

Hans Walser

Über Symmetrien und Ornamente

Uni-Nacht

Freitag 19. September 2008
18:00 Uhr und 20:30 Uhr

Rheinsprung 9-11, Hörsaal 118

Was heißt Symmetrie?

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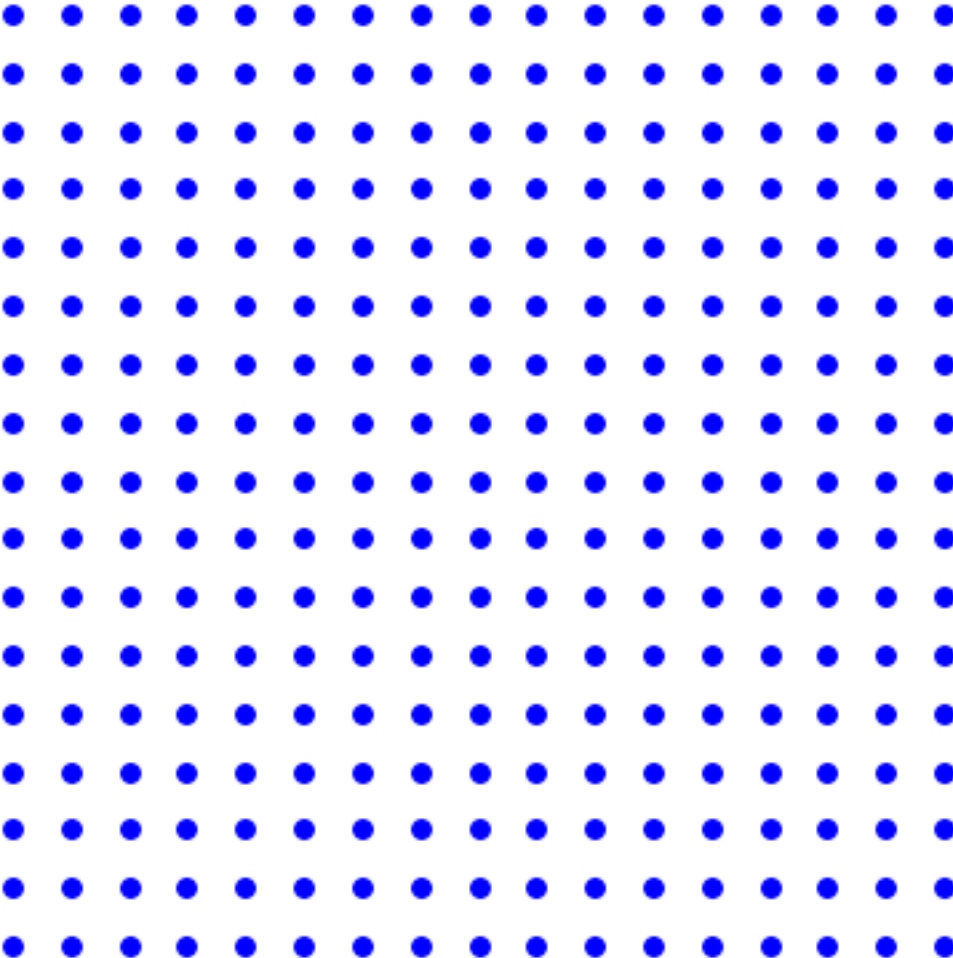
Wir können etwas tun,
ohne dass die anderen es merken.

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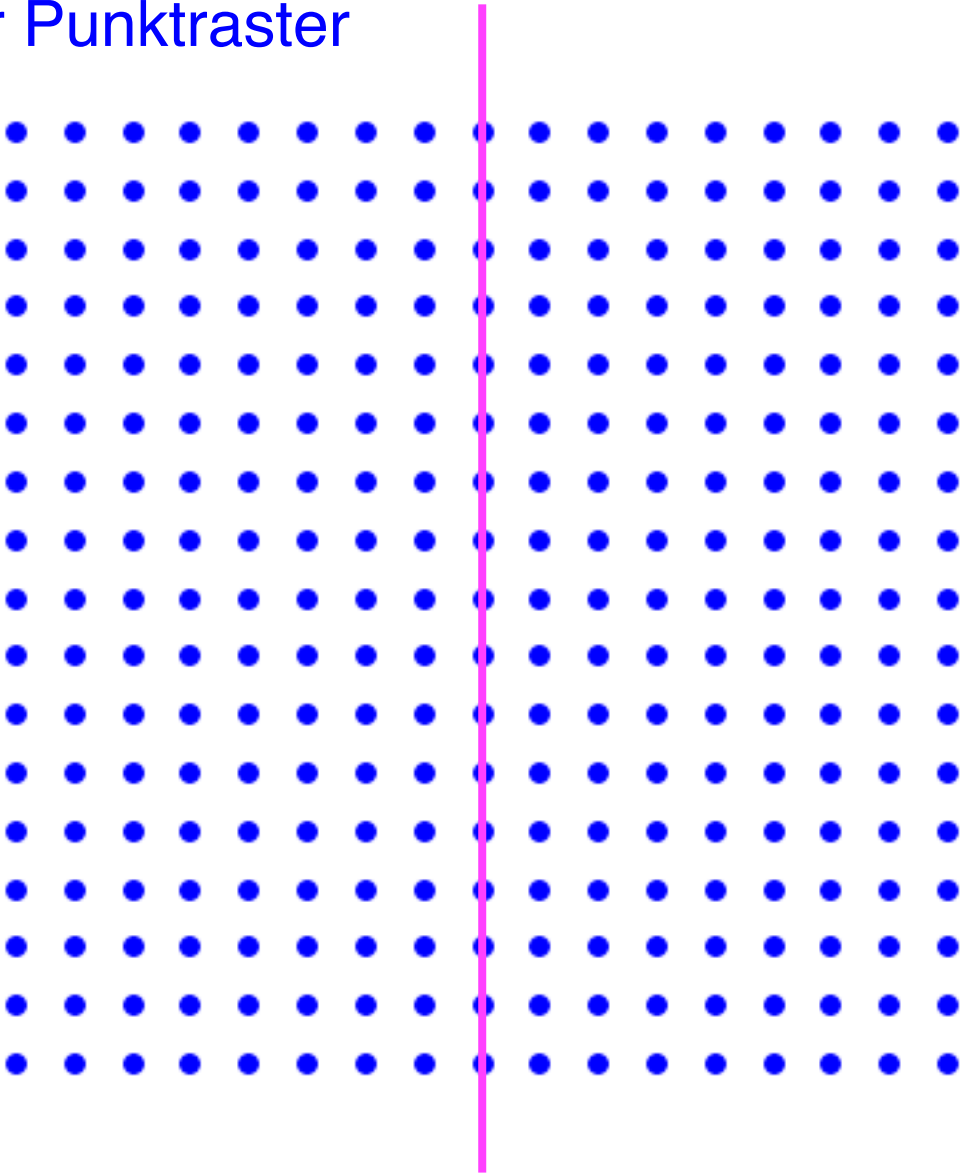
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ohne dass die anderen es merken.

