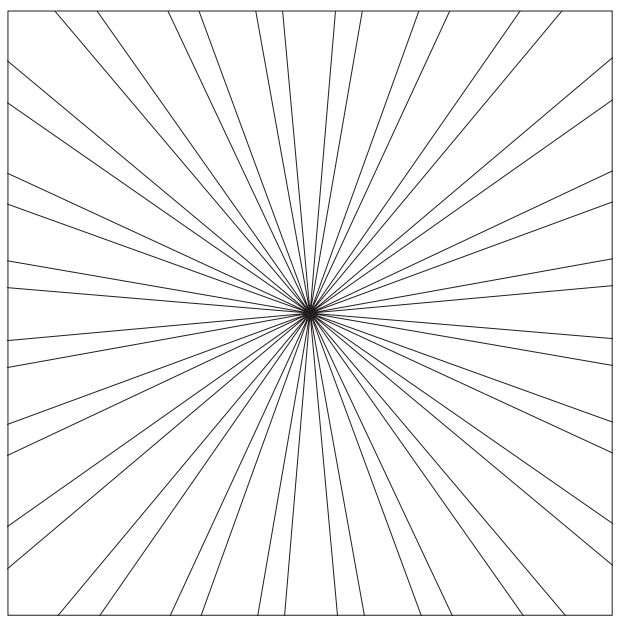


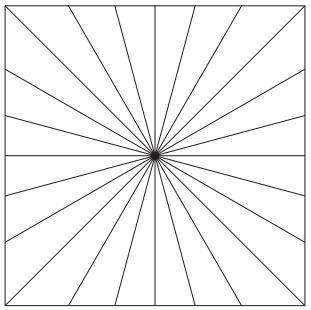


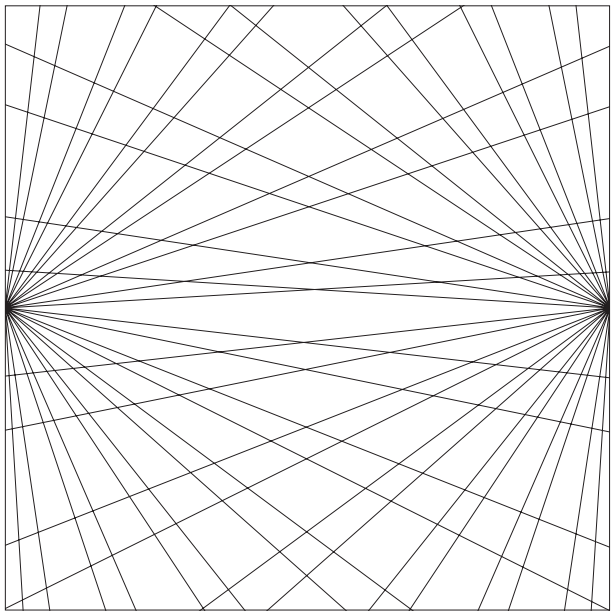
Strahlenbildend/ungleichwinklig

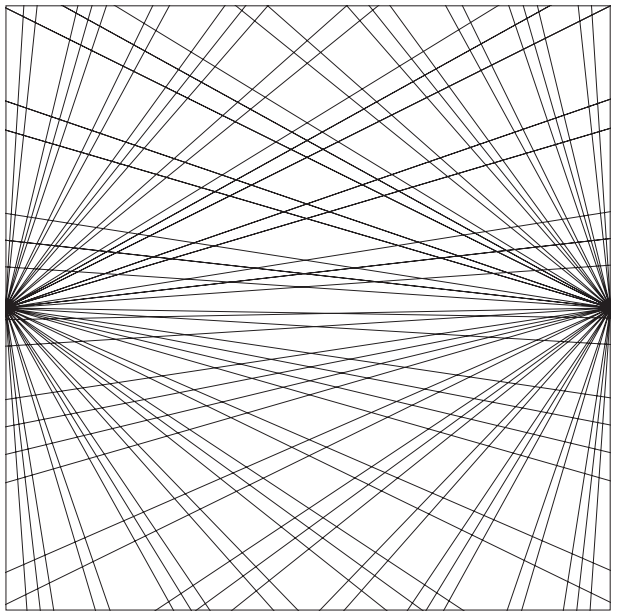
gruppiert







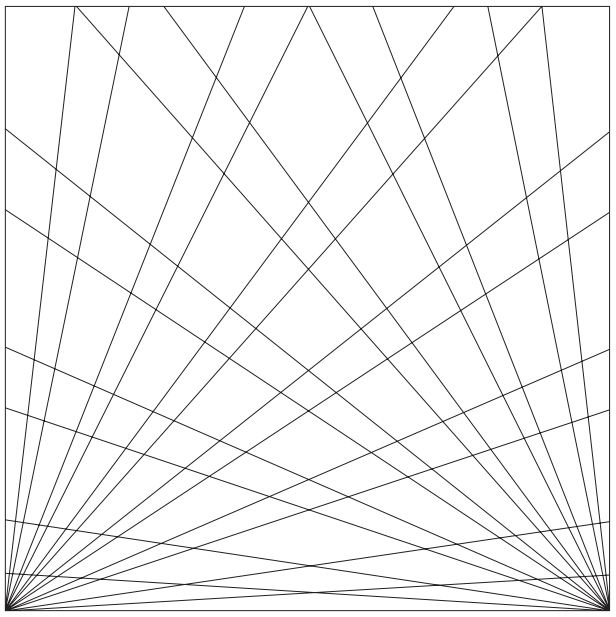


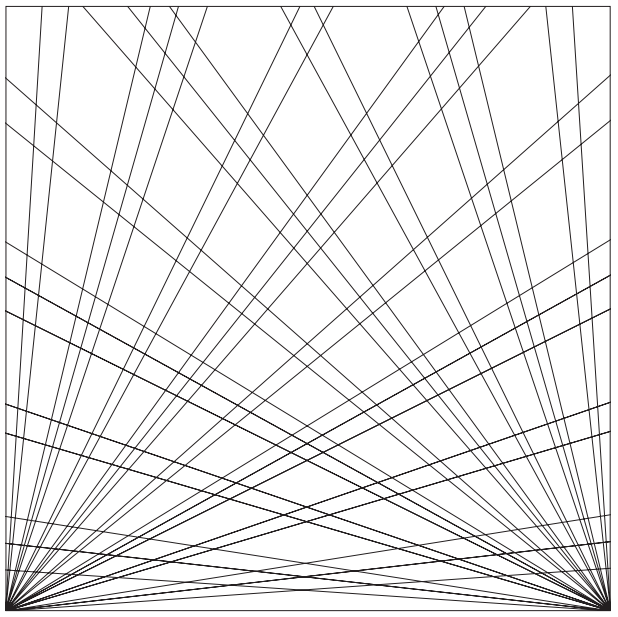


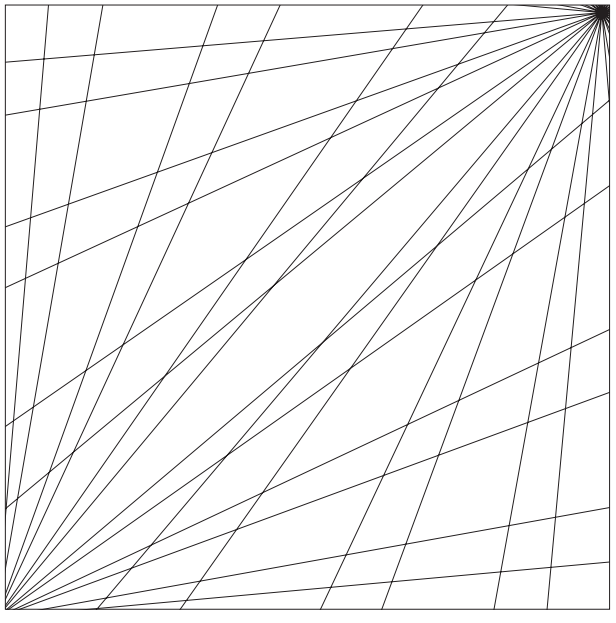
Strahlenbildend/ungleichwinklig

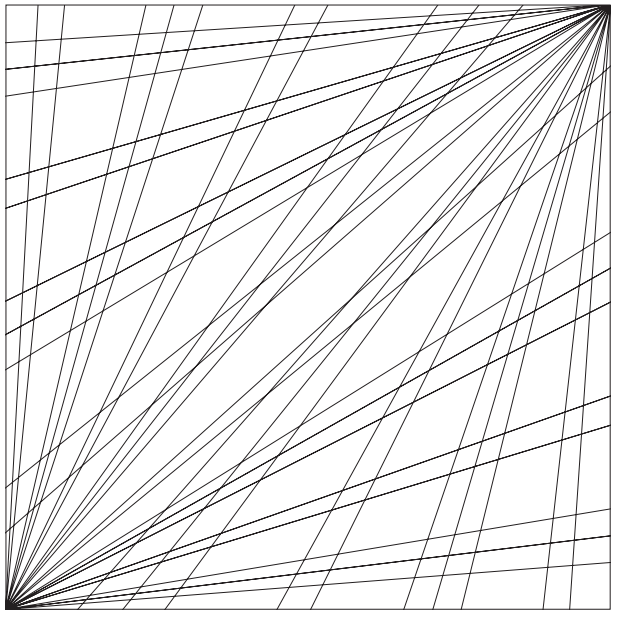
gleichmäßig und ungleichmäßig gruppiert

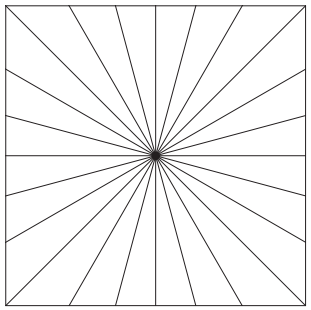
Überlagerung mit verschiedenen
Bezugspunkten - zweifach

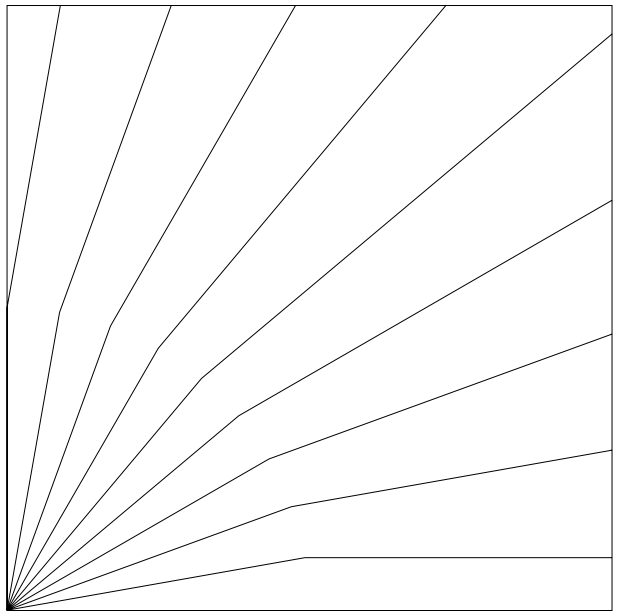


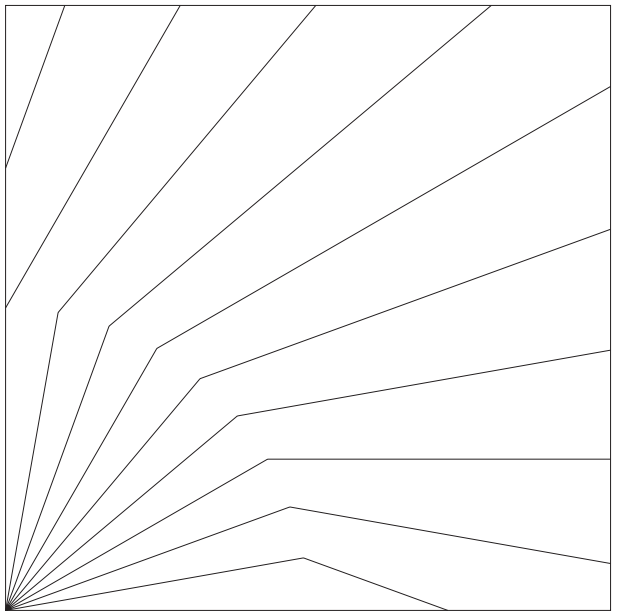






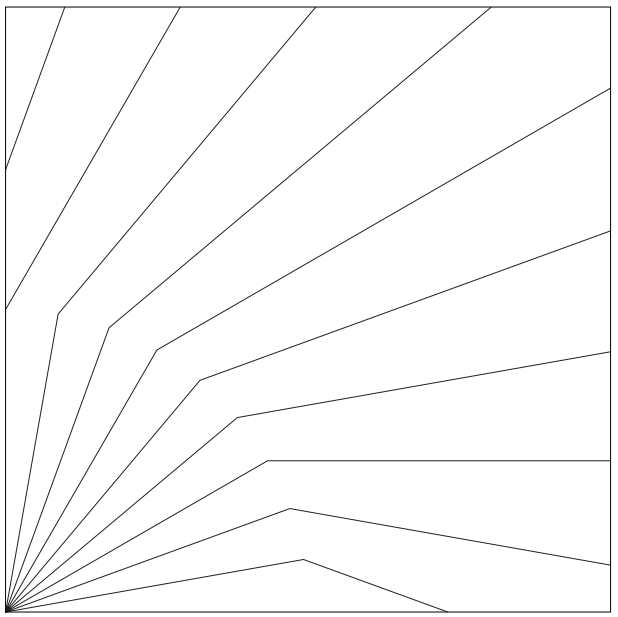


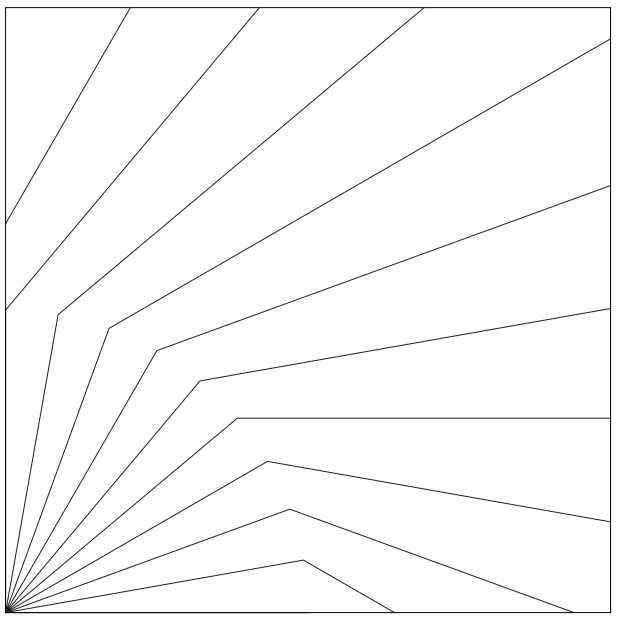


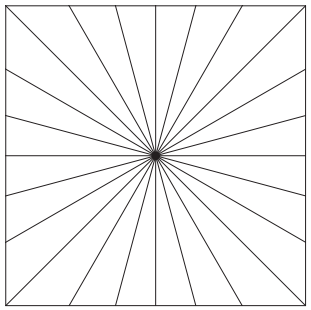


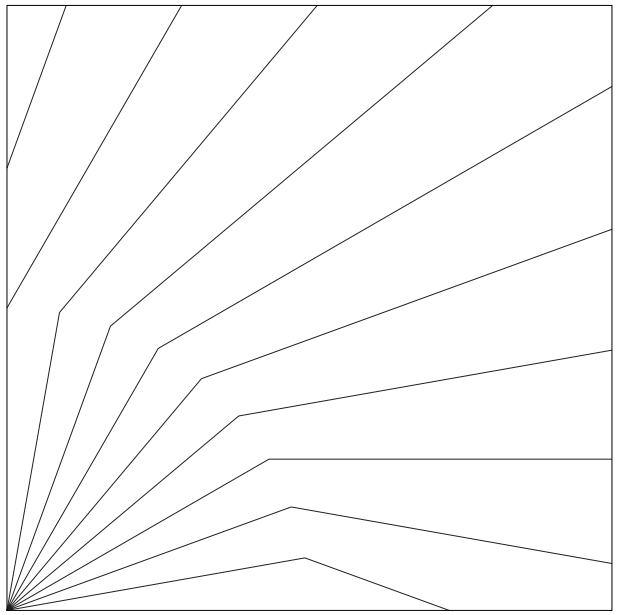
Strahlenbildend

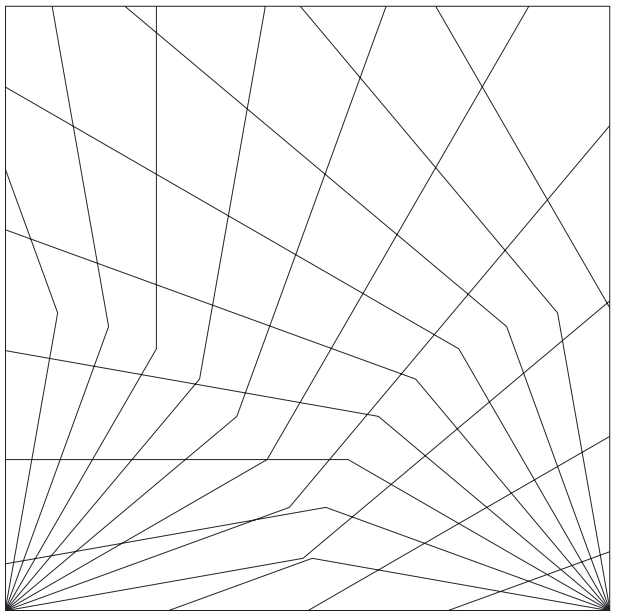
strahlbildend
einfach gekrümmt
exzentrisch
winkelvergrößernd





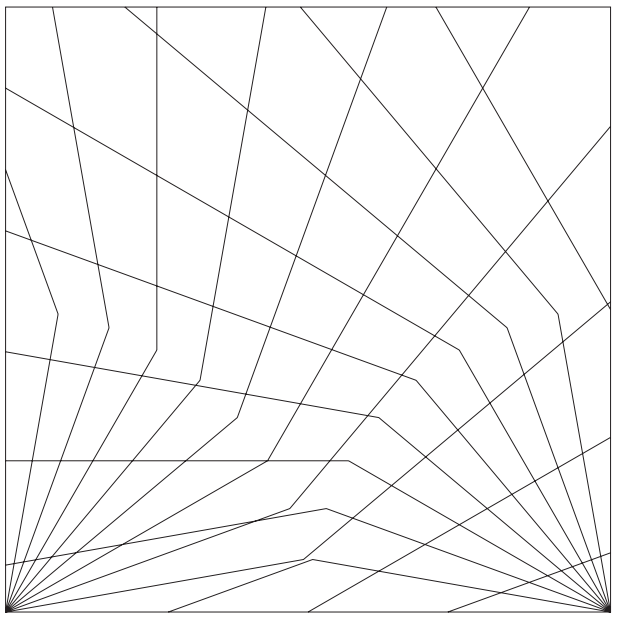


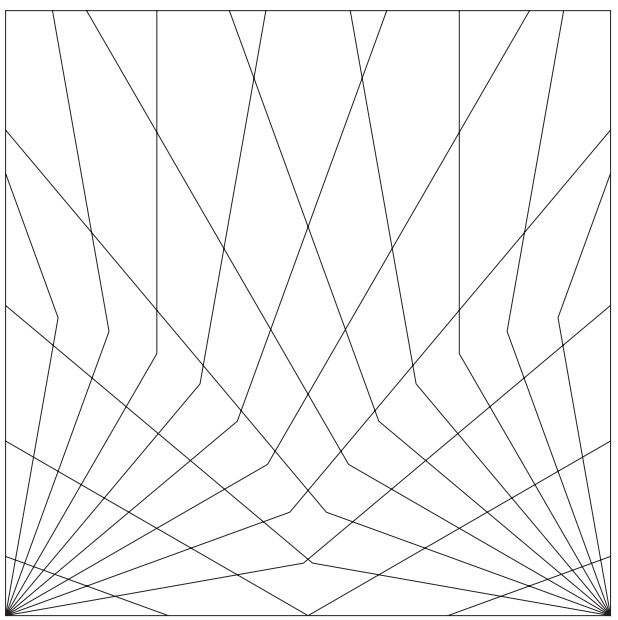


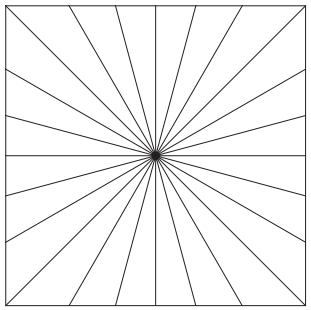


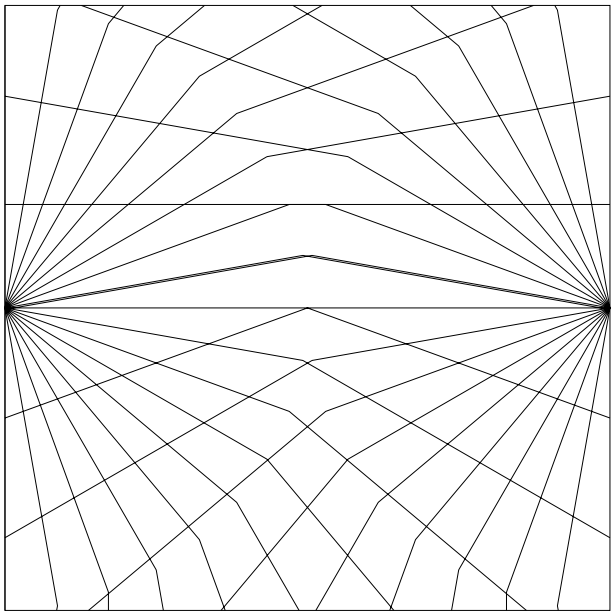
Strahlenbildend

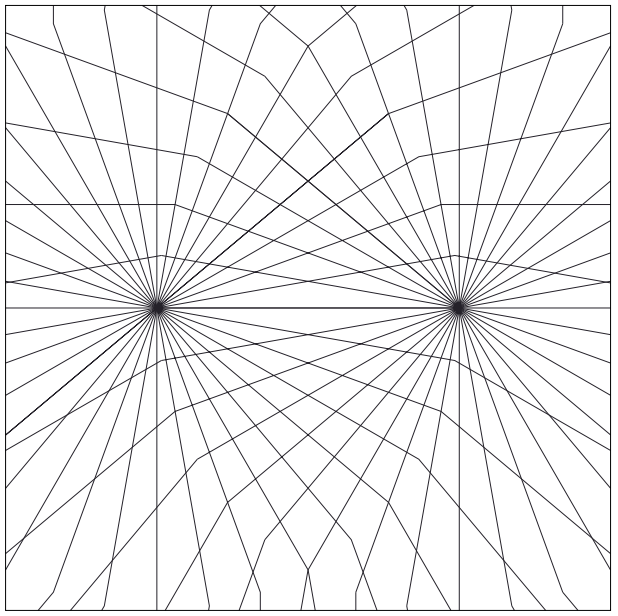
strahlbildend
einfach gekrümmt
exzentrisch
Überlagerung - zweifach