Spiel am rot-gelb-blau-Würfel

Quadratischer Punktraster

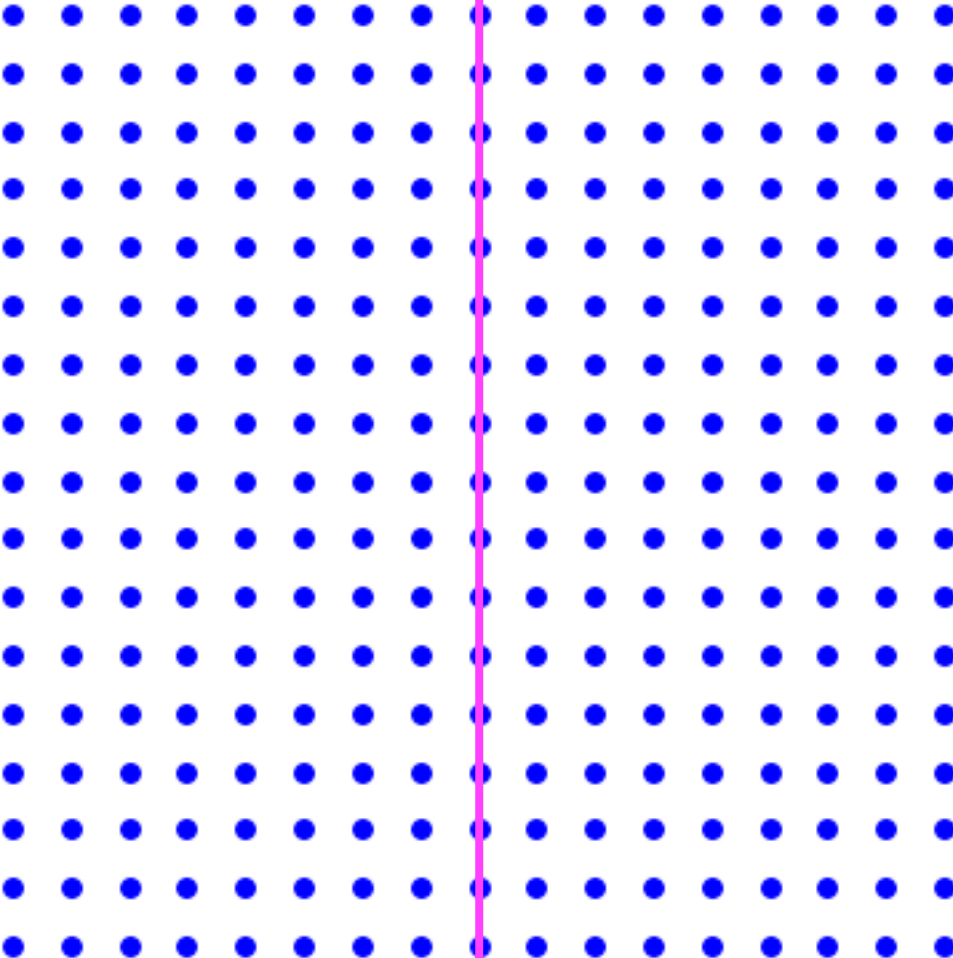


Quadratischer Punktraster

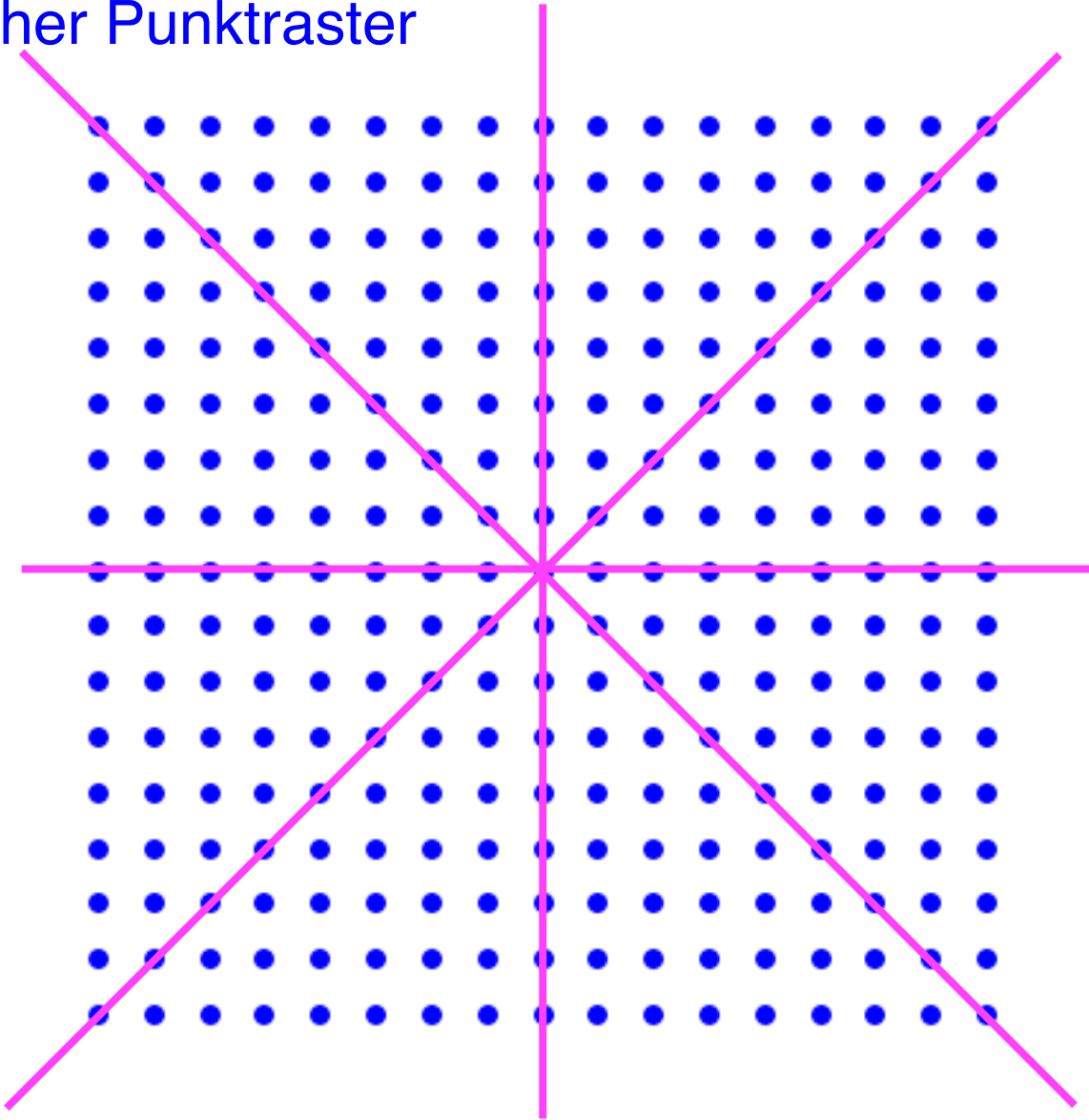


Quadratischer Punktraster

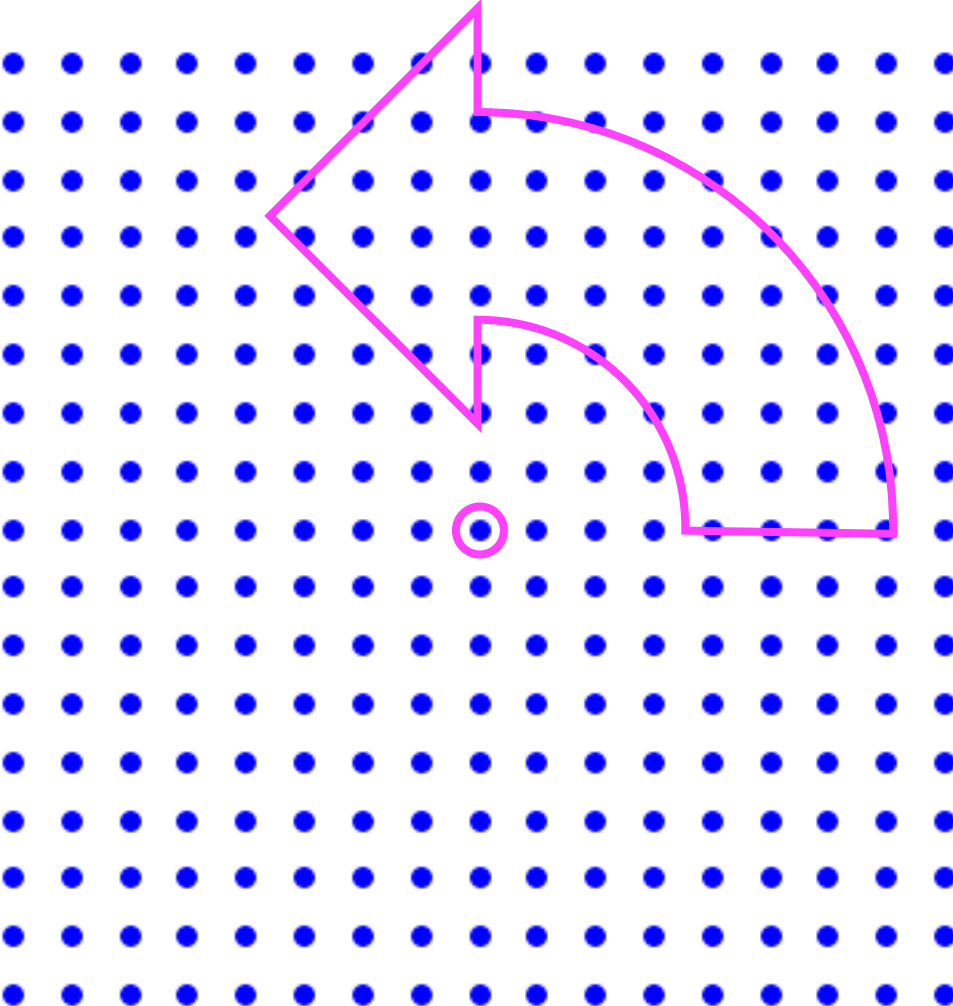
Demo mit Folie



Quadratischer Punktraster



Quadratischer Punktraster