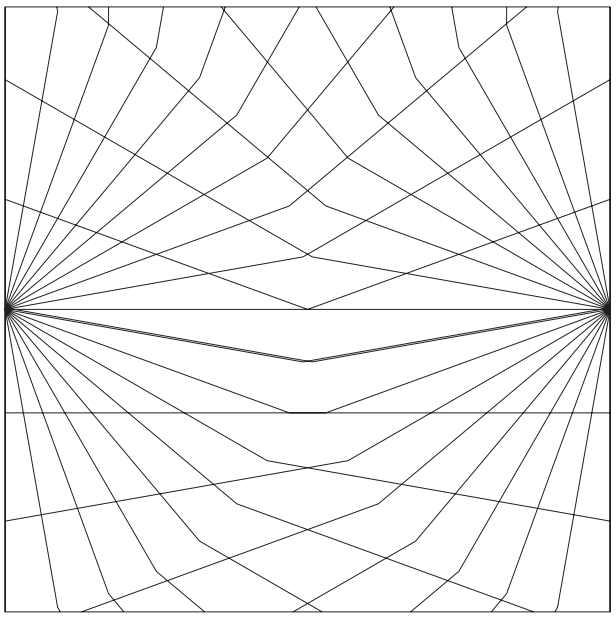


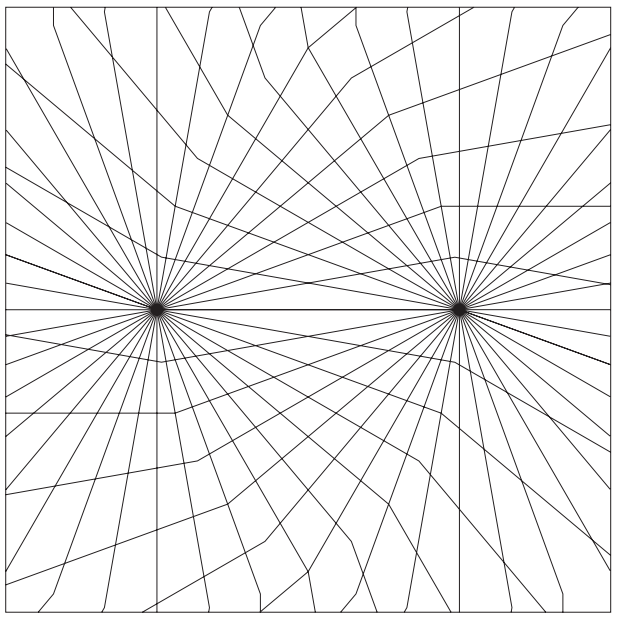


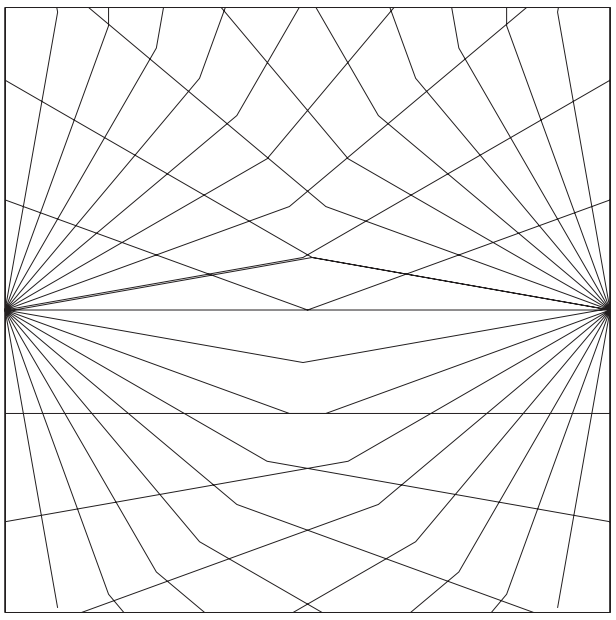


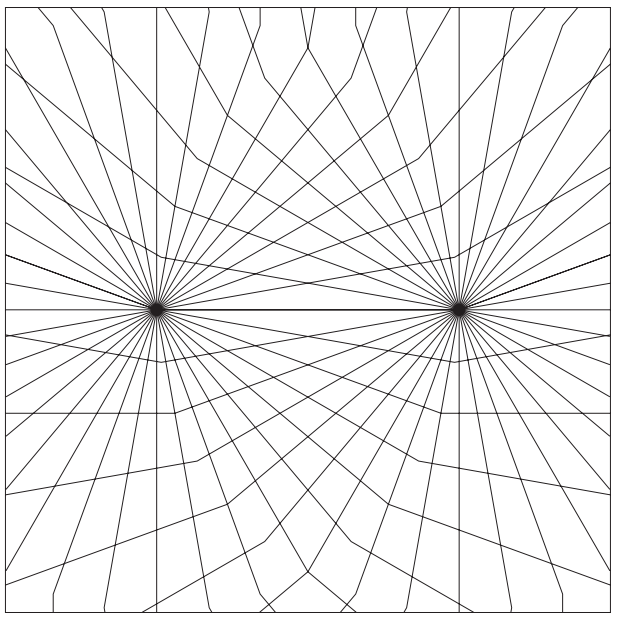
Strahlenbildend

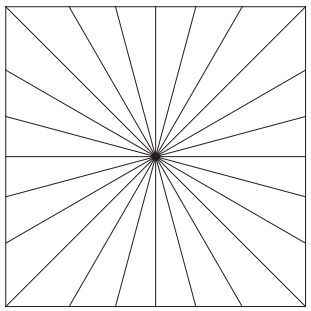
strahlbildend
einfach gekrümmt
exzentrisch
Überlagerung mit verschobenen
Bezugspunkten - zweifach

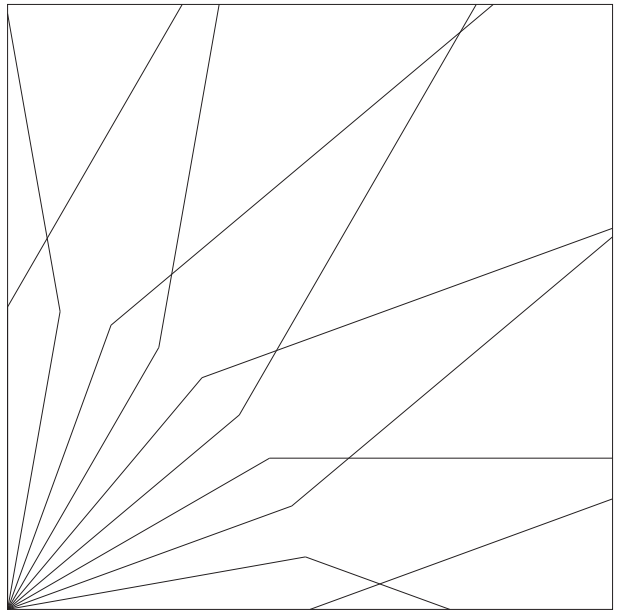






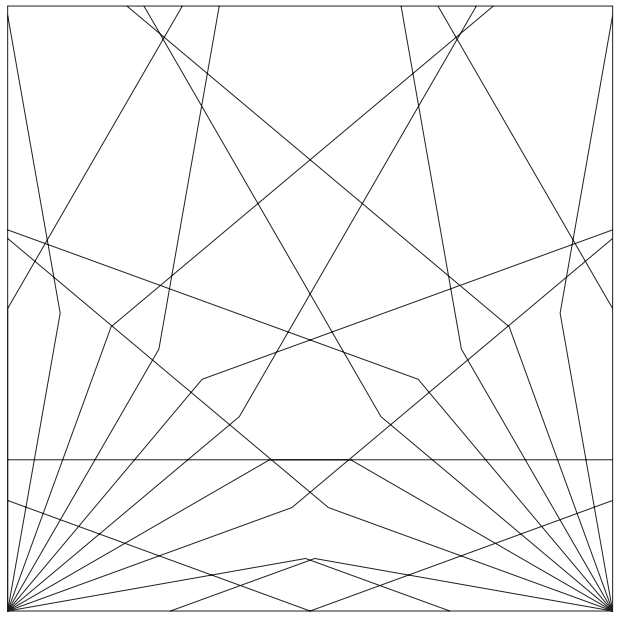


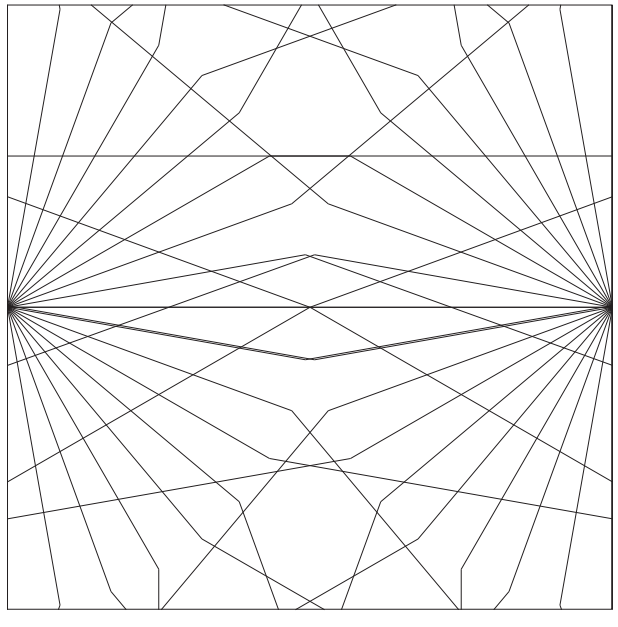


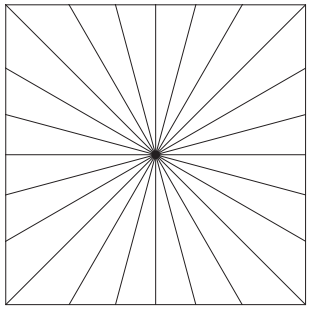


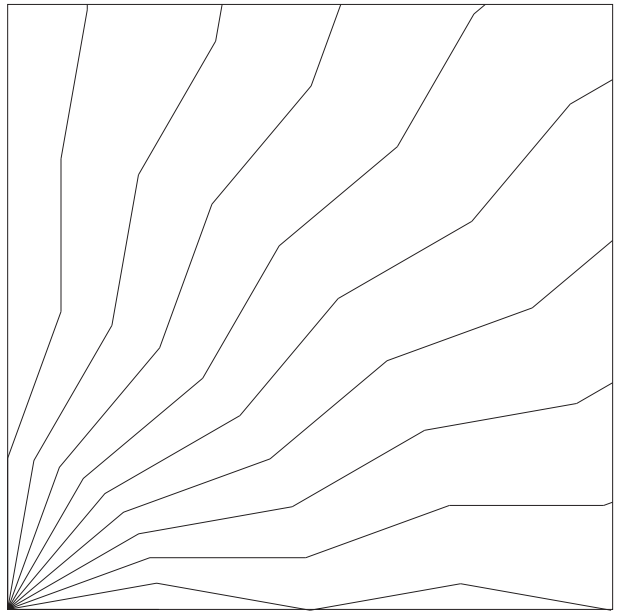
Strahlenbildend

strahlbildend
einfach entgegengesetzt gekrümmt
exzentrisch
Überlagerung mit verschiedenen
Bezugspunkten - zweifach



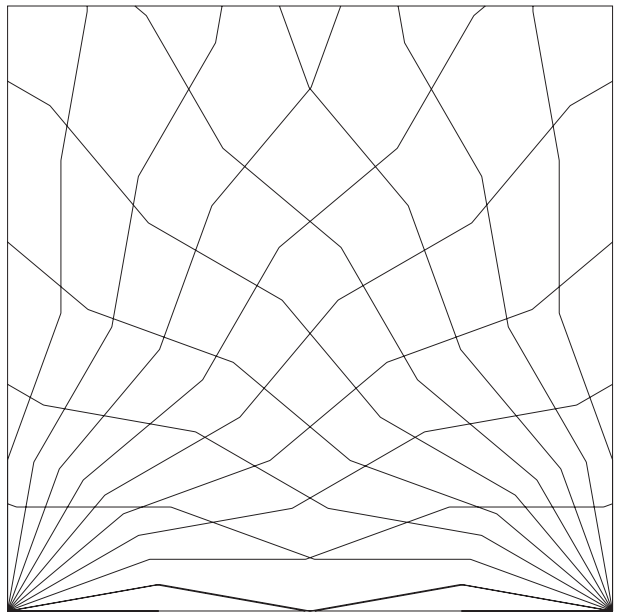


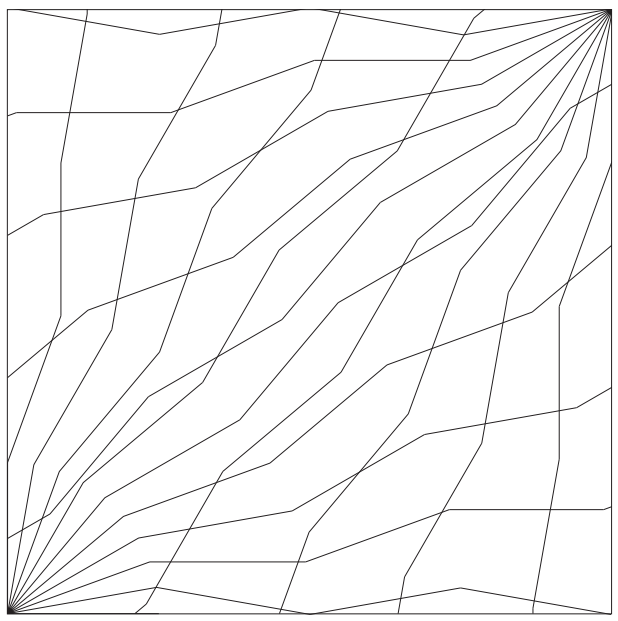


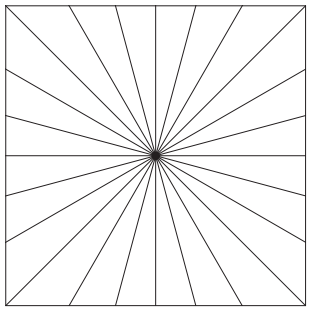


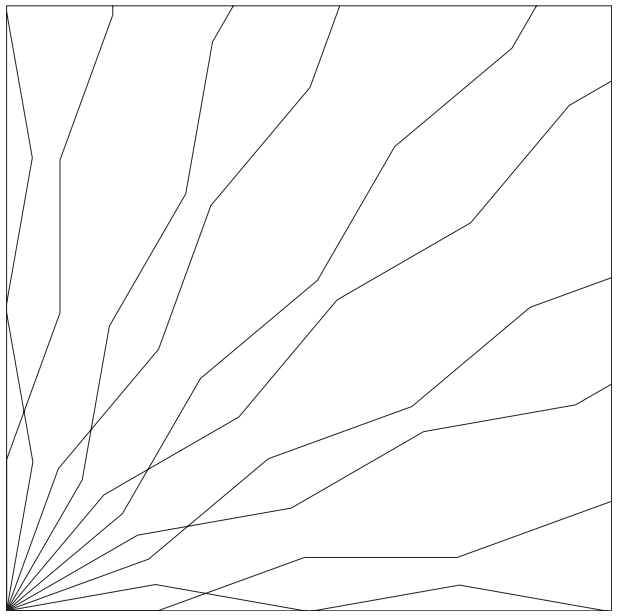
Strahlenbildend

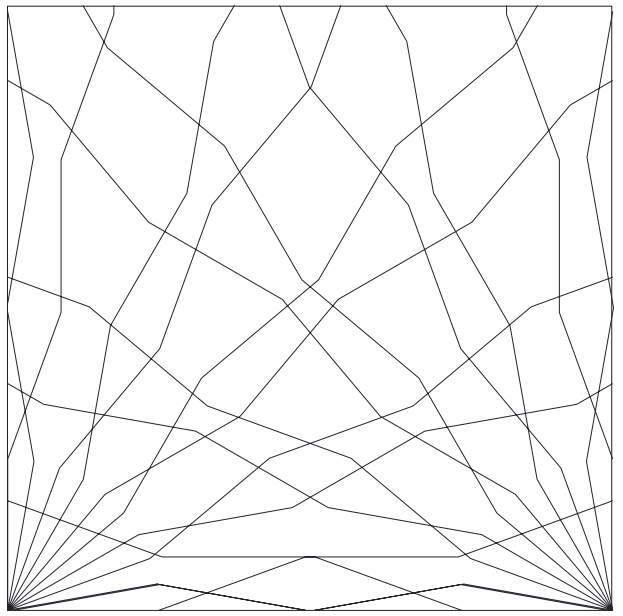
strahlbildend
mehrfach gekrümmt
exzentrisch
Überlagerung mit verschiedenen
Bezugspunkten - zweifach











Strahlenbildend

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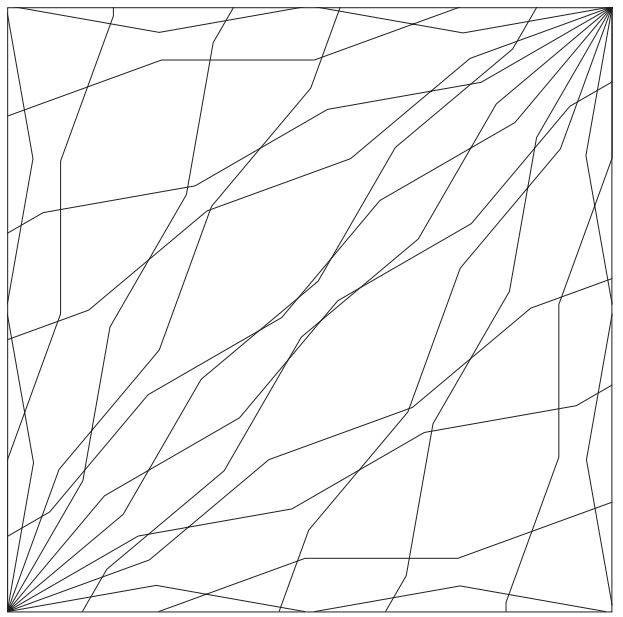
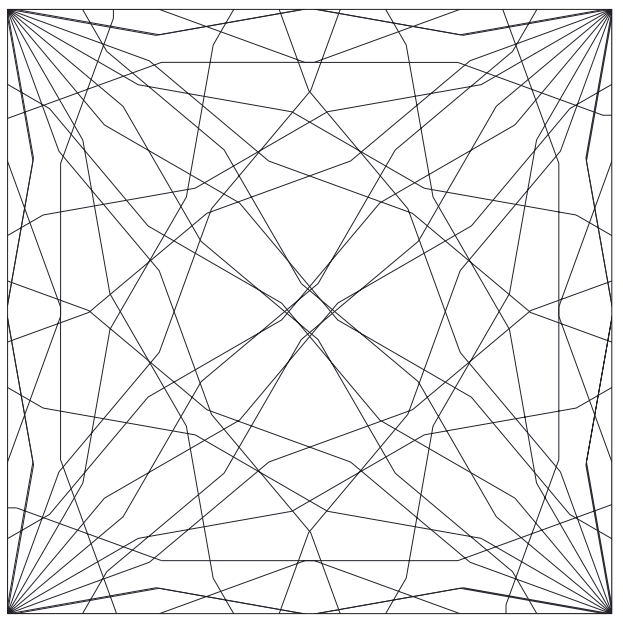
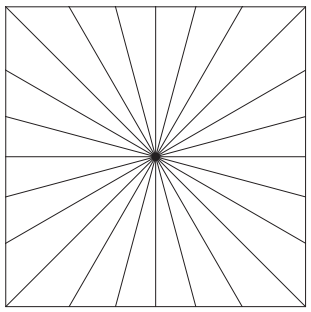
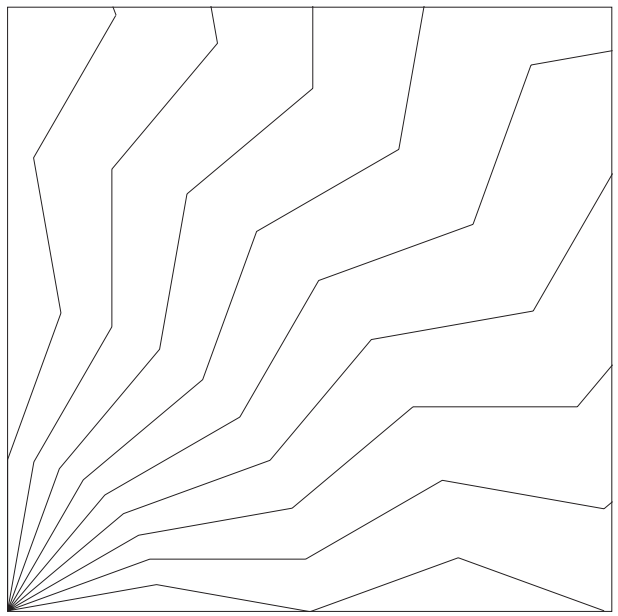
Überlagerung mit verschiedenen
Bezugspunkten - zweifach/vierfach









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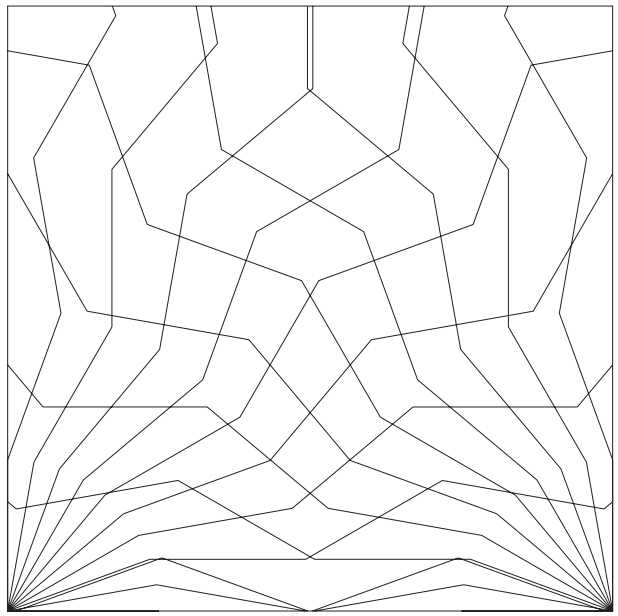
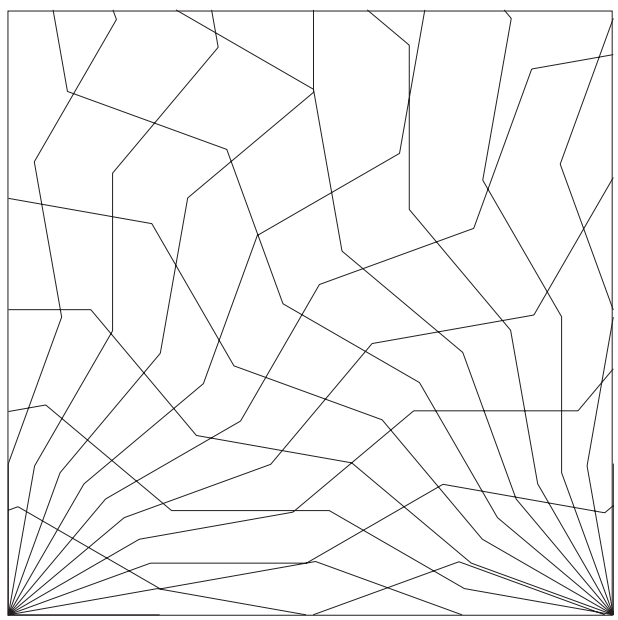
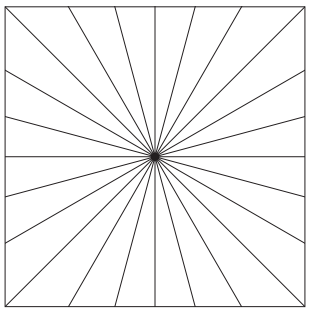
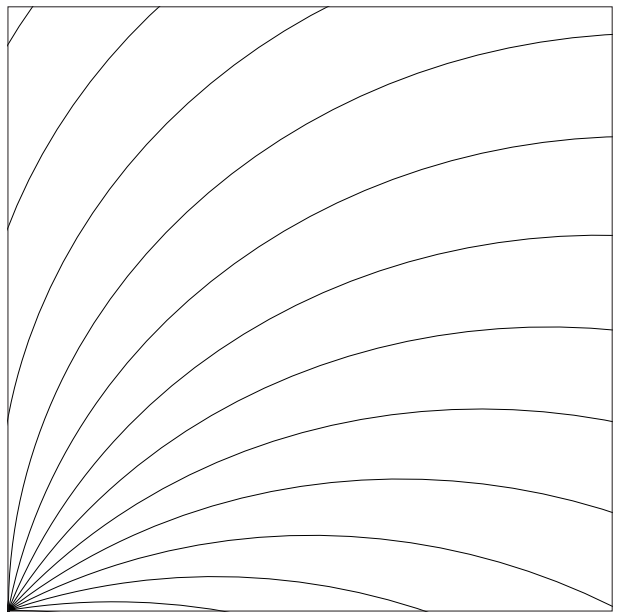
Überlagerung - zweifach