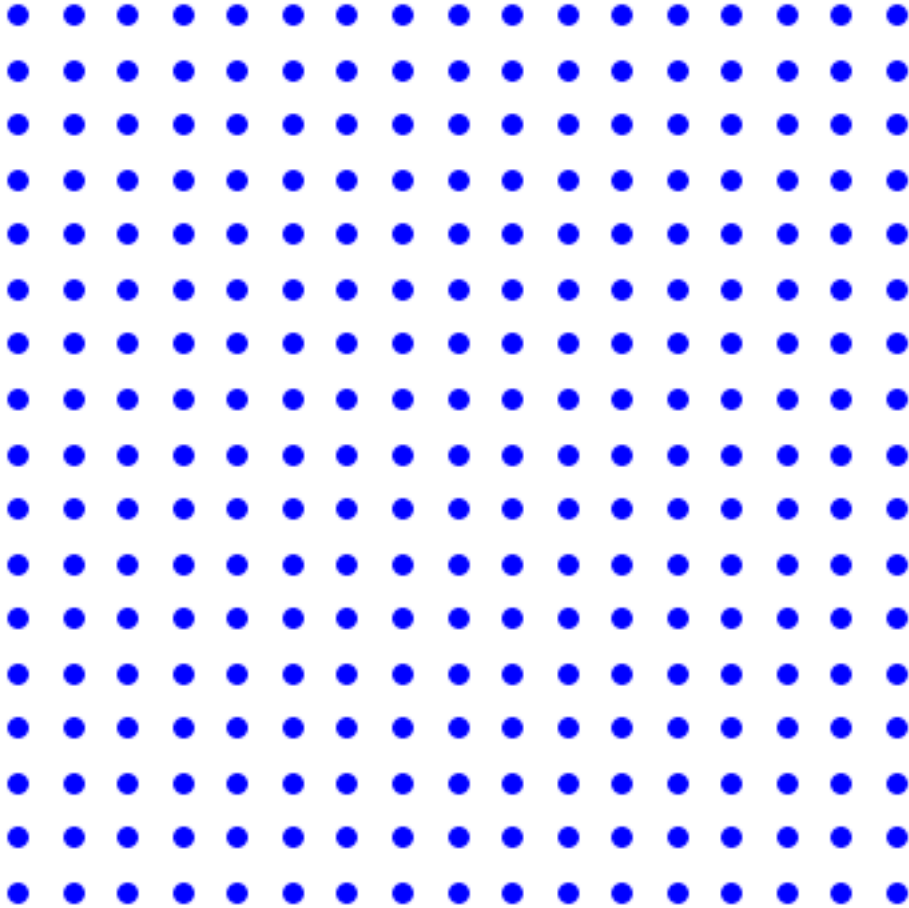
Quadratischer Punktraster

Victor Vasarely, 1906-1997

Quadratischer Punktraster

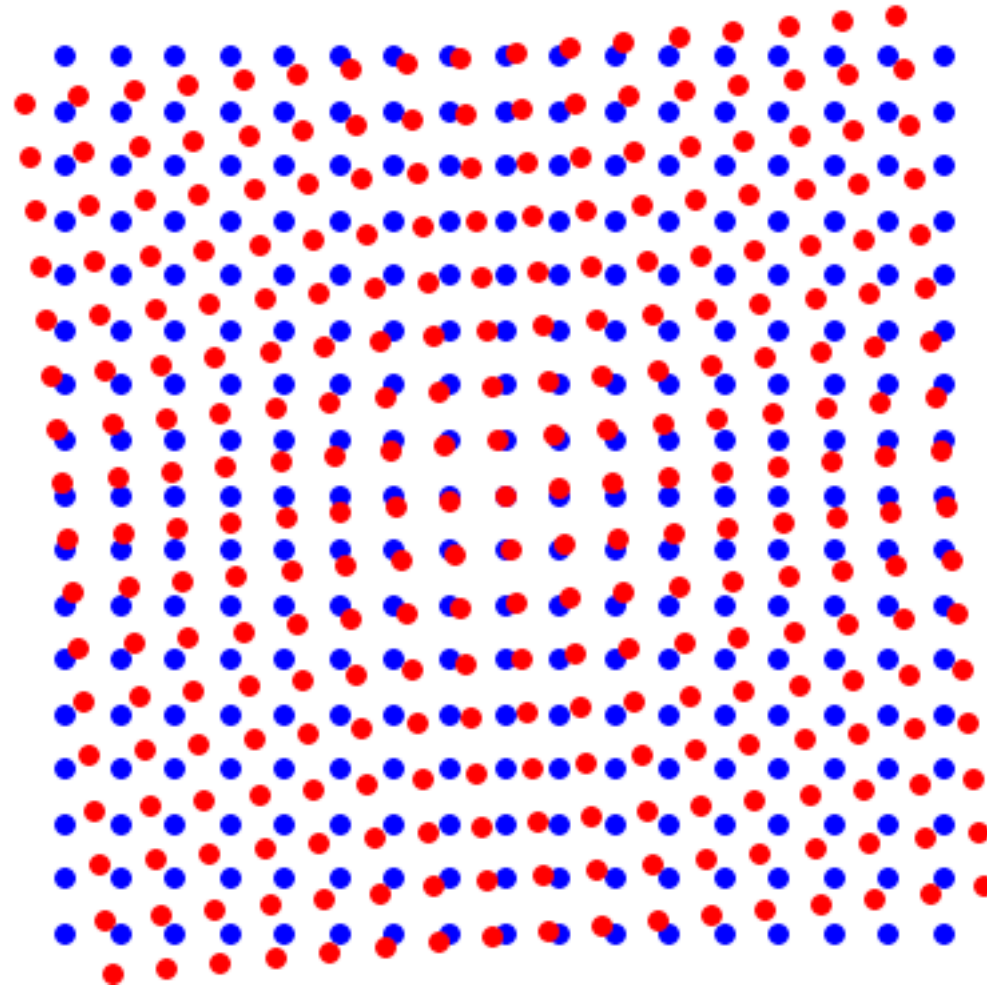
Bridget Louise Riley, *1931

Kleine Drehung



Kleine Drehung

Demo mit Folie



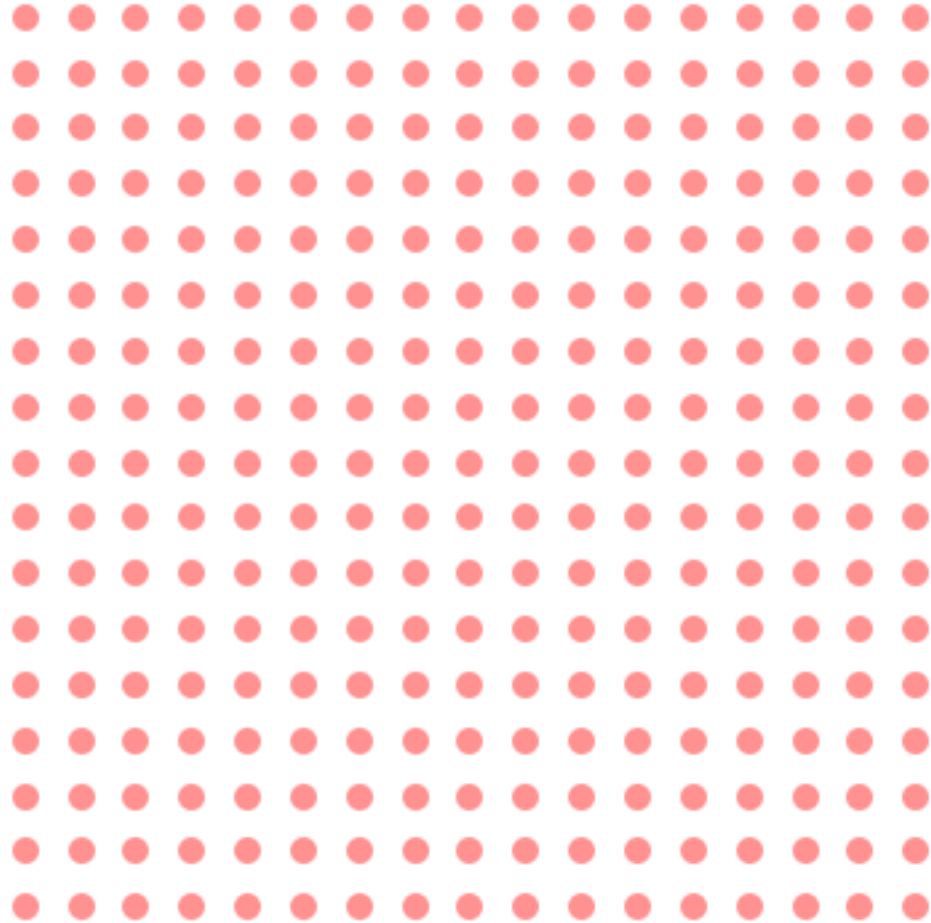
Zoom

Demo mit Folie