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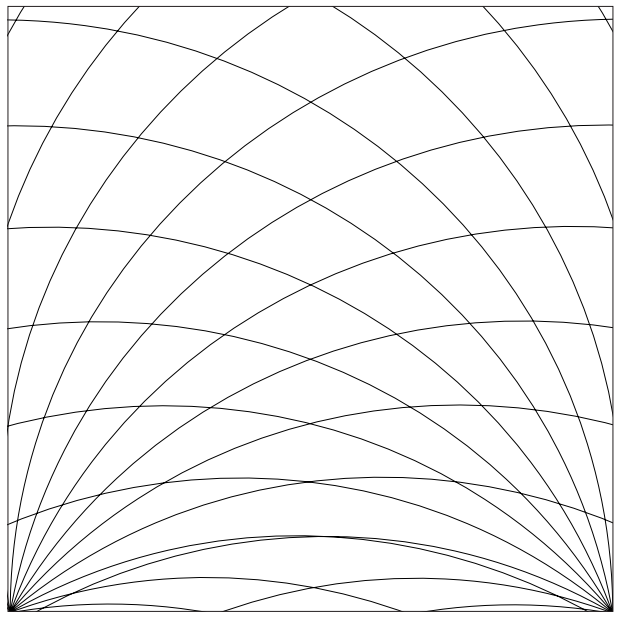

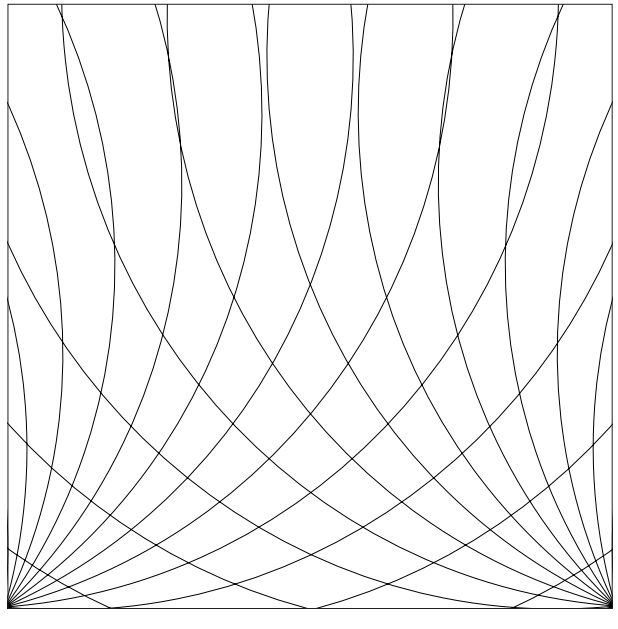

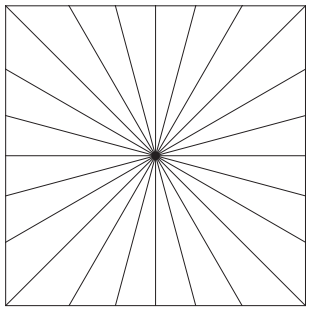

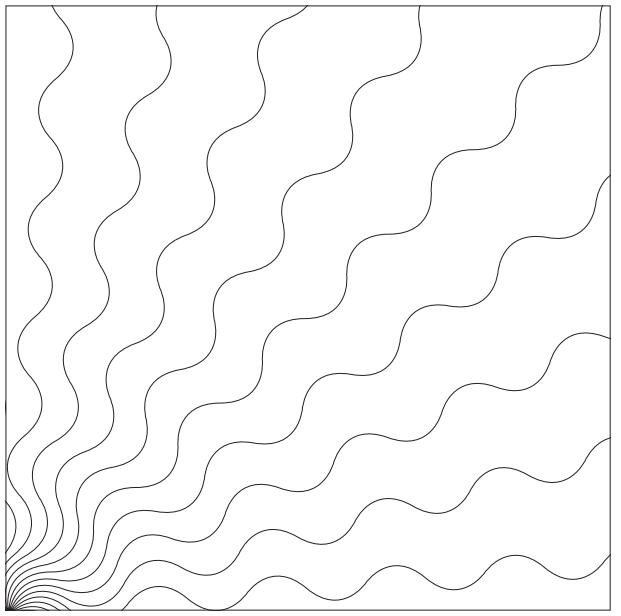

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gleichwinklig
mehrfach gekrümmte
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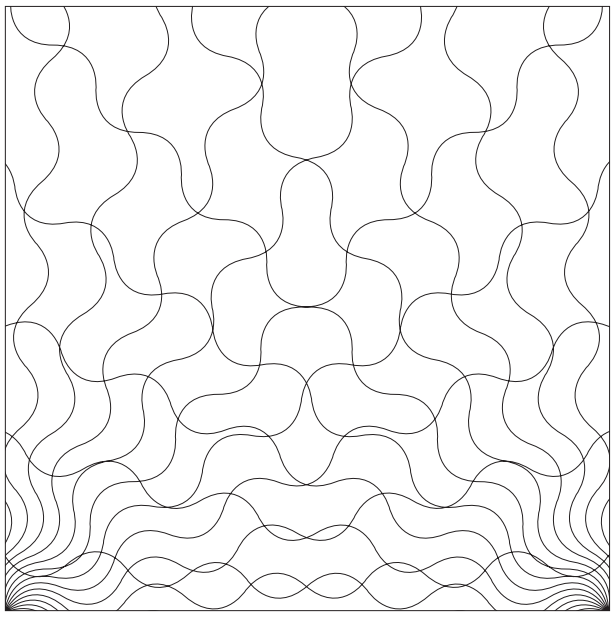

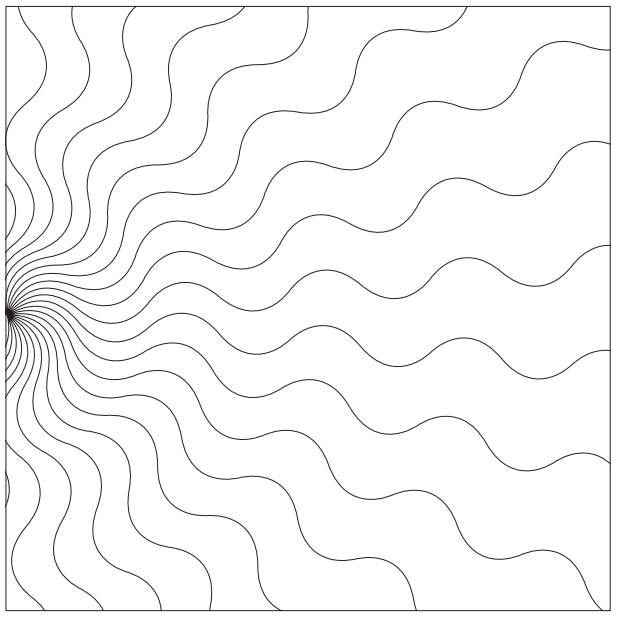

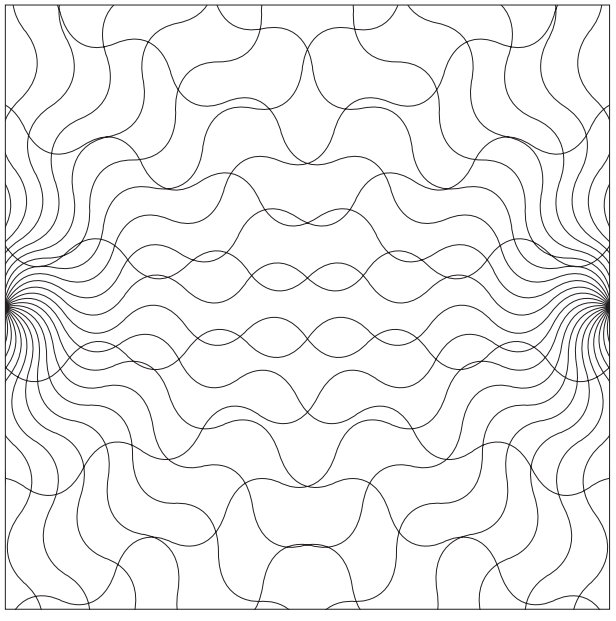

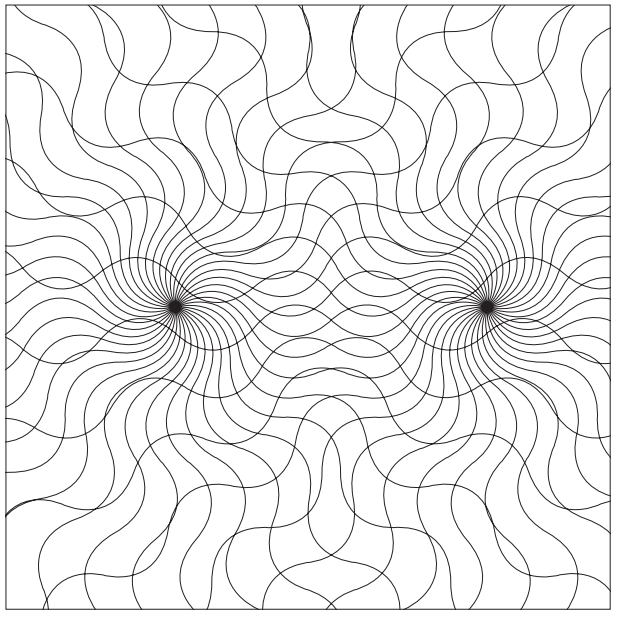

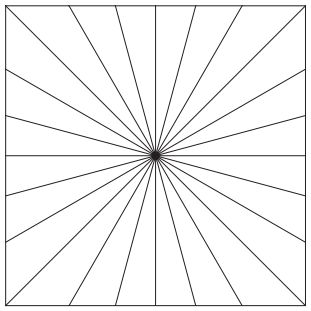

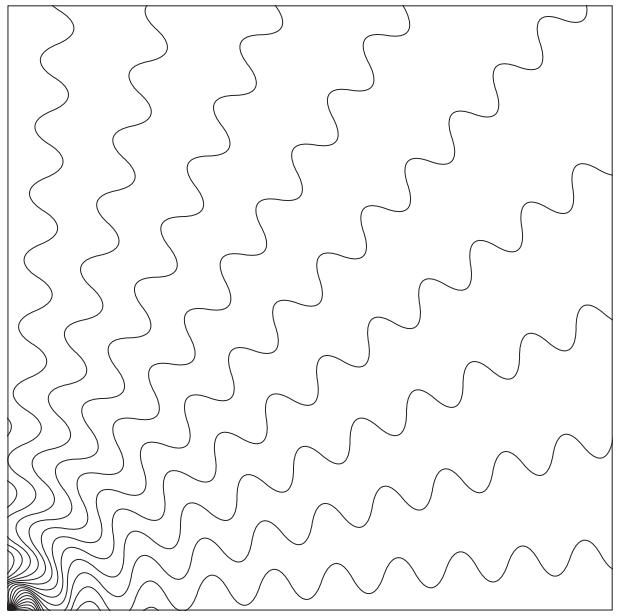

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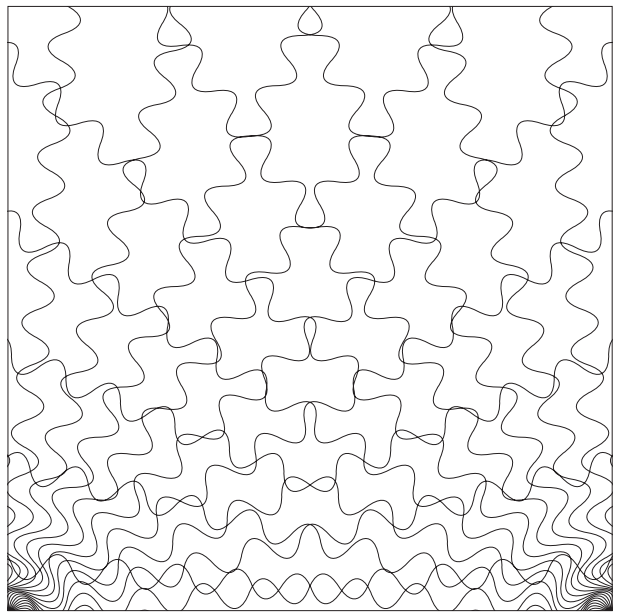

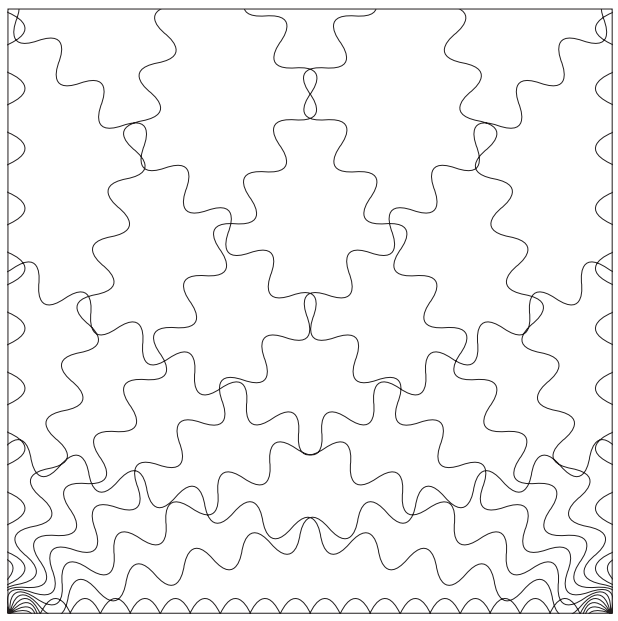

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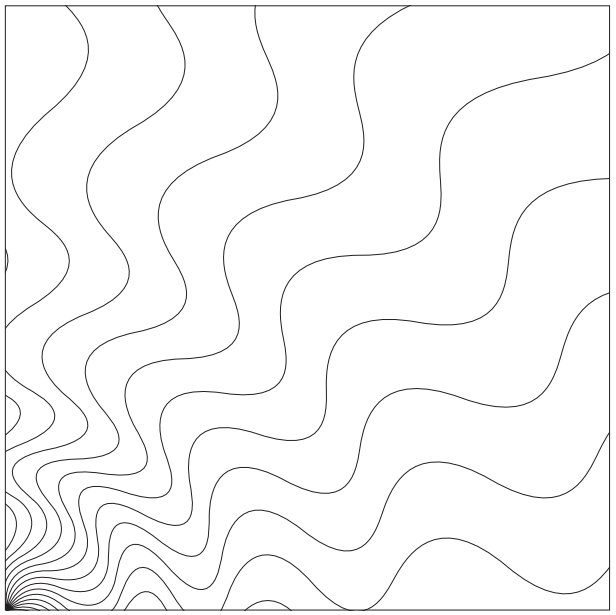
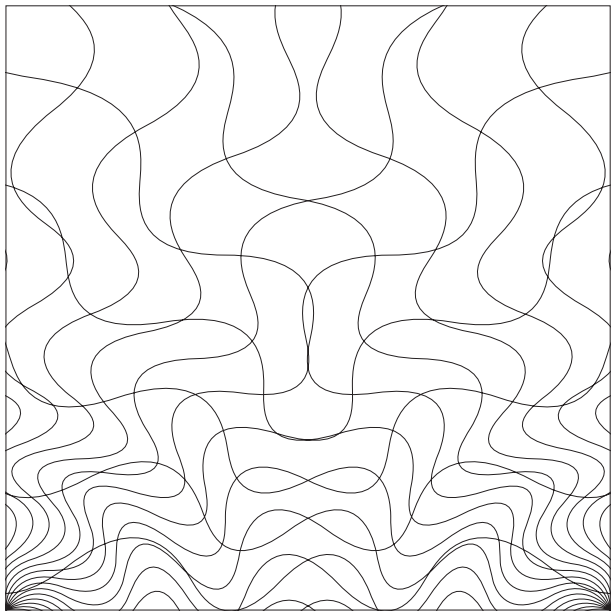
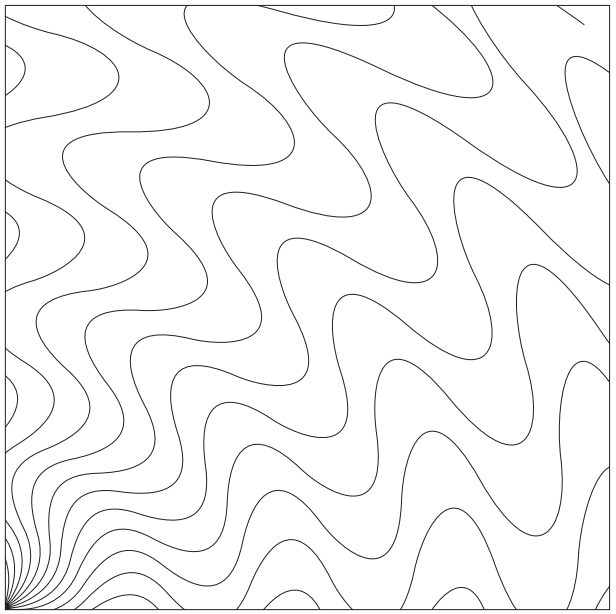
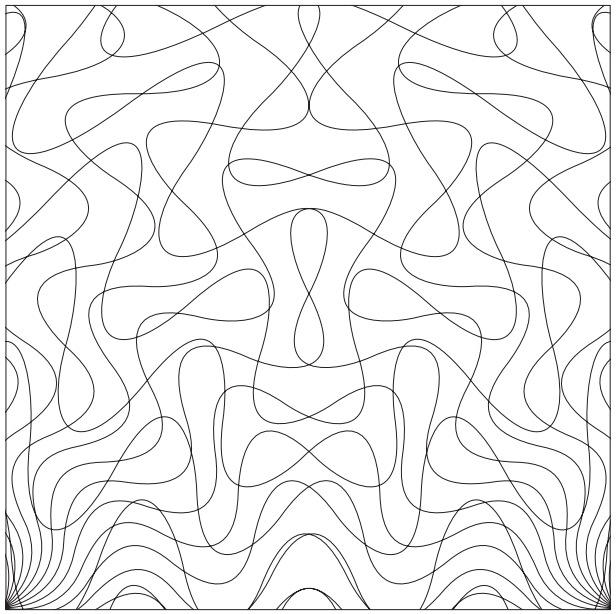
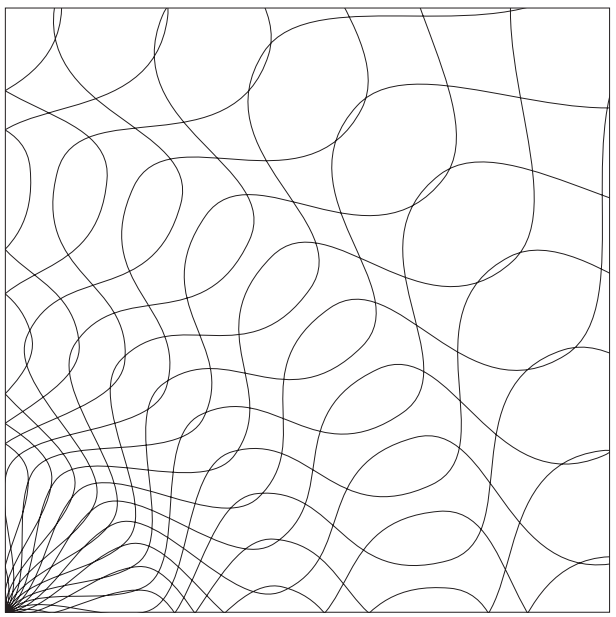
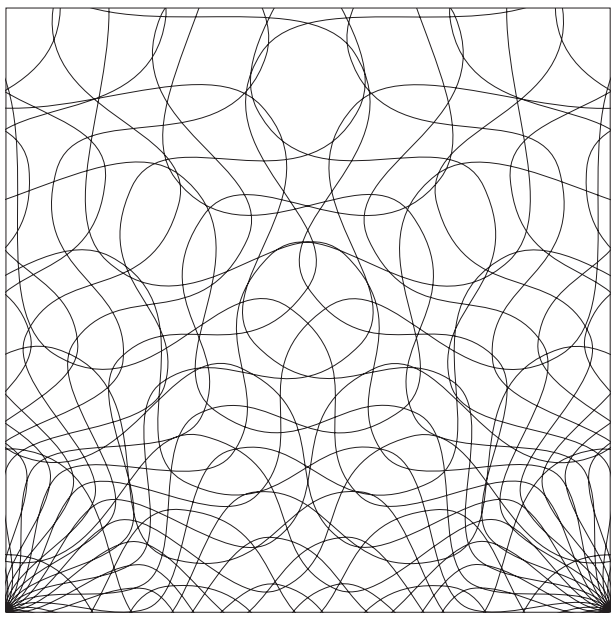












Ordnungphänomene in Natur
Technik/Architektur und Design

Synthetische Ordnungssyteme

Modulare Systeme über die Bildung von Interferenzen

Interferenzen im dreidimensionalen Raum

Interferenz
Durch die Überlagerung zweier gleicher Grundstrukturen und Anwendung verschiedener Symmetrieoperationen an einer oder beiden Flächen enstehen verschiedene Interferenzmuster, die in Additionsverbände übertragen werden.

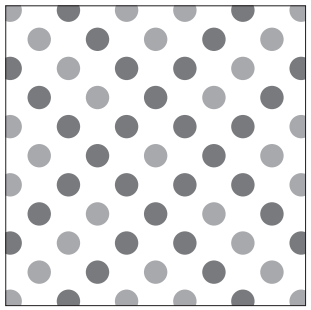
Physikalisch
Die Interferenz beschreibt die Überlagerung von zwei oder mehr Wellen nach dem Superpositionsprinzip – also die Addition ihrer Amplituden (nicht der Intensitäten) während ihrer Durchdringung. Interferenz tritt bei allen Arten von Wellen auf, also bei Schall-, Licht-, Materiewellen usw. Löschen sich die Wellen dabei gegenseitig aus, so spricht man von (vollständiger) destruktiver Interferenz. Verstärken sich die Amplituden, so spricht man von konstruktiver Interferenz. Das Muster aus Stellen konstruktiver und destruktiver Interferenz wird als Interferenzmuster bezeichnet. Im experimentellen Aufbau treten abwechselnd charakteristische Interferenzmaxima und Interferenzminima auf.

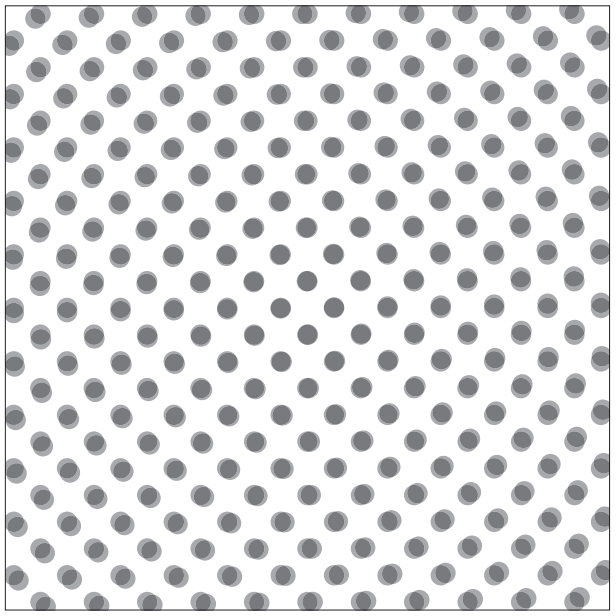
Psychologisch
Als Interferenzen bezeichnet man in der Gedächtnispsychologie verschiedene Formen der Gedächtnishemmung, vorzugsweise die retroaktive und die proaktive Hemmung. Bei der retroaktiven Hemmung wird das Lernen und Behalten von zuvor gelerntem Stoff durch nachfolgend Gelerntes behindert. Bei der proaktiven Hemmung behindert ein vorausgegangener Lernprozess den nachfolgenden.

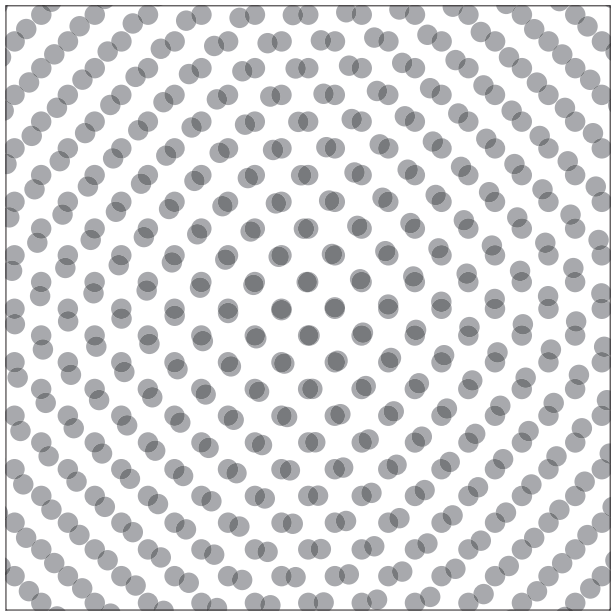
Sprachwissenschaftlich
Mit dem Begriff Interferenz bezeichnet man in der Sprachwissenschaft die Übertragung muttersprachlicher Strukturen auf äquivalente Strukturen einer Fremdsprache und umgekehrt oder von Strukturen eines Dialekts auf die zugehörige Standardsprache und umgekehrt. Das betrifft Strukturen semantischer, grammatischer (morphosyntaktischer), idiomatischer, phonologischer und gestikulatorischer Art in der Ausgangssprache, deren Übernahme in die Zielsprache von kompetenten Hörern oder Lesern dort als falsch oder irreführend betrachtet werden und die gegebenenfalls so zu Missverständnissen oder zu unverständlichen Sätzen führen können.

Interferenz und Strukturfarben
Da sich das Licht wie eine Welle verhält, ist es möglich, dass uns Dinge farbig erscheinen obwohl sie weder Pigmente noch Farbstoffe enthalten. Manchmal leuchten und schillern sie sogar besonders bunt. Die Rede ist von sogenannten Interferenzfarben. In der Natur findet man sie beispielsweise bei den Flügeln der Schmetterlinge oder dem bunten Federkleid der Pfauen oder Kolibris. Aber auch außerhalb des Tierreichs kann man Interferenzfarben beobachten. Das farbige Schillern von Seifenblasen oder Pfützen mit einem dünnen Ölfilm sind Beispiele dafür.

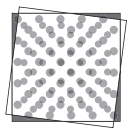
Biologisch
In den Biowissenschaften hat sich RNA-Interferenz als eine experimentelle Möglichkeit zur Stilllegung von Genen („Gen-Knockdown“) etabliert. Neue auf RNA-Interferenz basierende Therapien befinden sich in der klinischen Entwicklung.

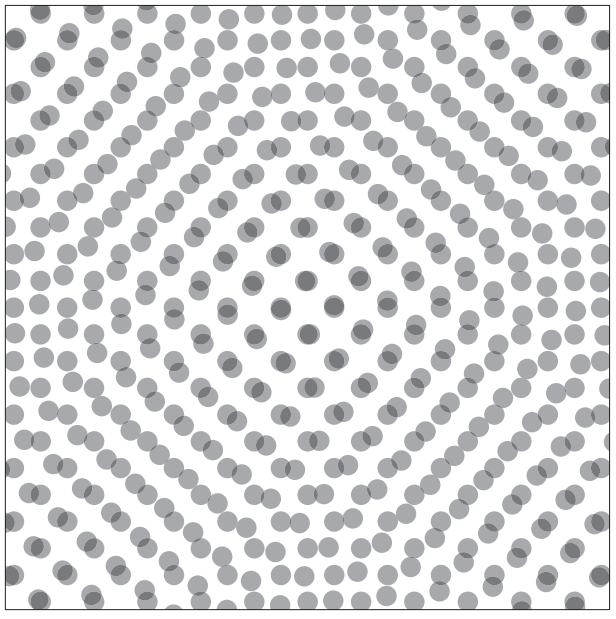


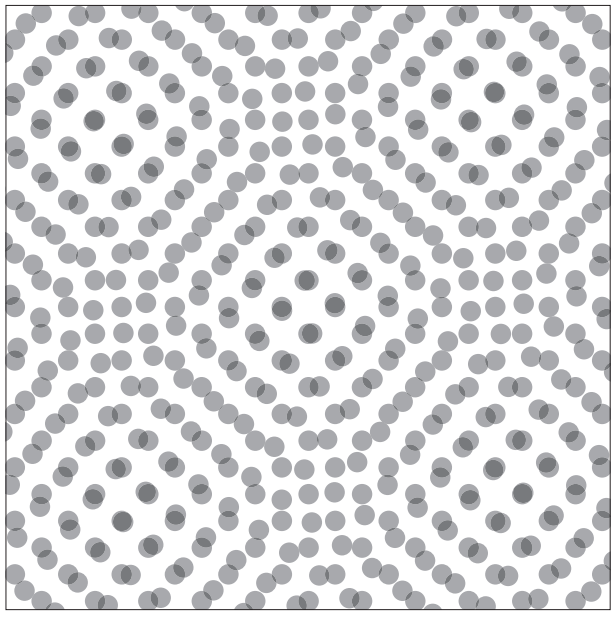


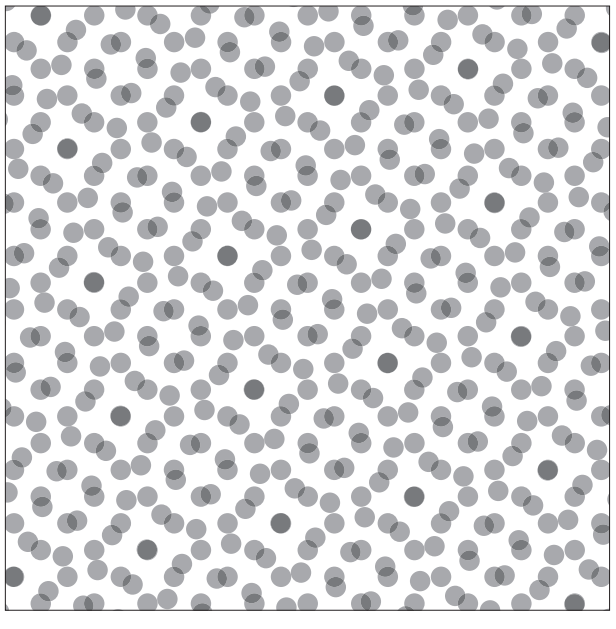


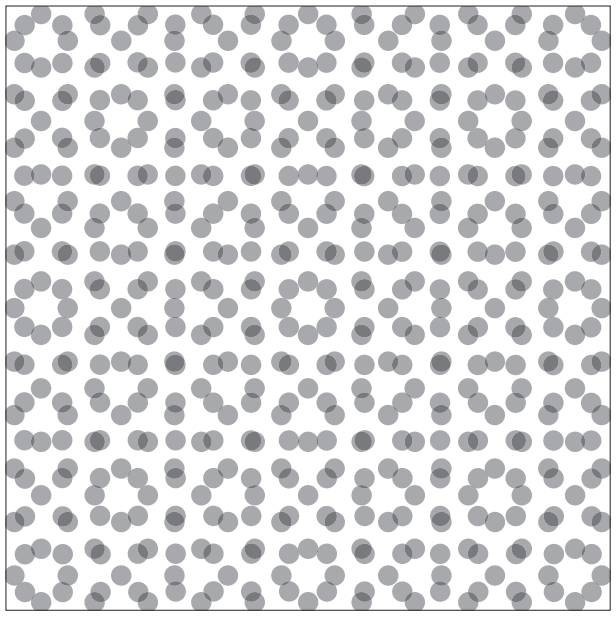
Exemplarische Darstellung verschiedener Intensitätsgrade anhand der Rotation

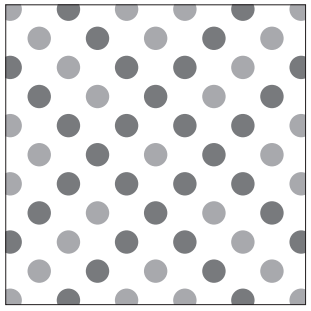


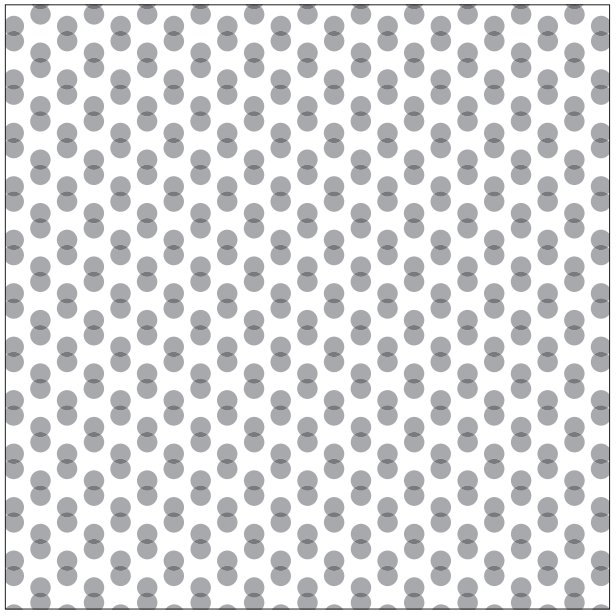


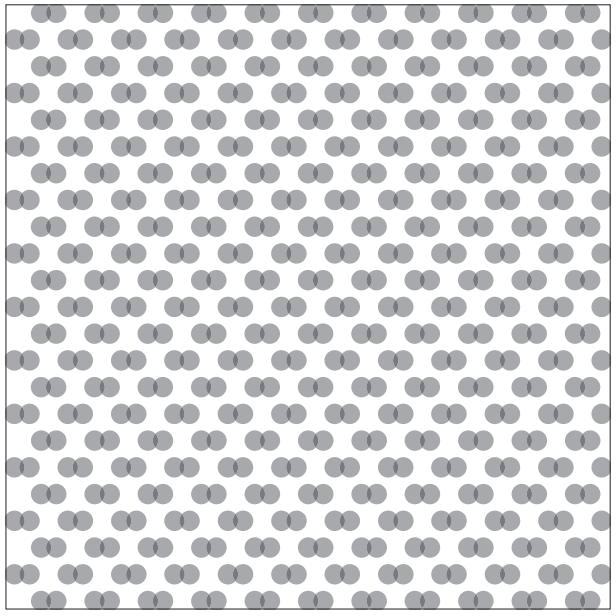




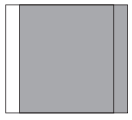


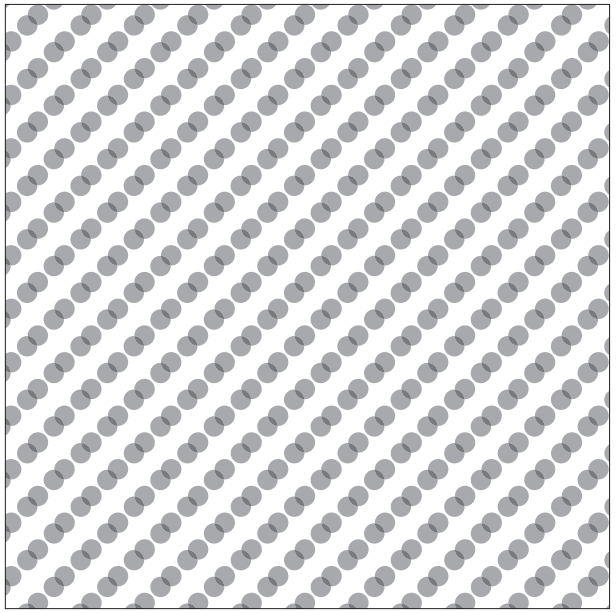


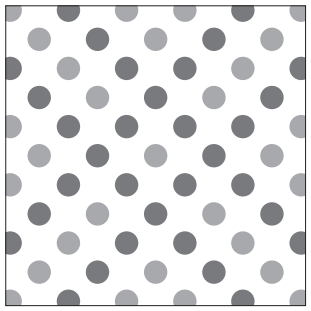


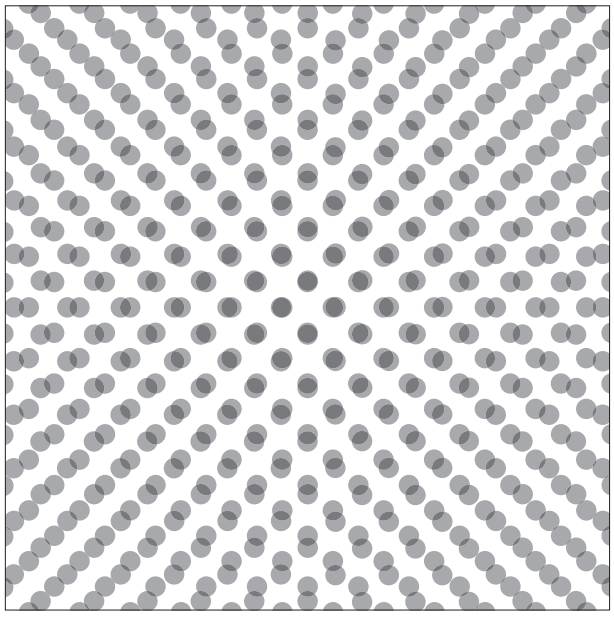


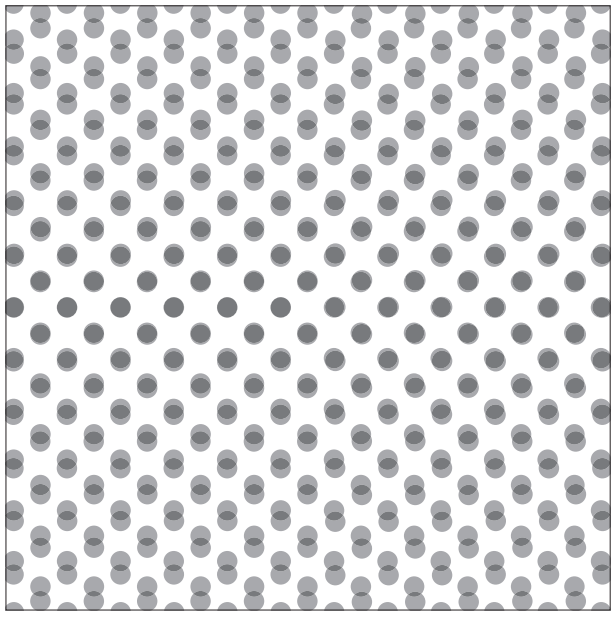
Verschiebung











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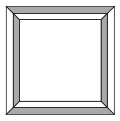

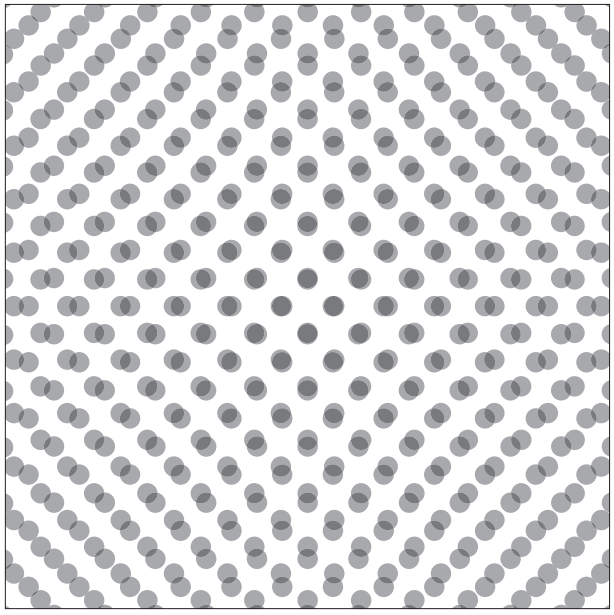

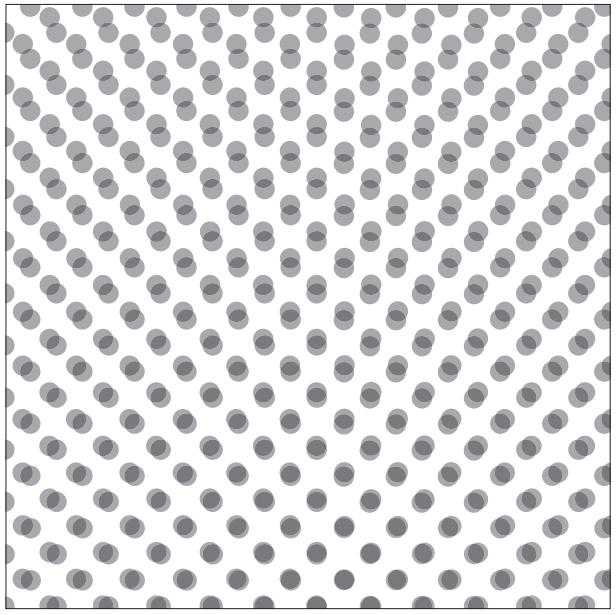

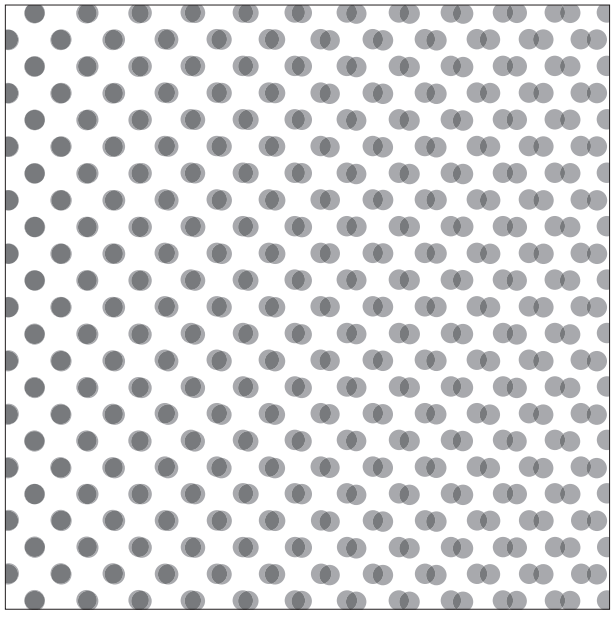

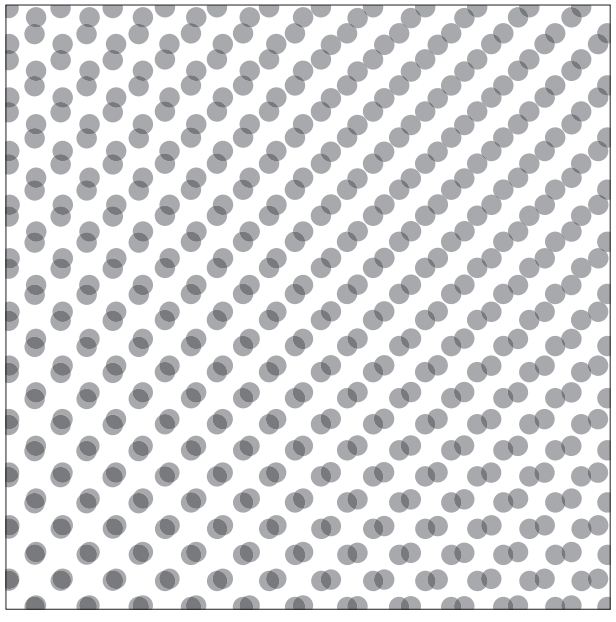

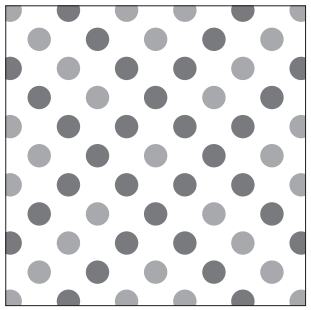

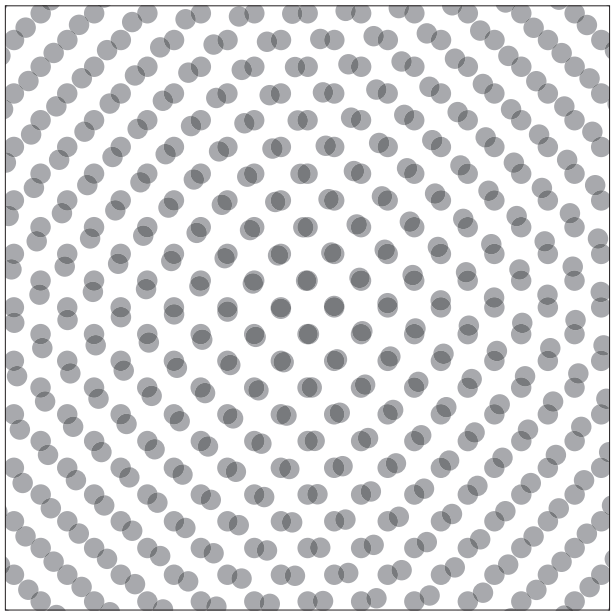

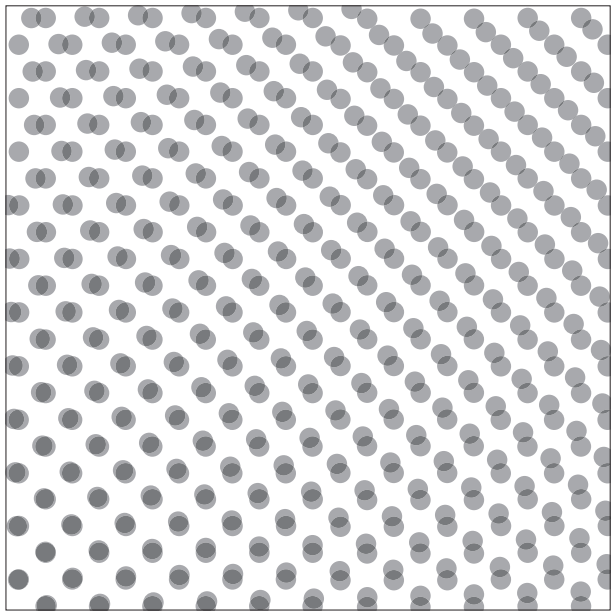

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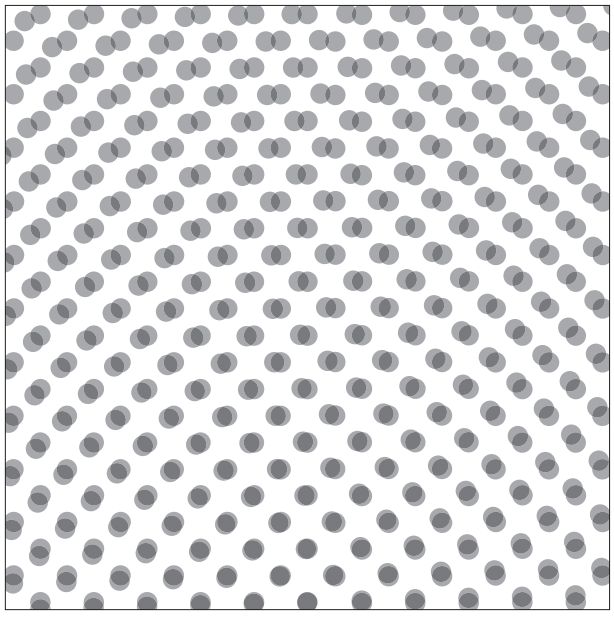
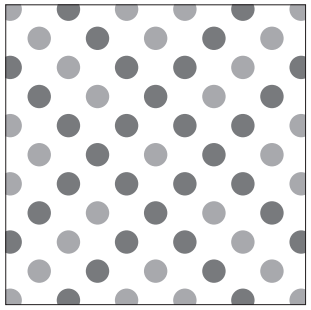
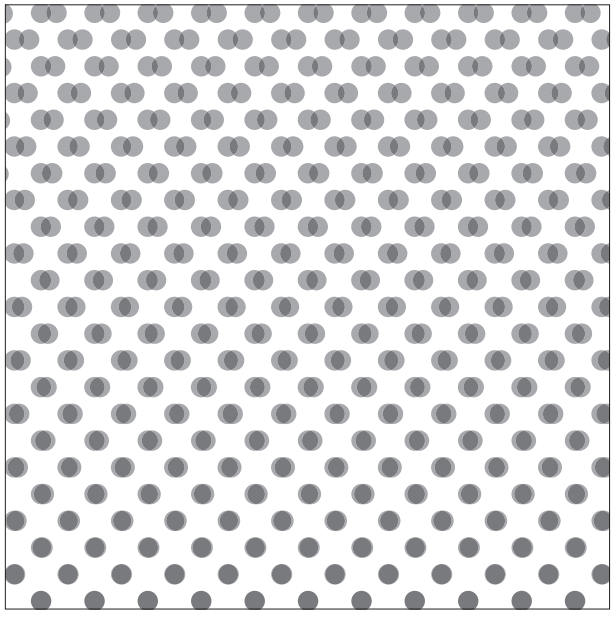
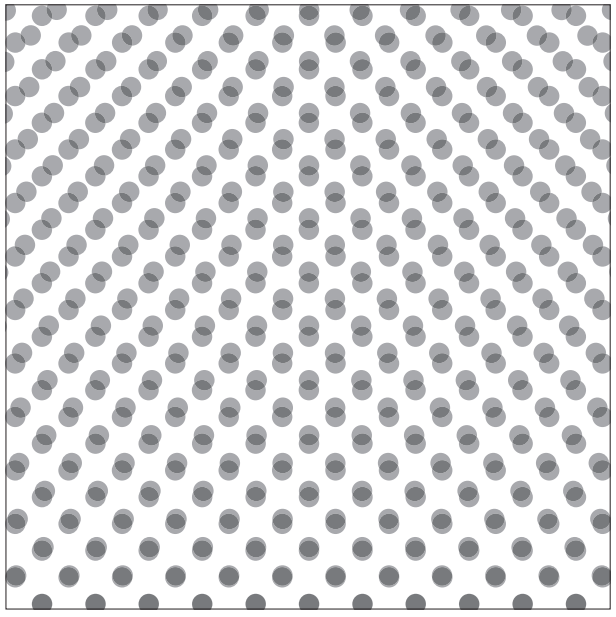
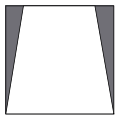