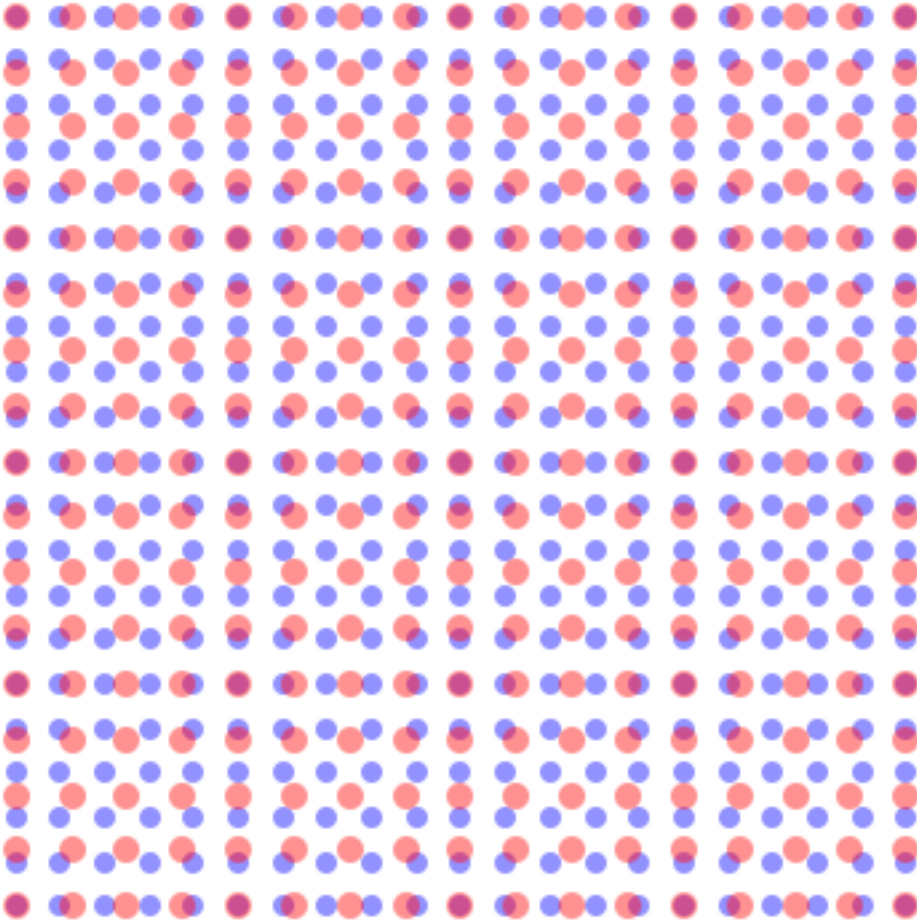


Zoom

Demo mit Folie

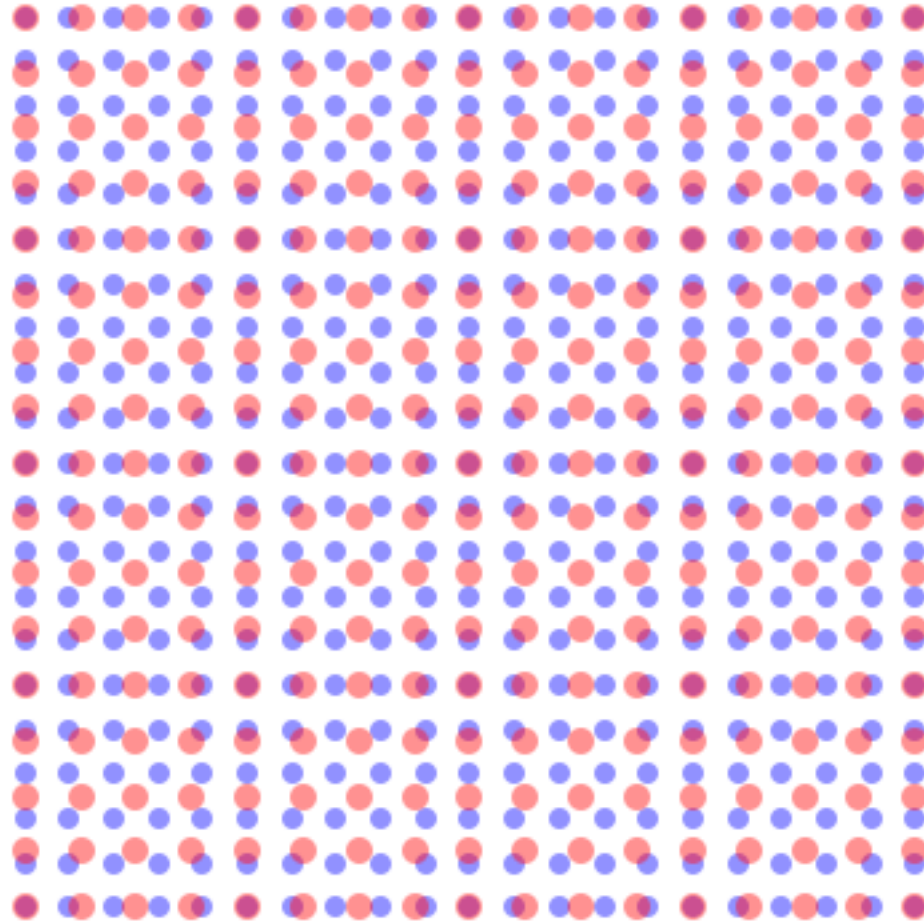


Zoom

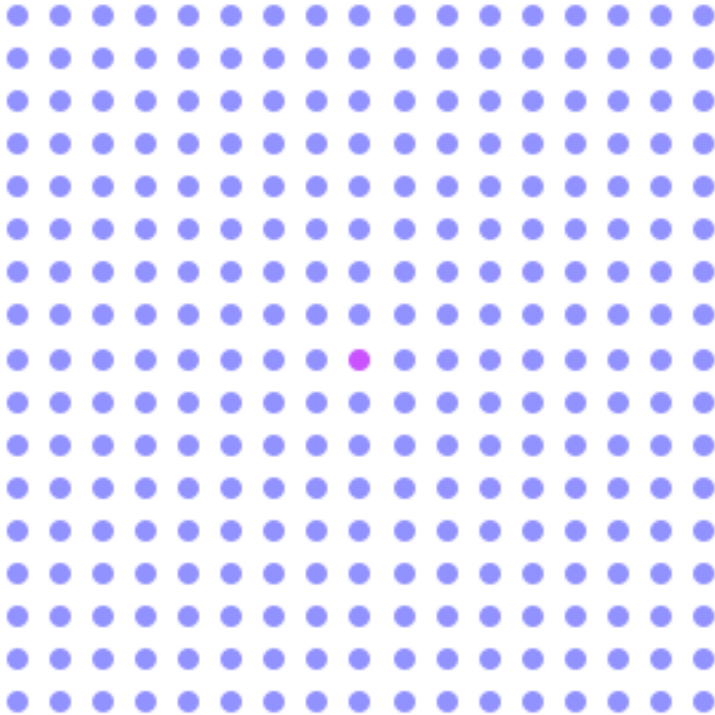


Zoom