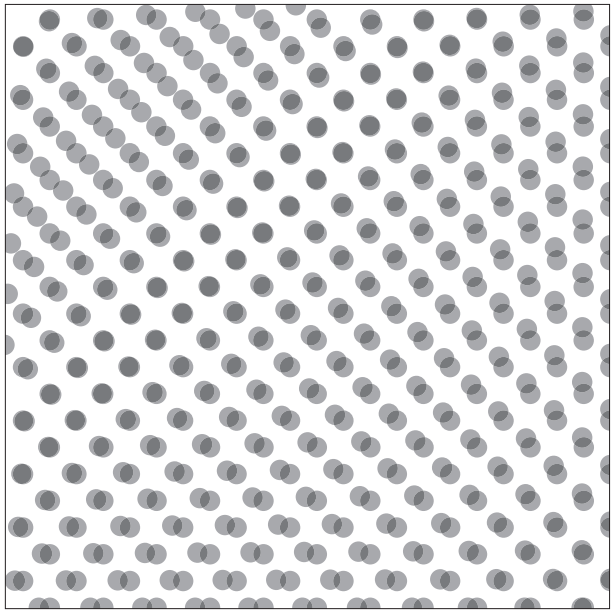


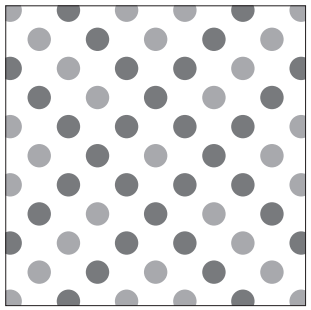


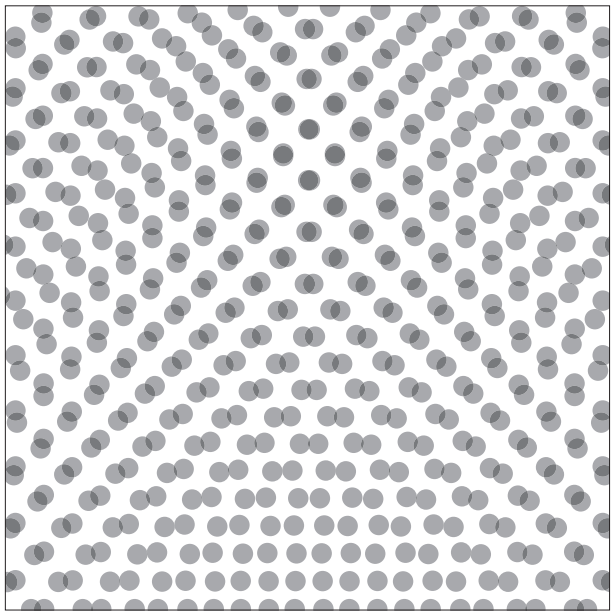


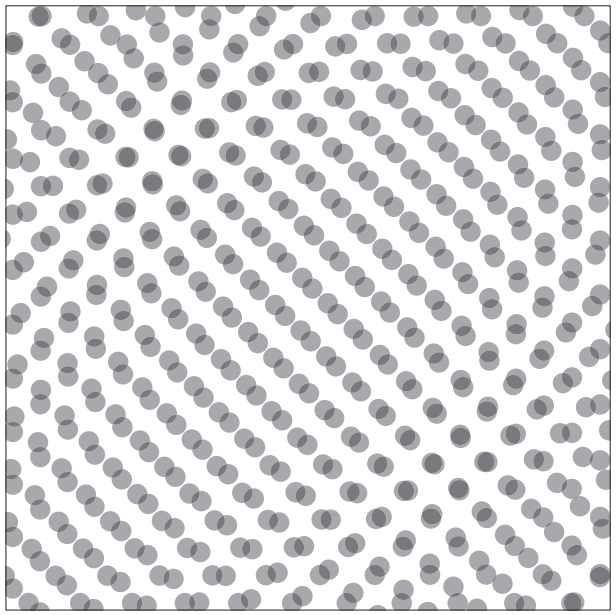
Perspektivische Verzerrung mit einer aktiven Ebene



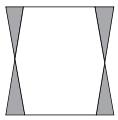


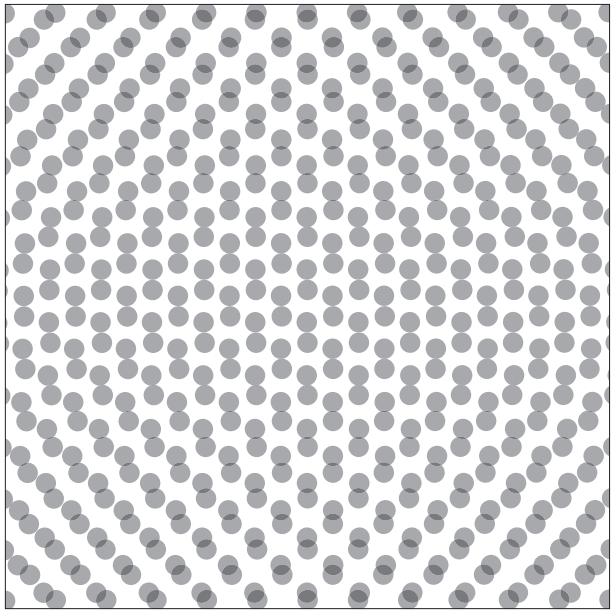


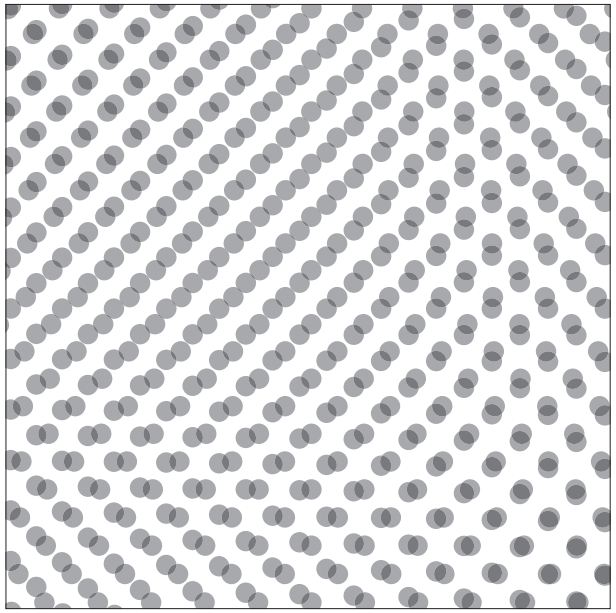


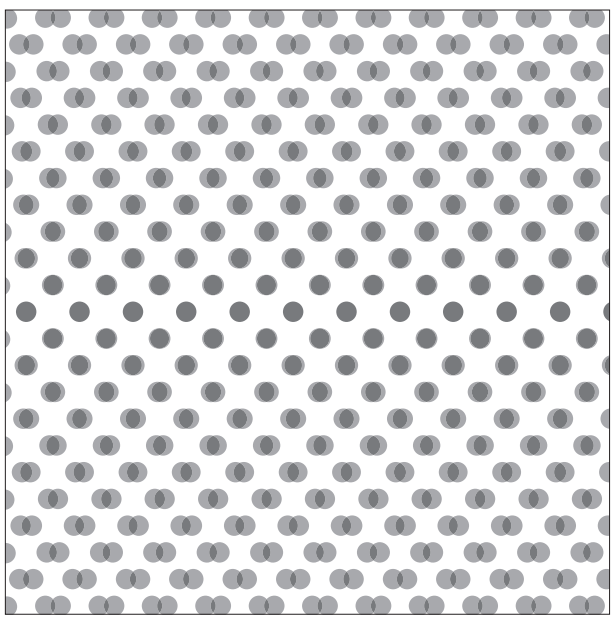


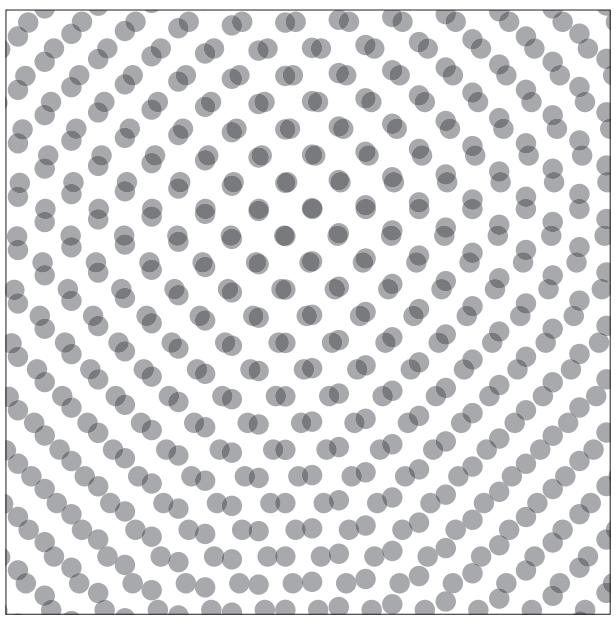
Perspektivische Verzerrung mit zwei aktiven Ebenen

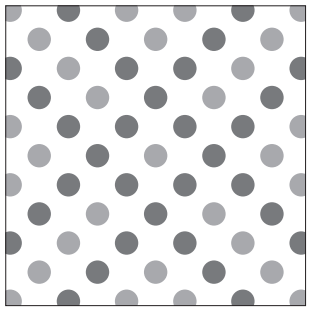


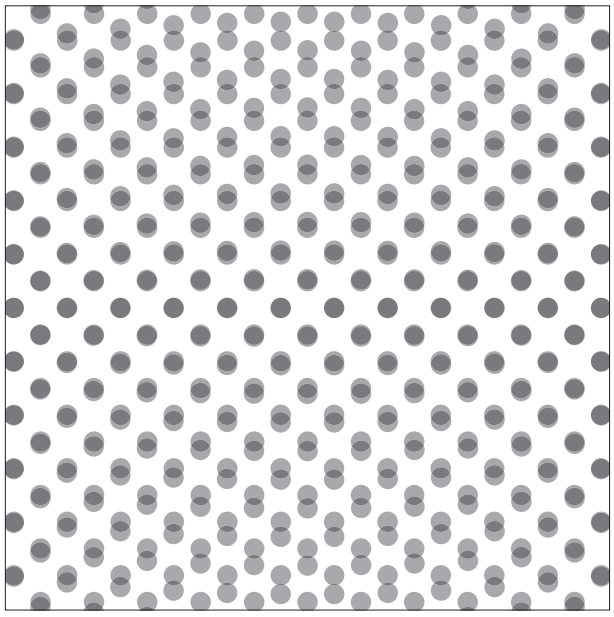


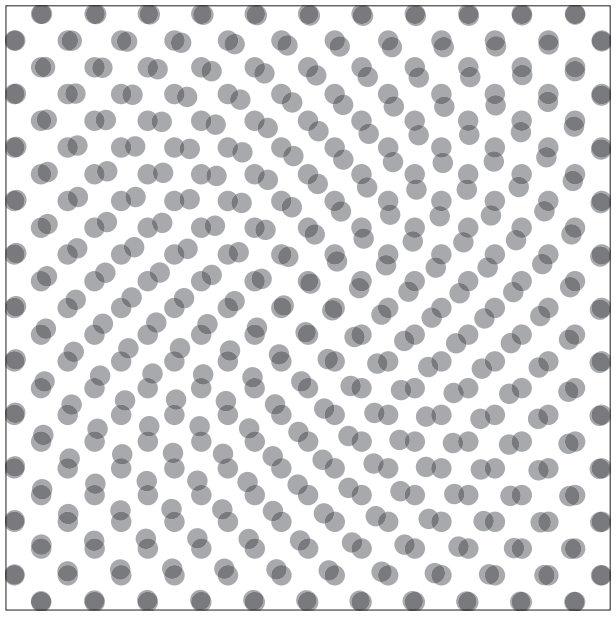




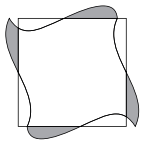


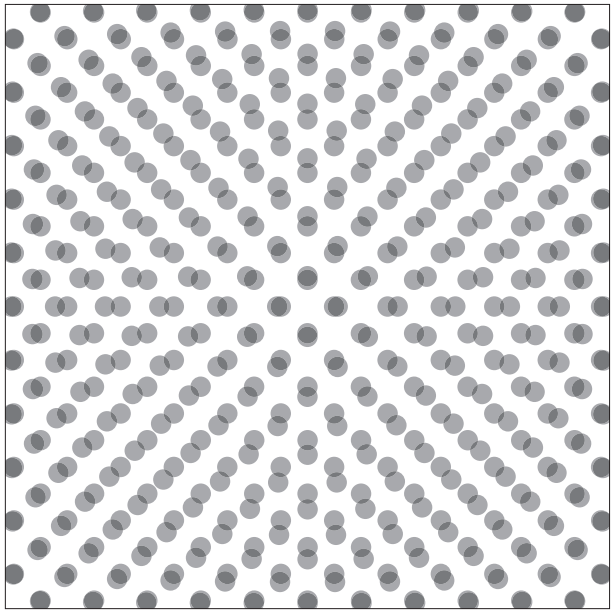


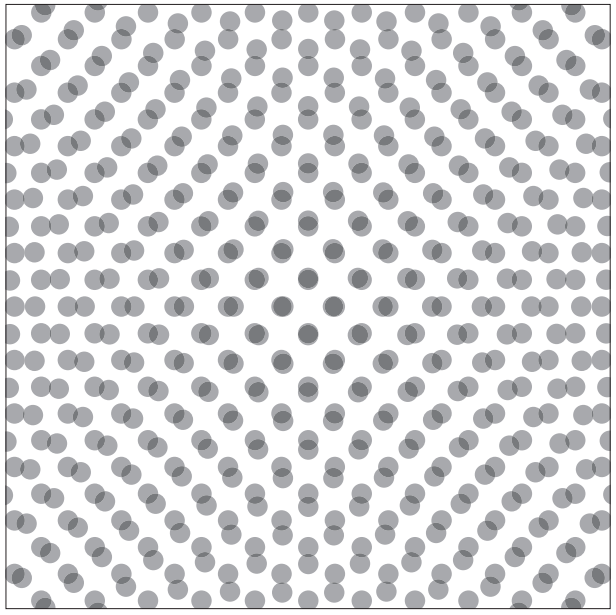


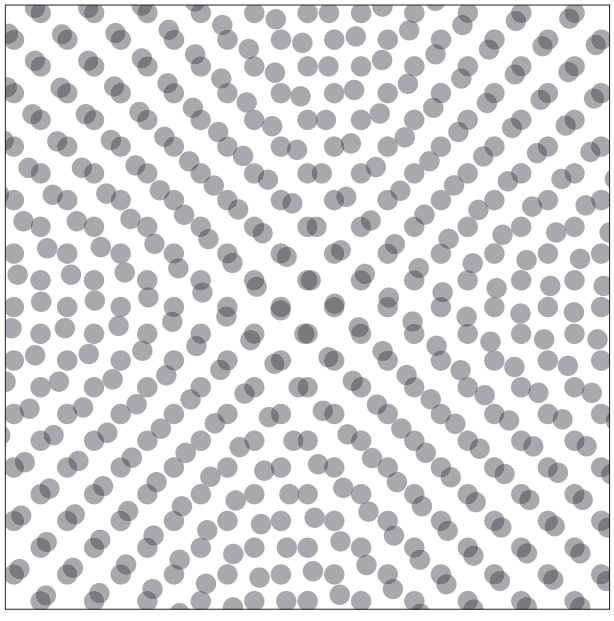


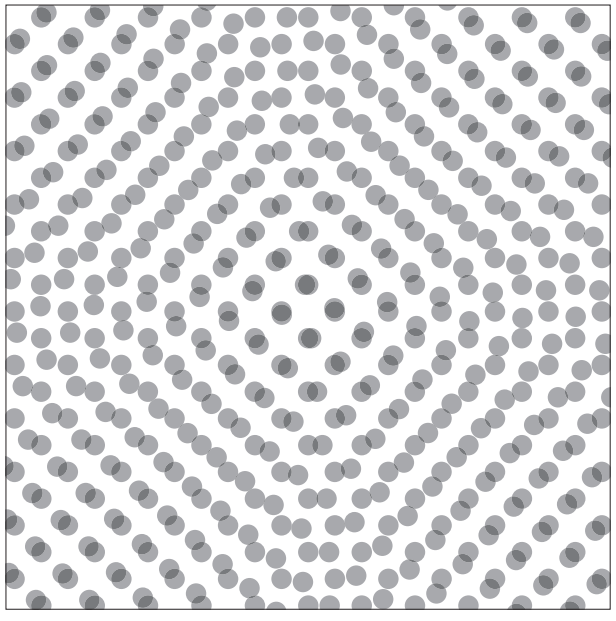
Katamorphe Verzerrungen mit einer aktiven Ebene