Kleine Drehstreckung: Toulouse-Lautrec

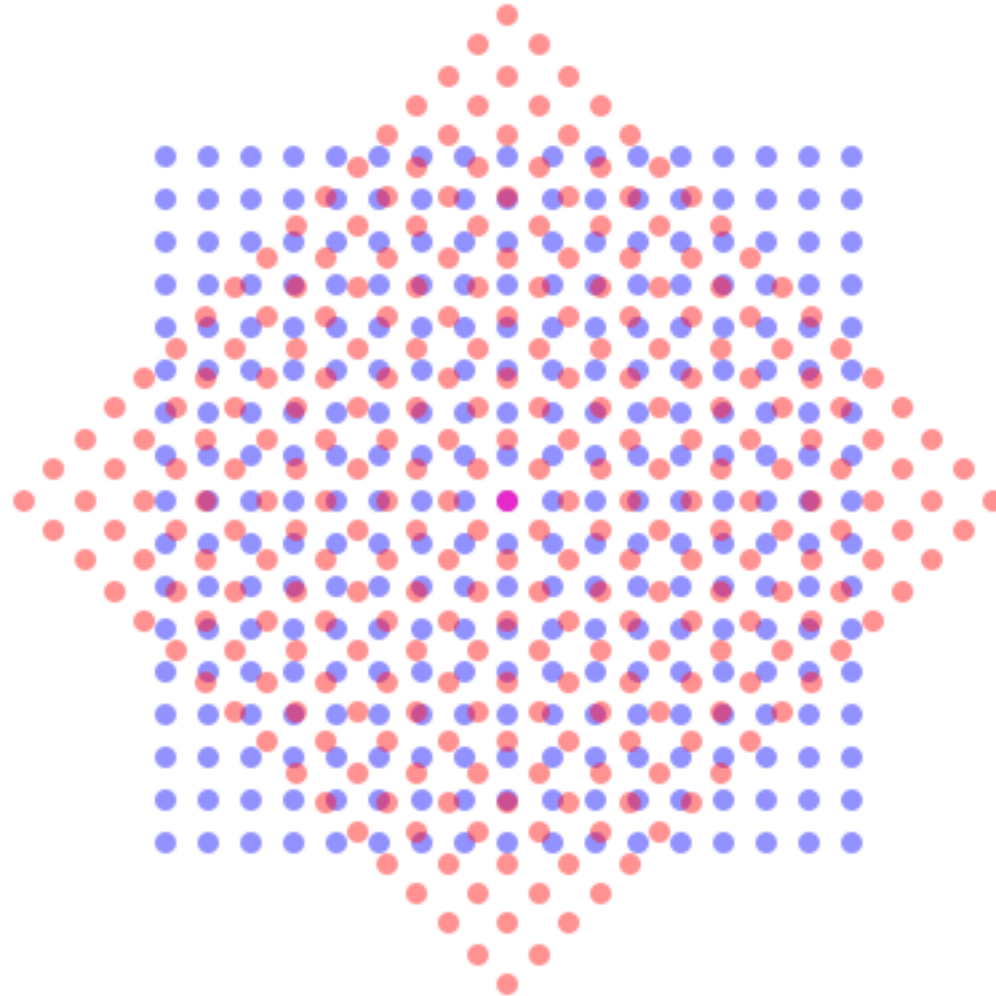


Drehung um 45°



Drehung um 45°

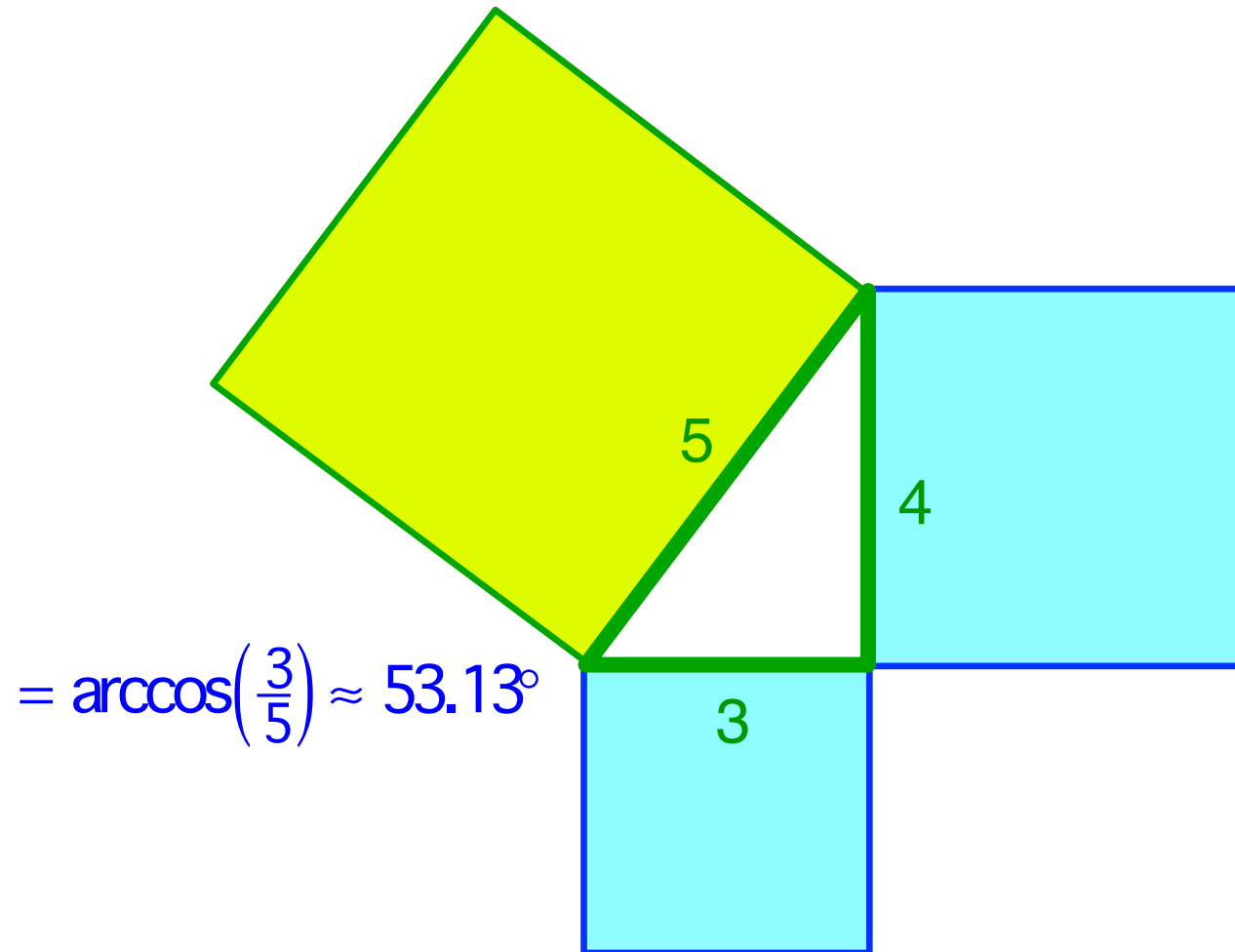
Demo mit Folie