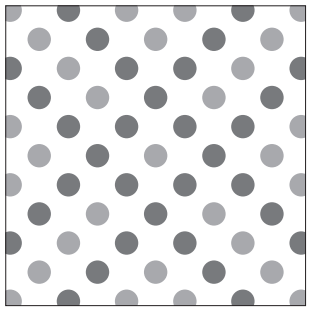


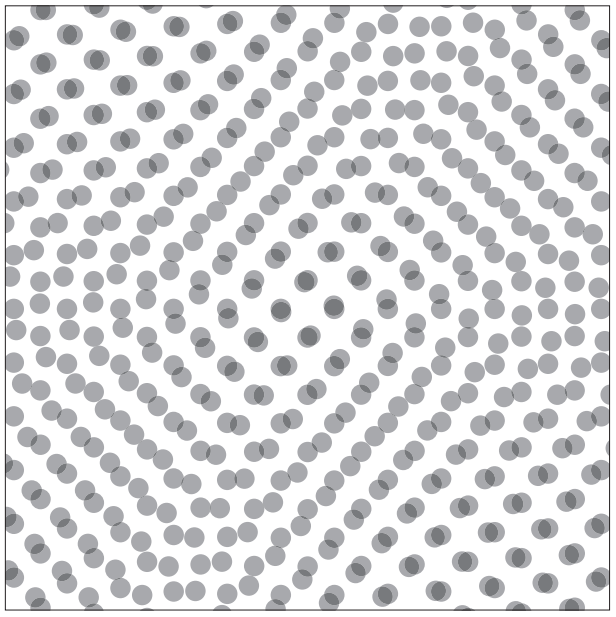


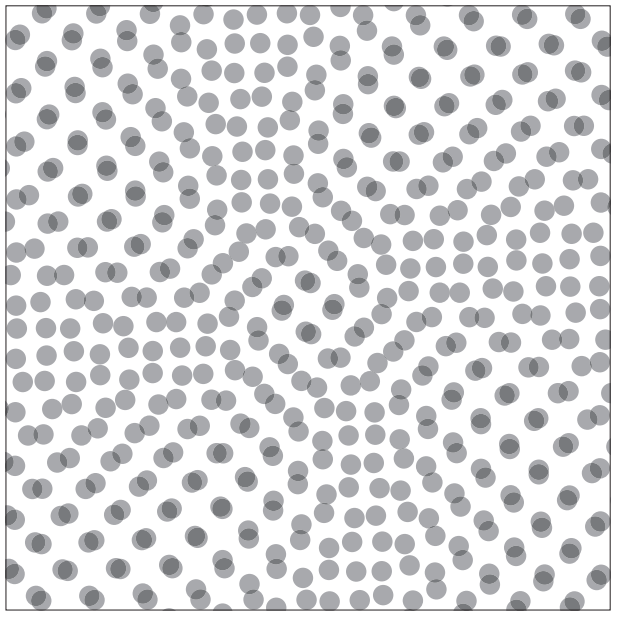




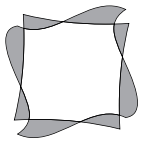


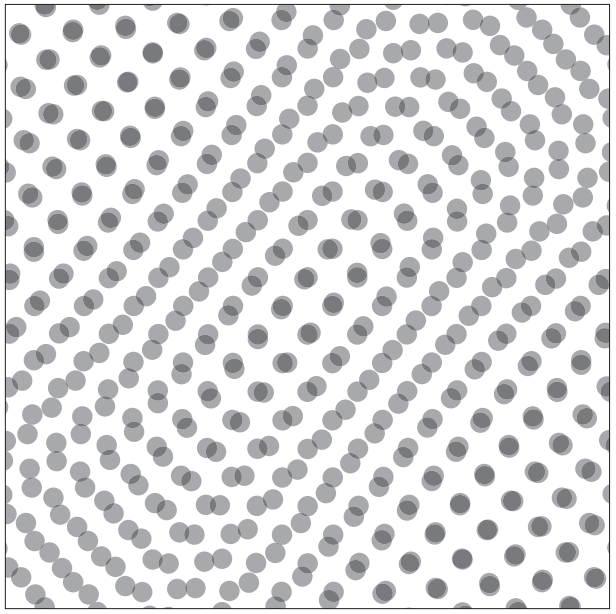


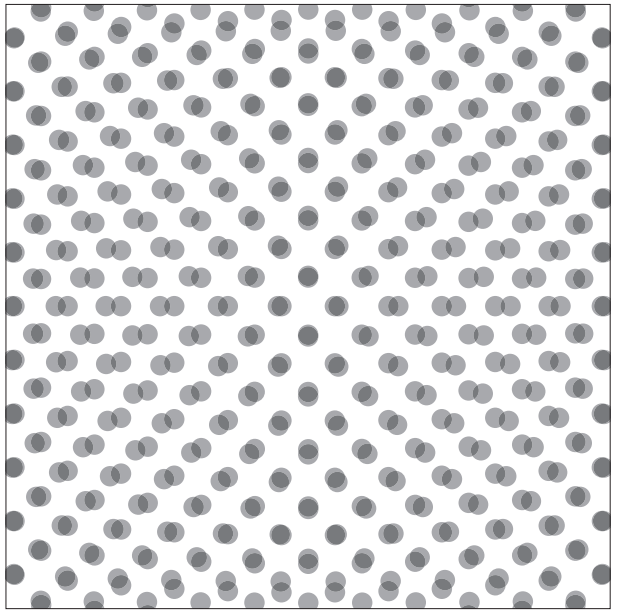


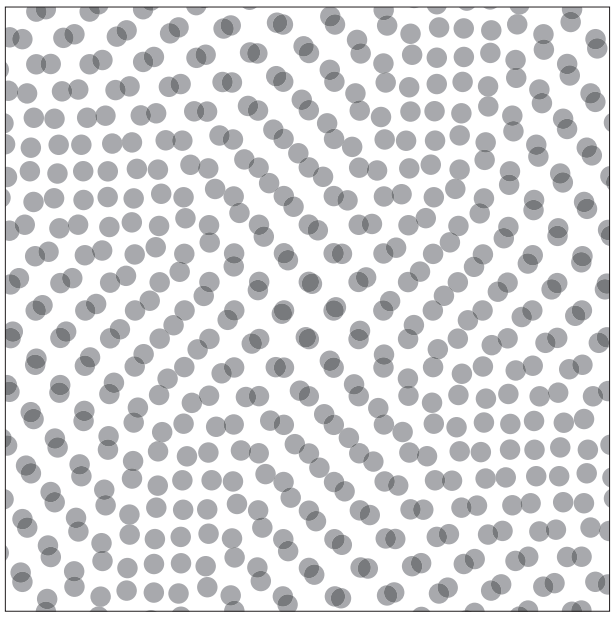


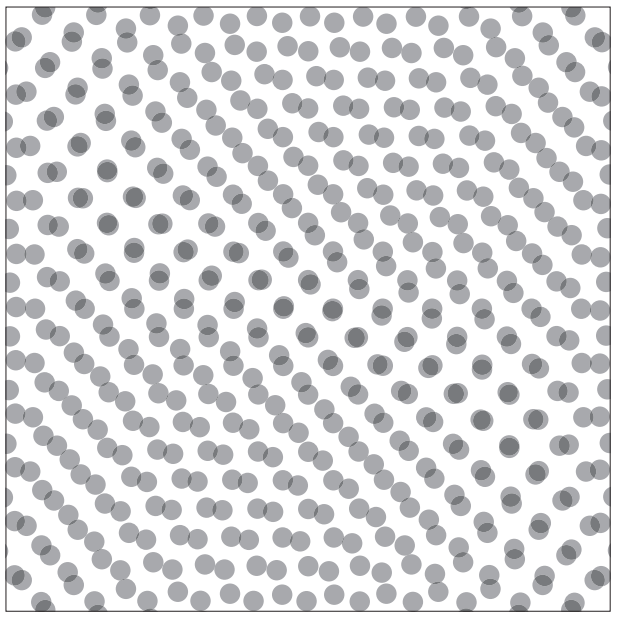
Katamorphe Verzerrungen mit zwei aktiven Ebenen

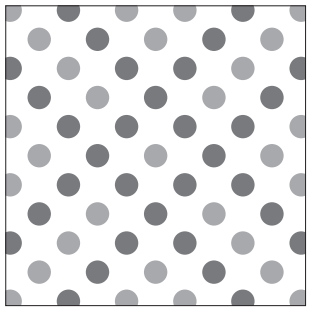


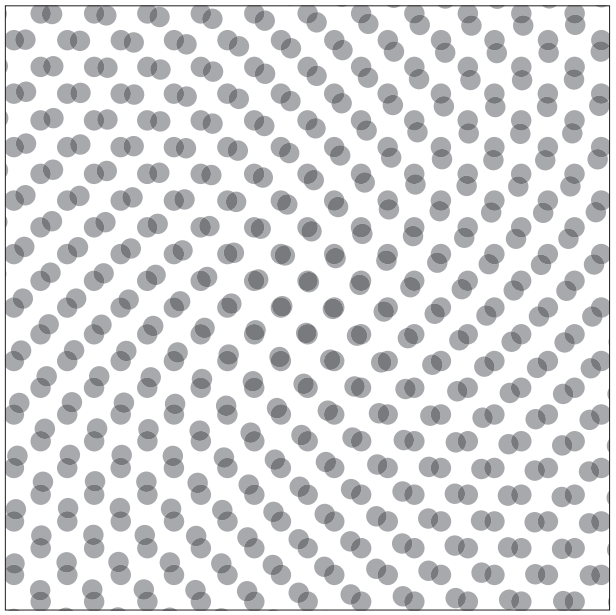


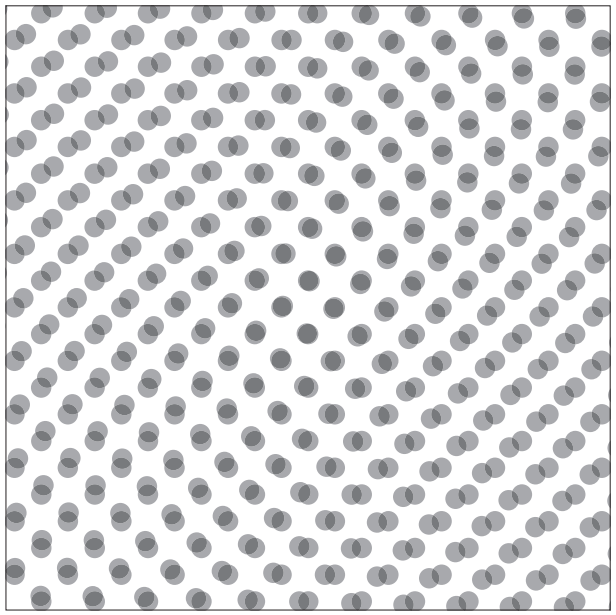




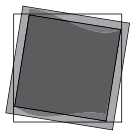


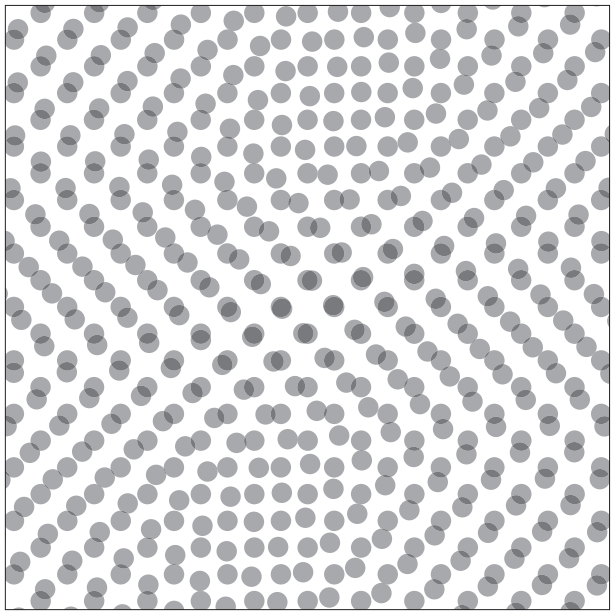


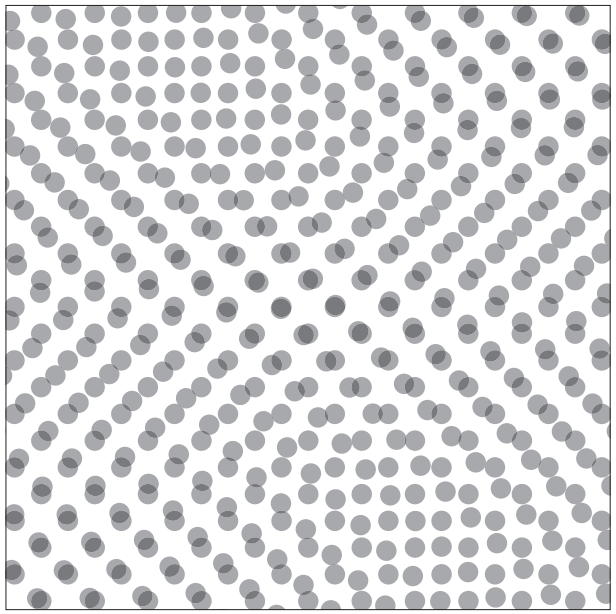


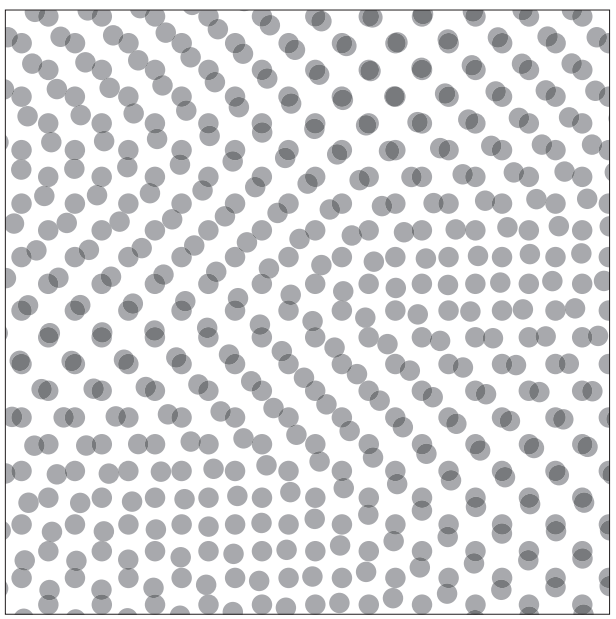


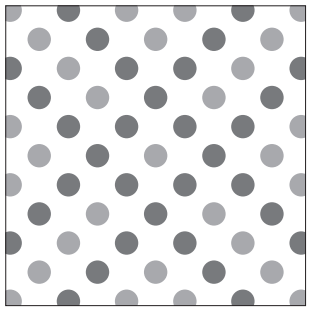
Operationskopplungen

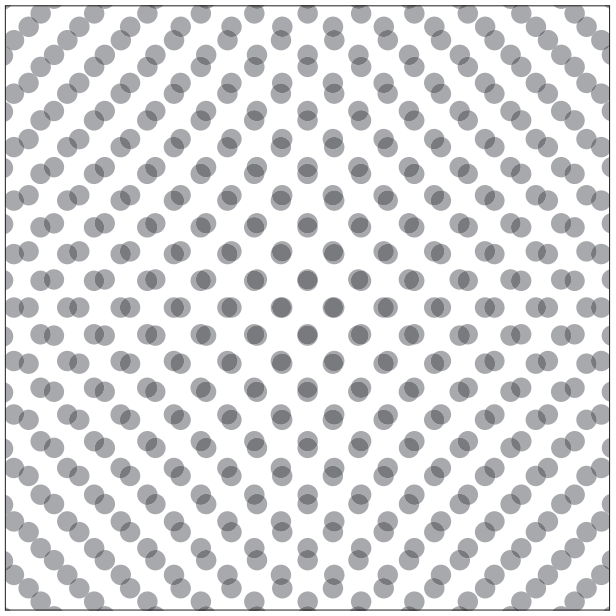


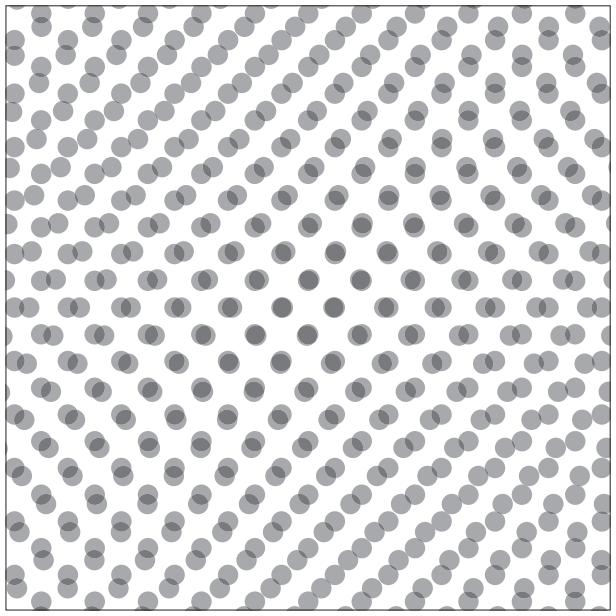




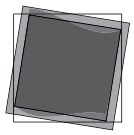


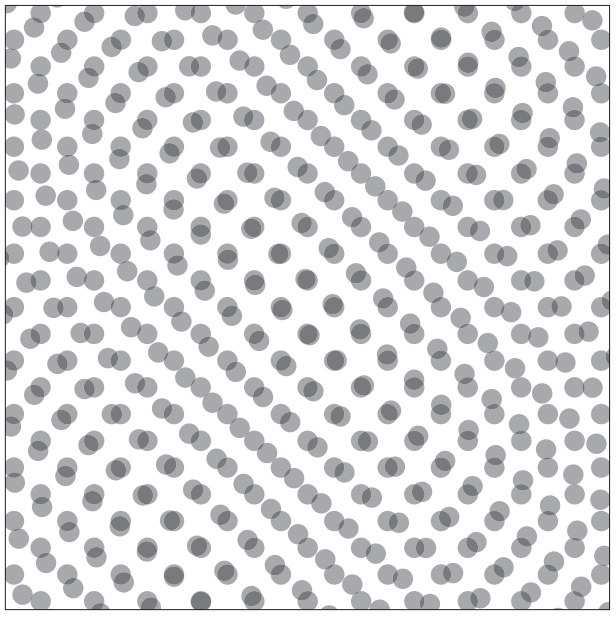


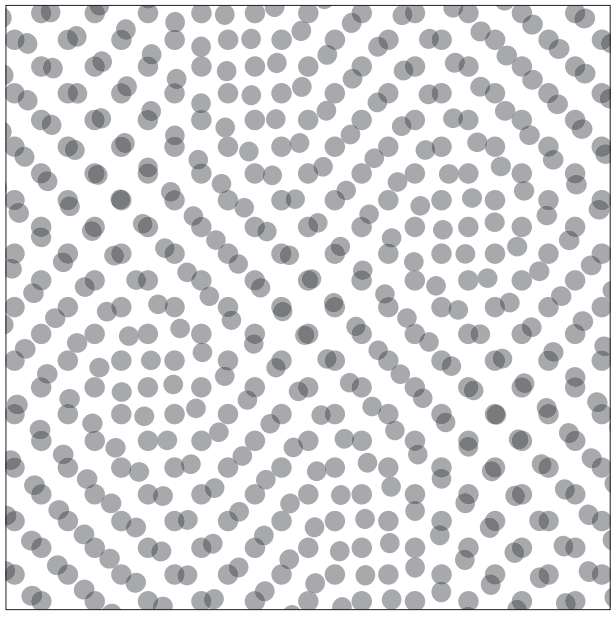


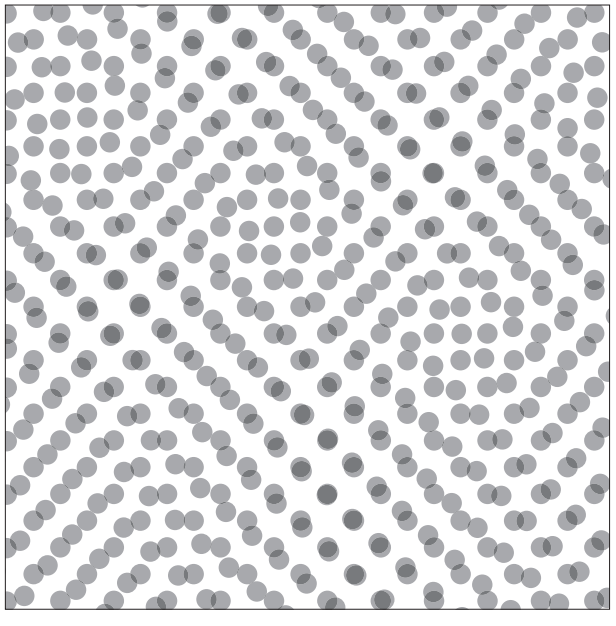


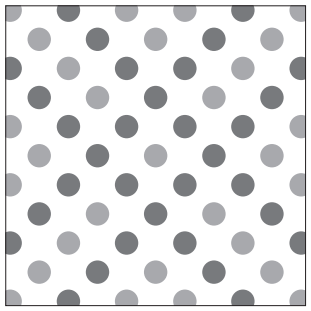
Operationskopplungen

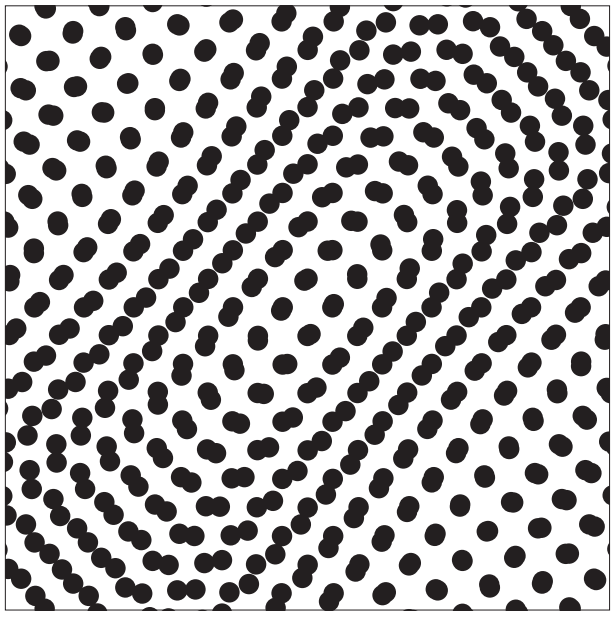


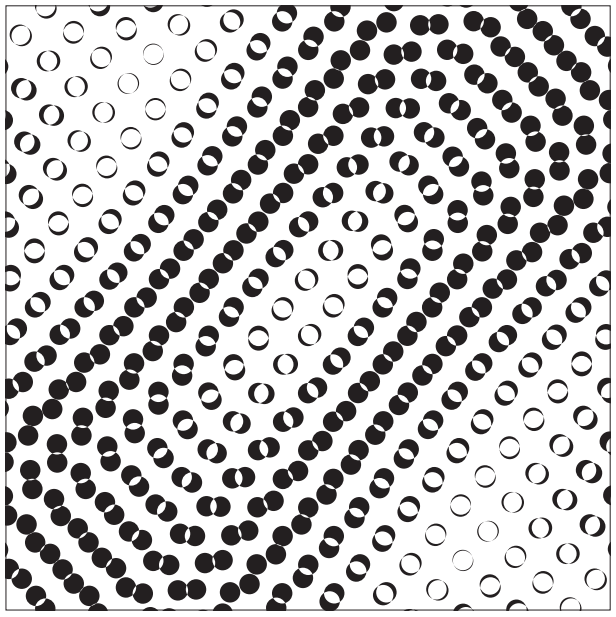




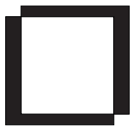


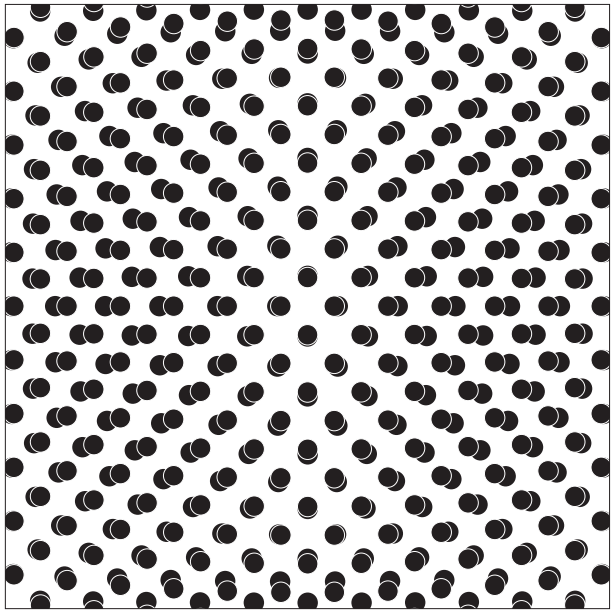


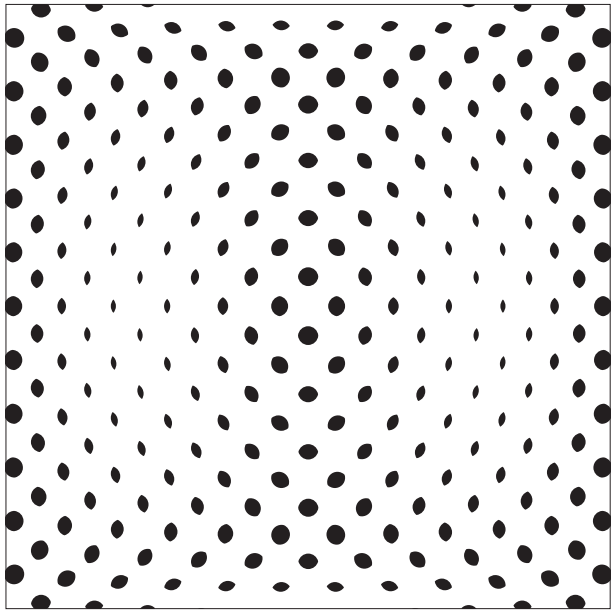


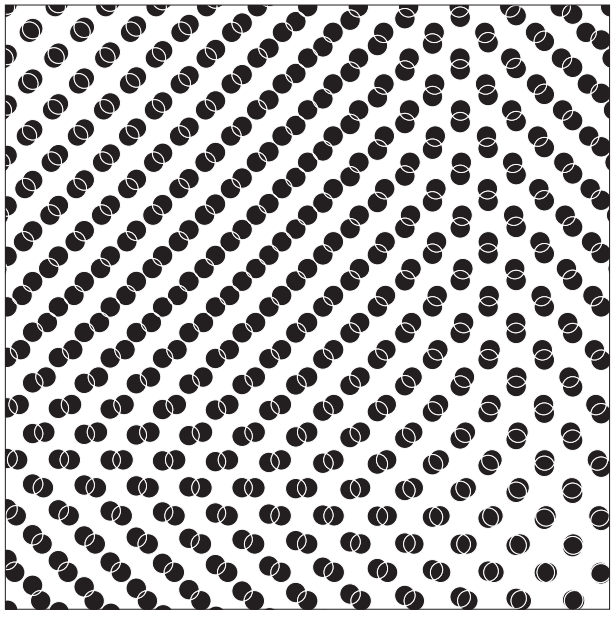


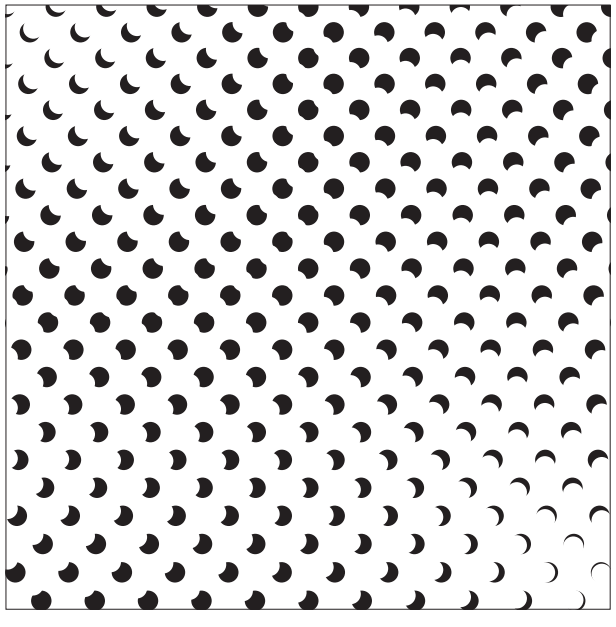
Grafische Interpretation

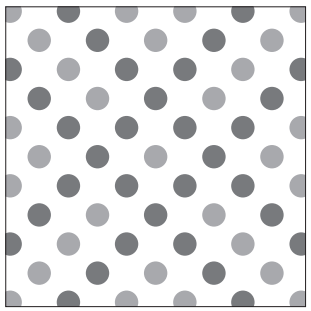


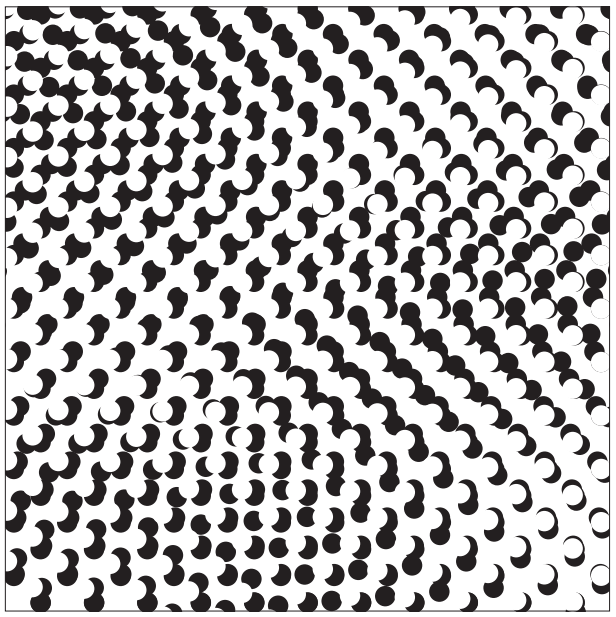


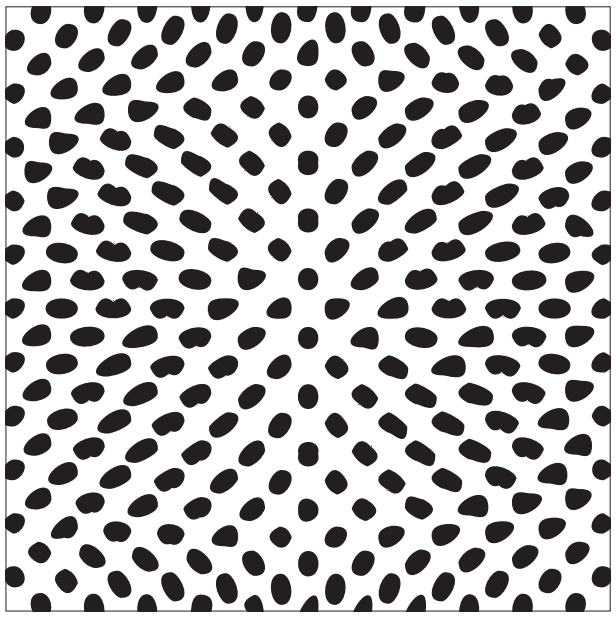




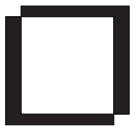


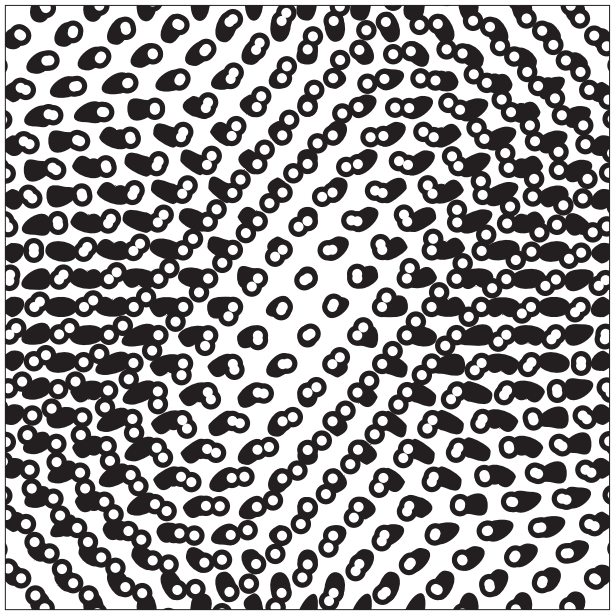


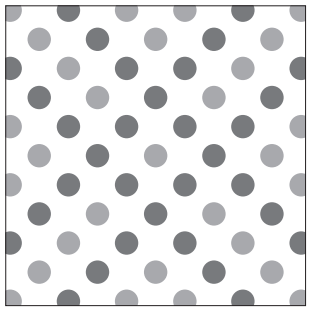




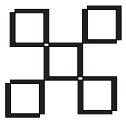
Grafische Interpretation

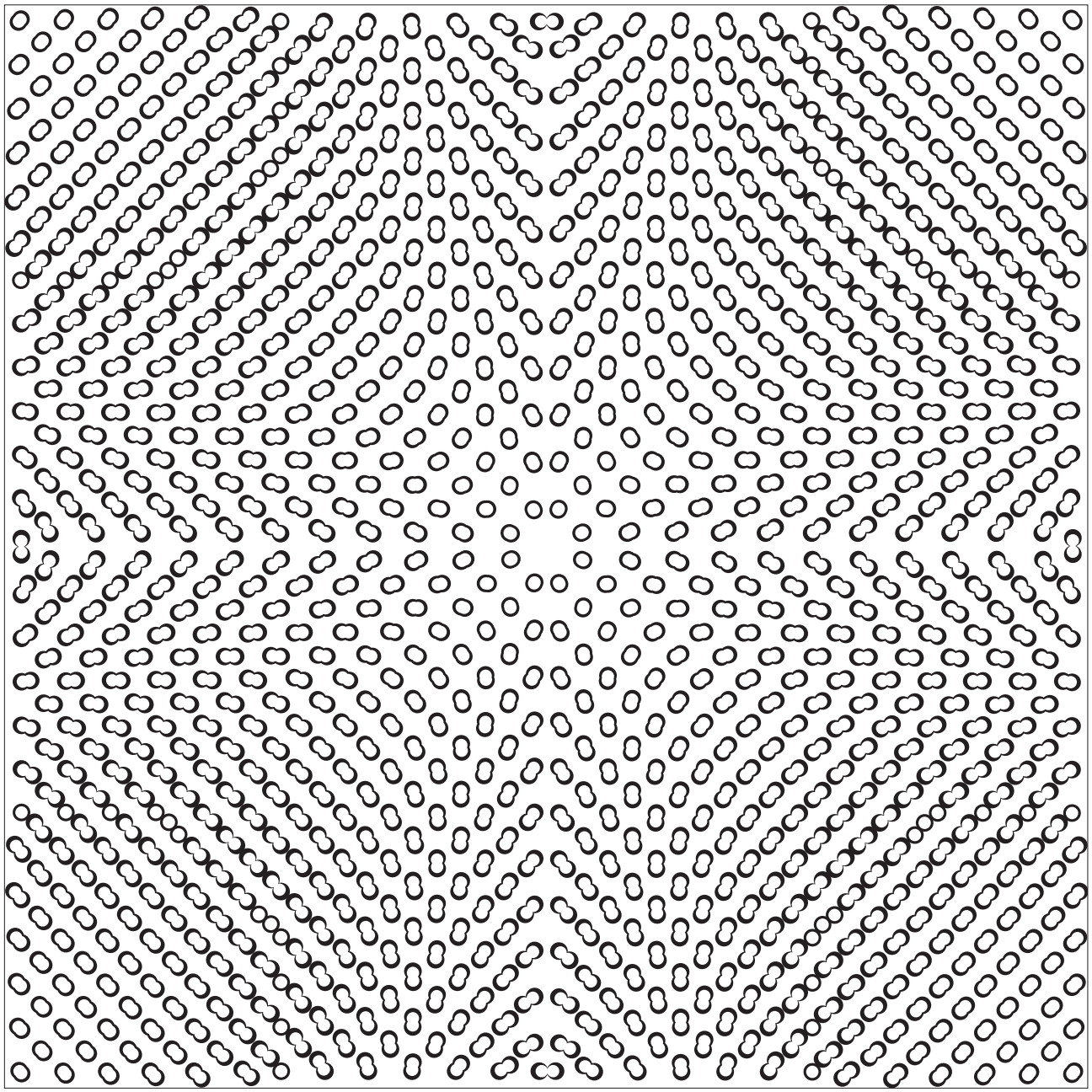


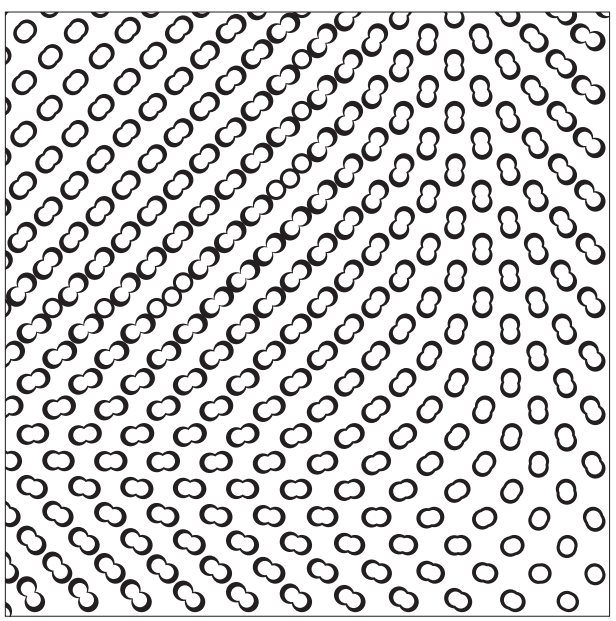


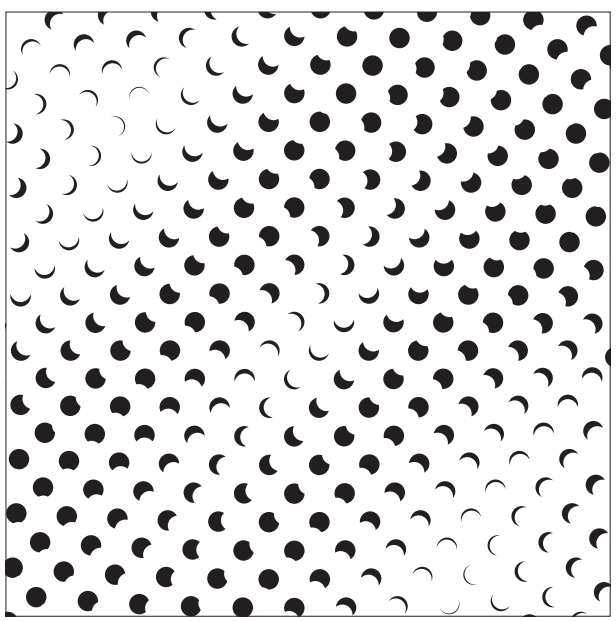


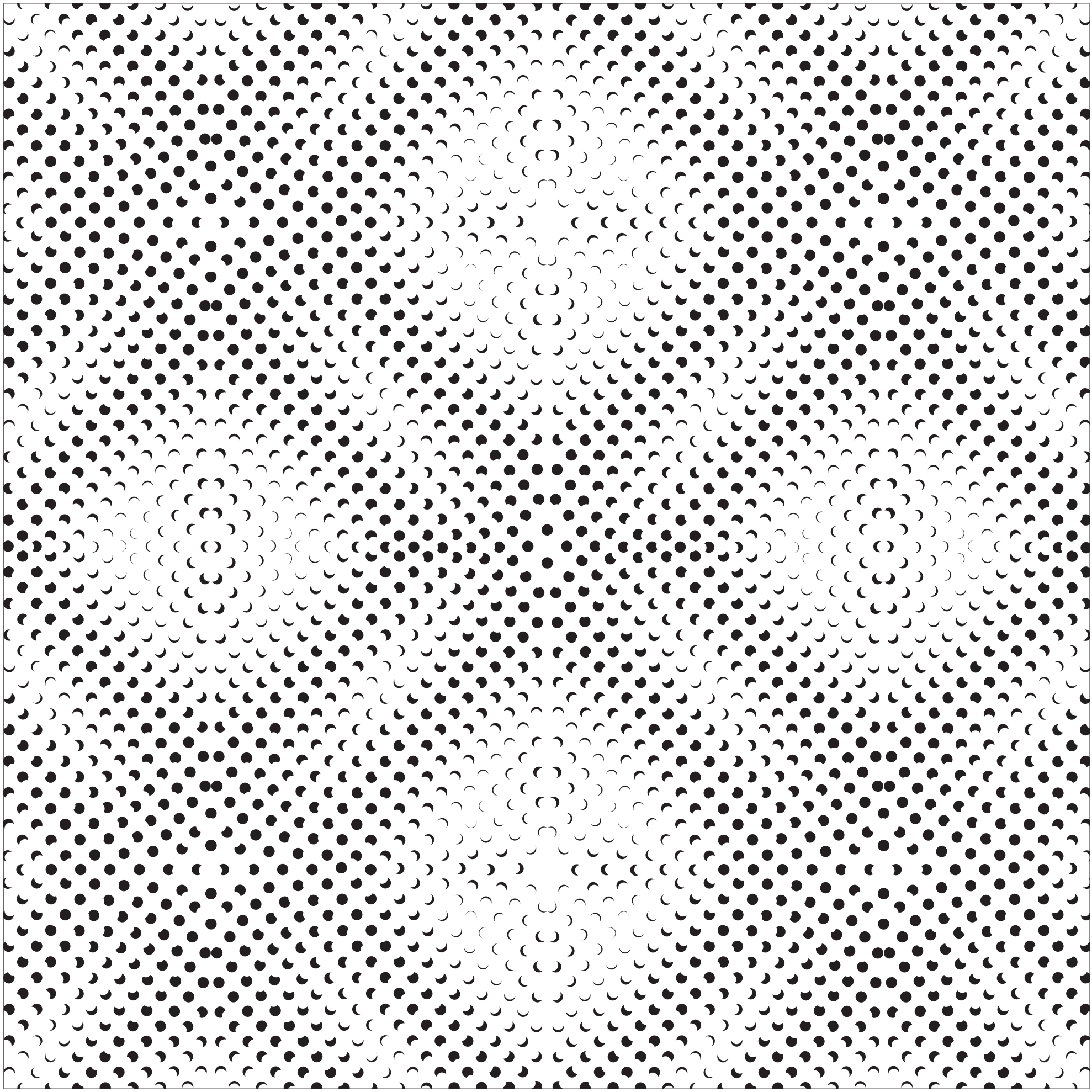
Additionsverbände

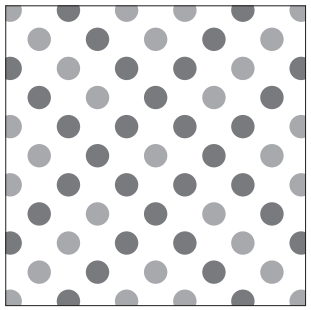












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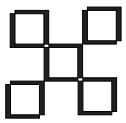
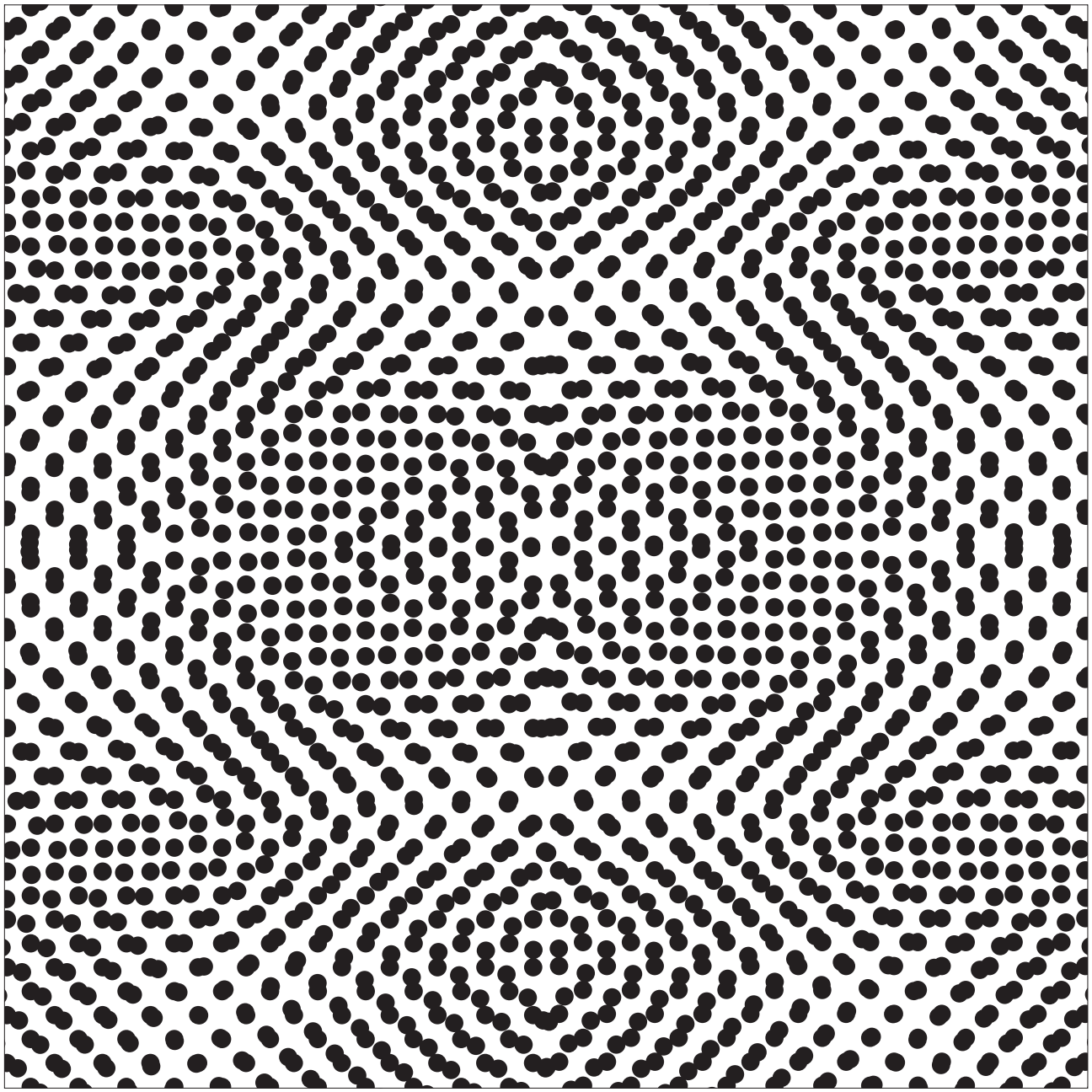
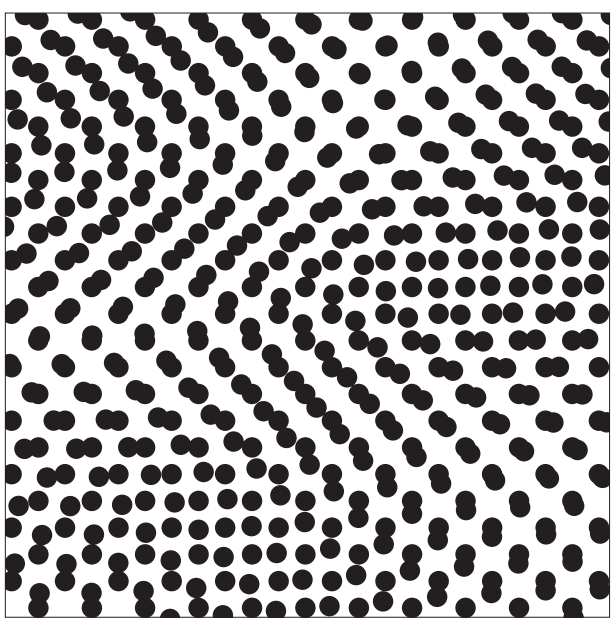
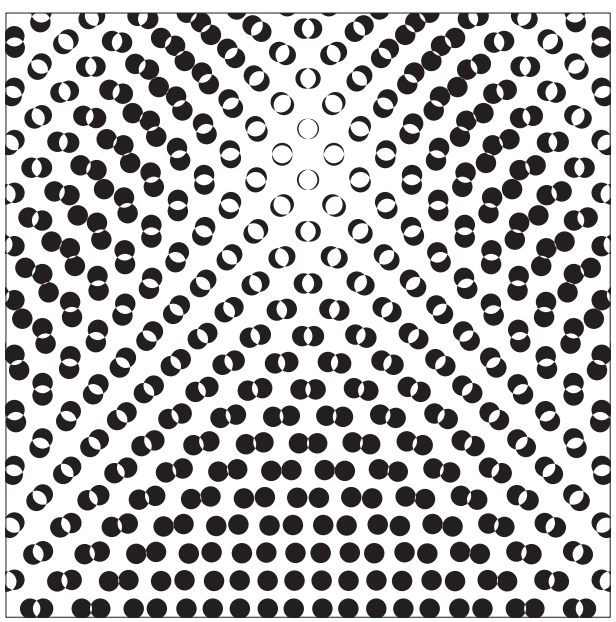
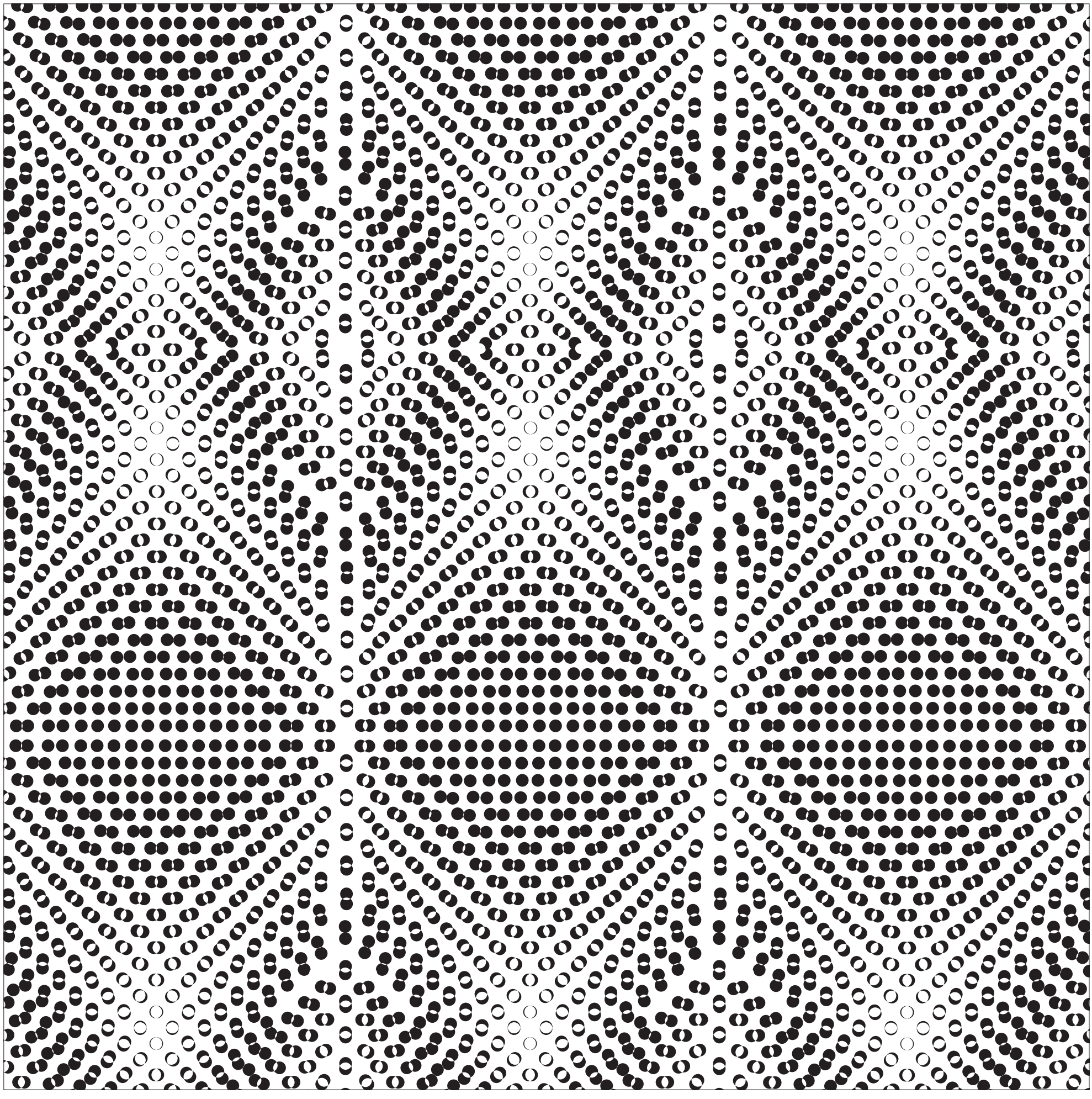








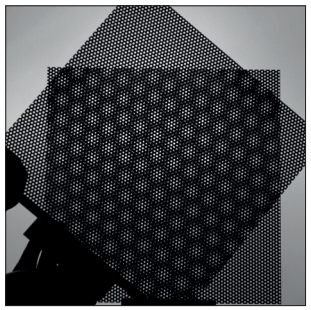


Ordnungphänomene in Natur
Technik/Architektur und Design

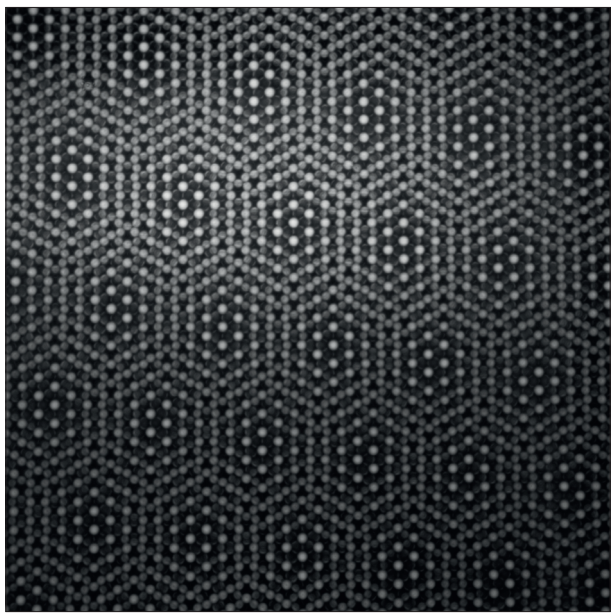
Synthetische Ordnungssyteme

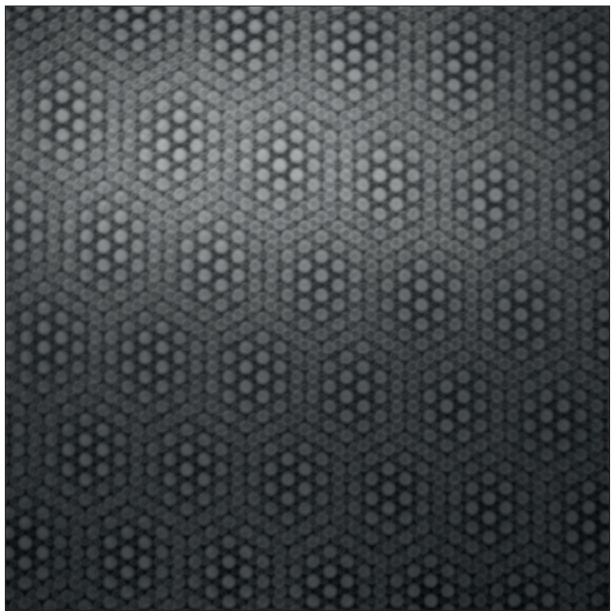
Modulare Systeme über die
Bildung von Interferenzen

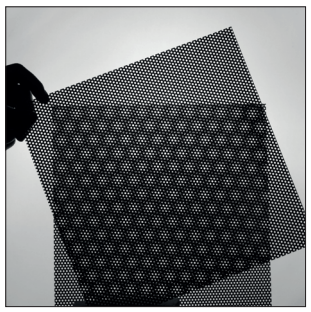
Interferenzen im dreidimensionalen Raum

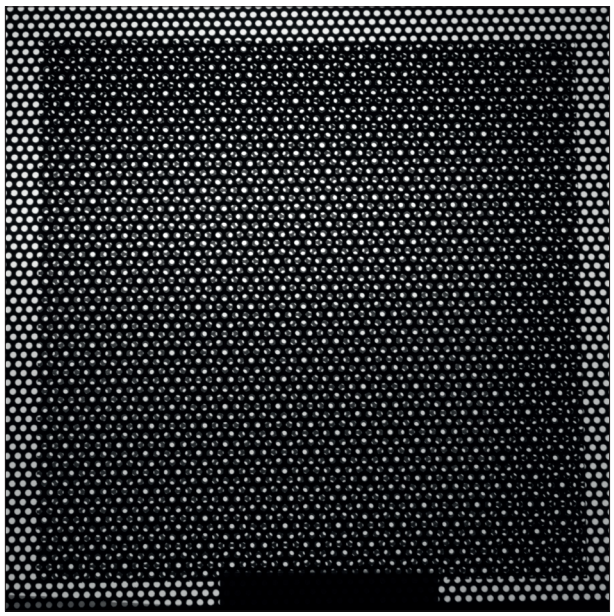


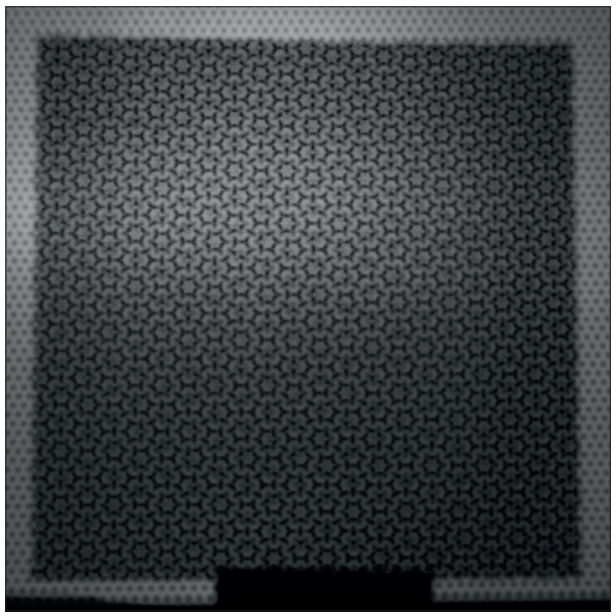
Dreidimensionale Interferenzen



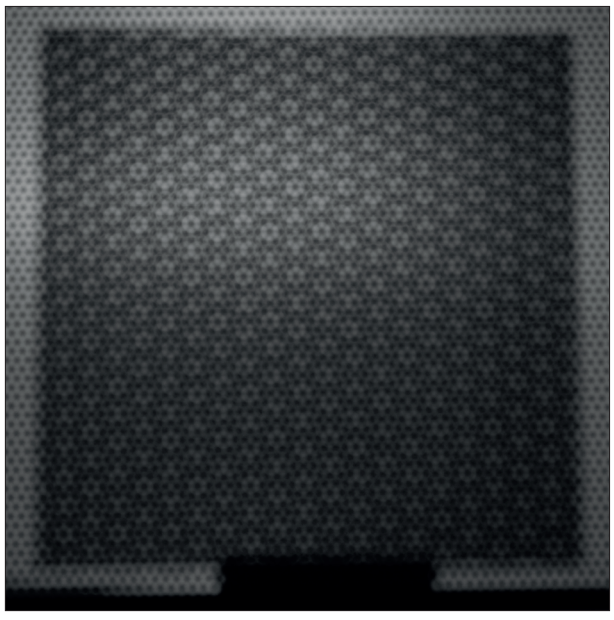


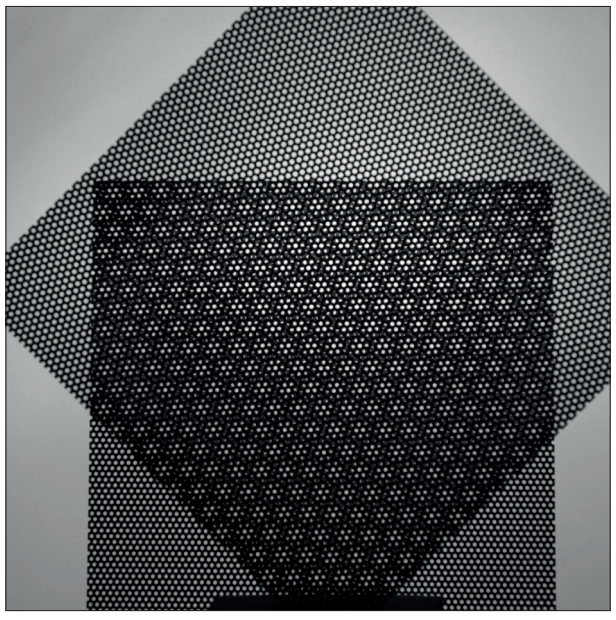


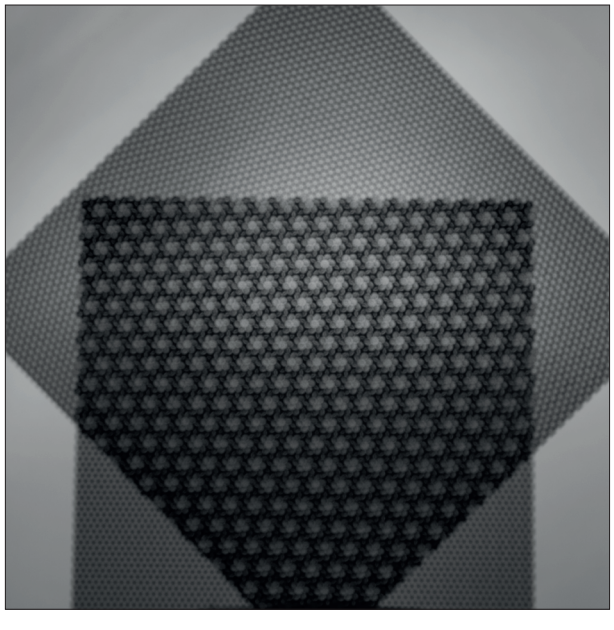


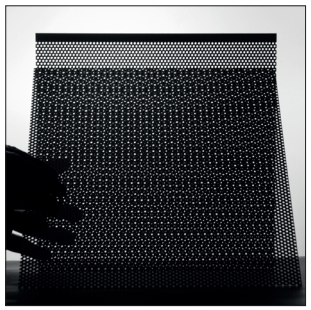


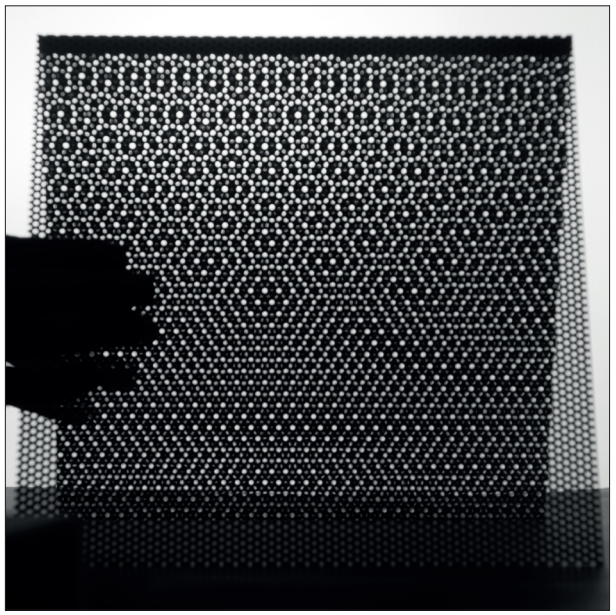
Dreidimensionale Interferenzen

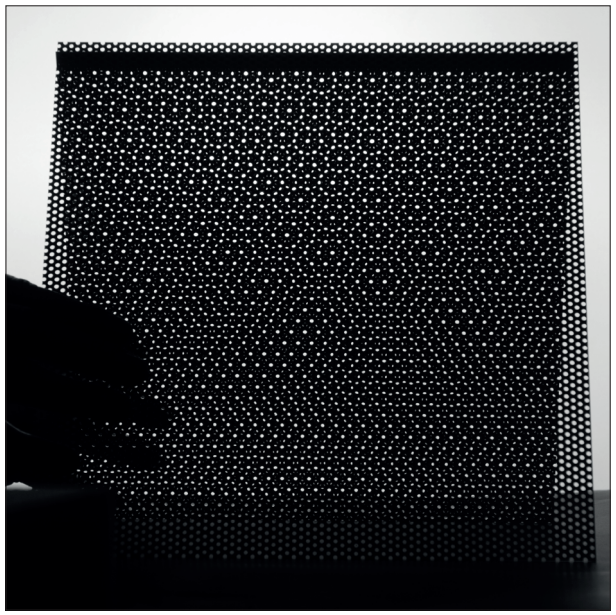




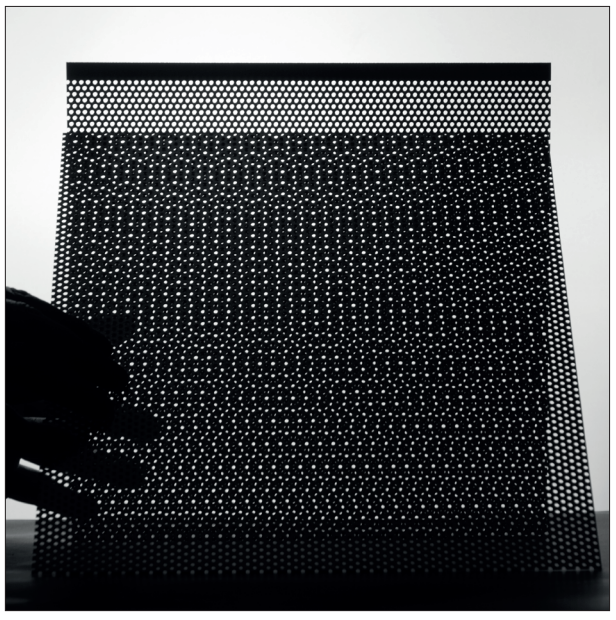


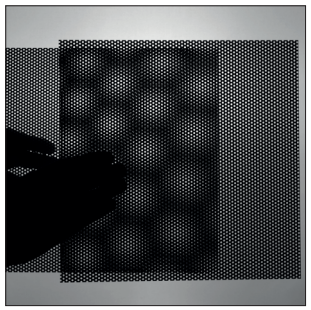


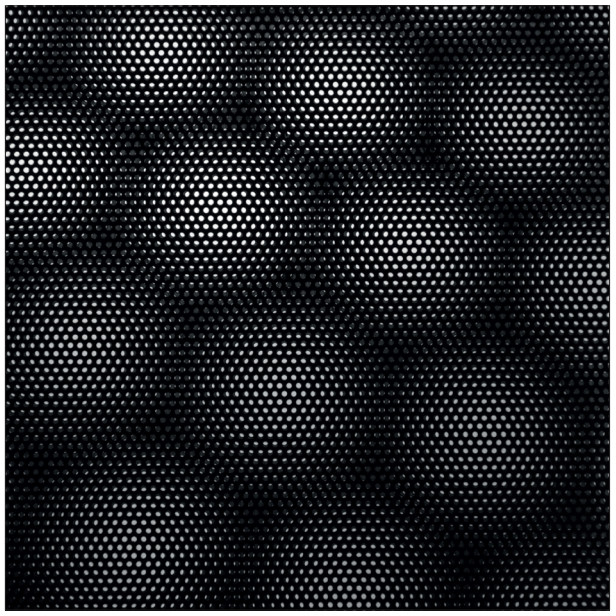


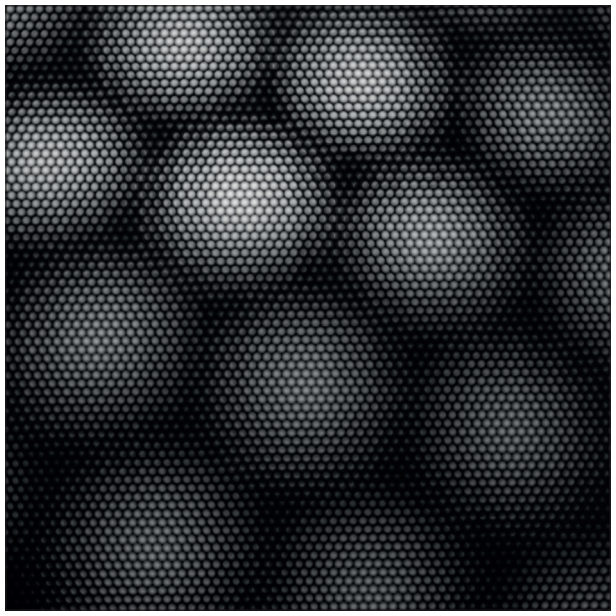


Dreidimensionale Interferenzen









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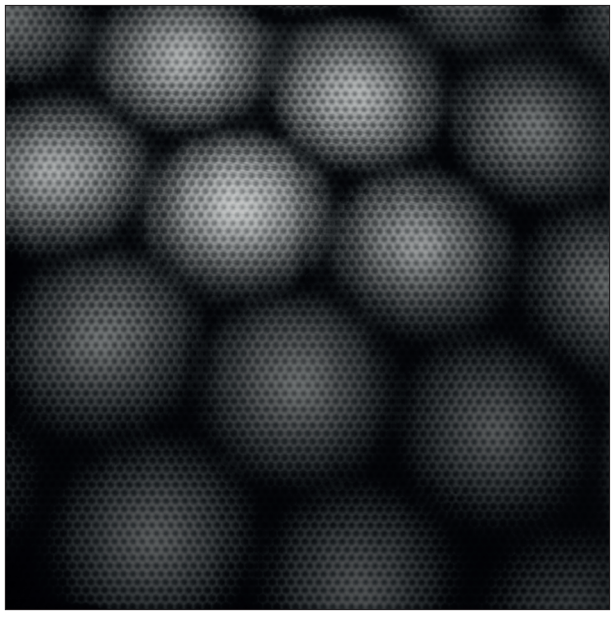

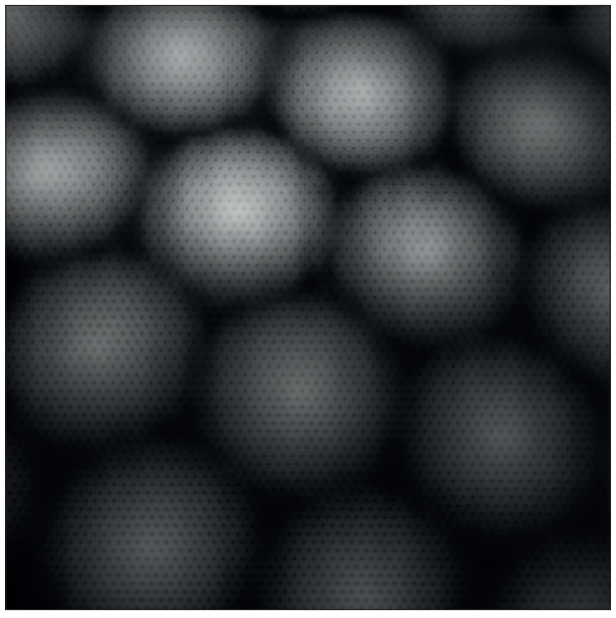

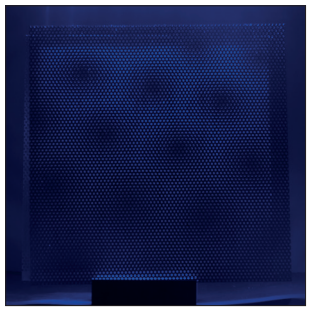

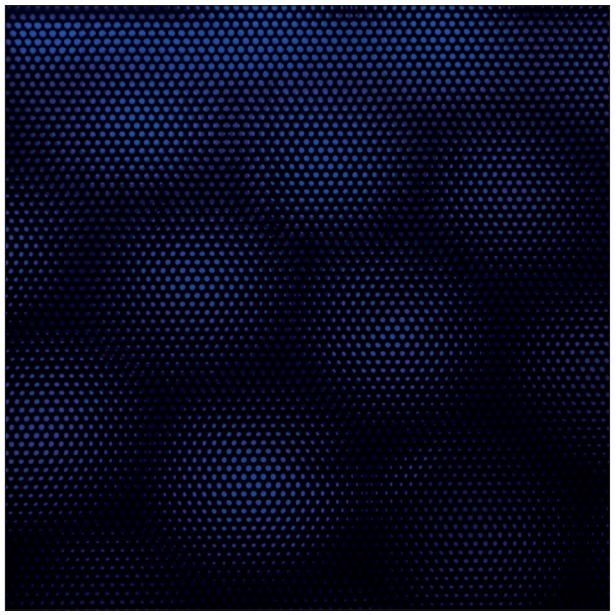

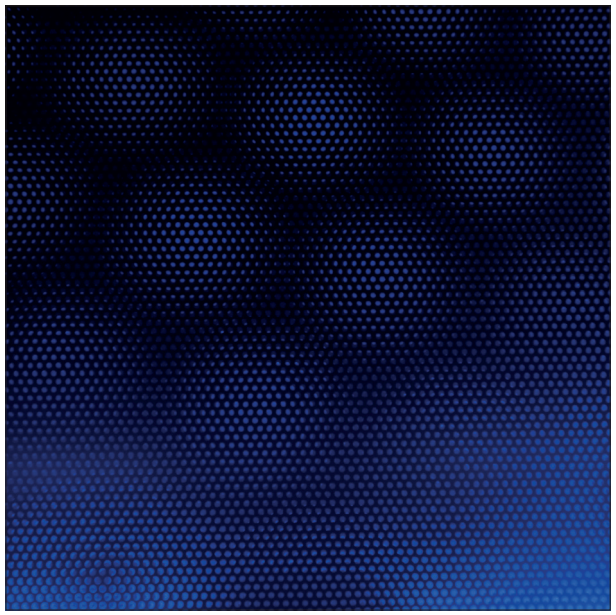

Dreidimensionale Interferenzen