Es geht nicht auf. $\sqrt{2}$ ist irrational.

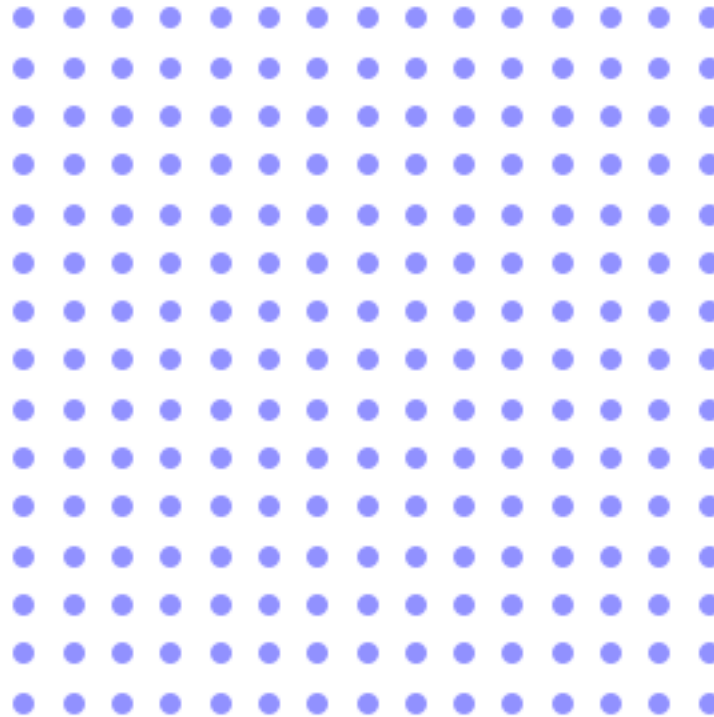
Erinnerung: Pythagoras $a^2 + b^2 = c^2$

Insbesondere: $3^2 + 4^2 = 5^2$

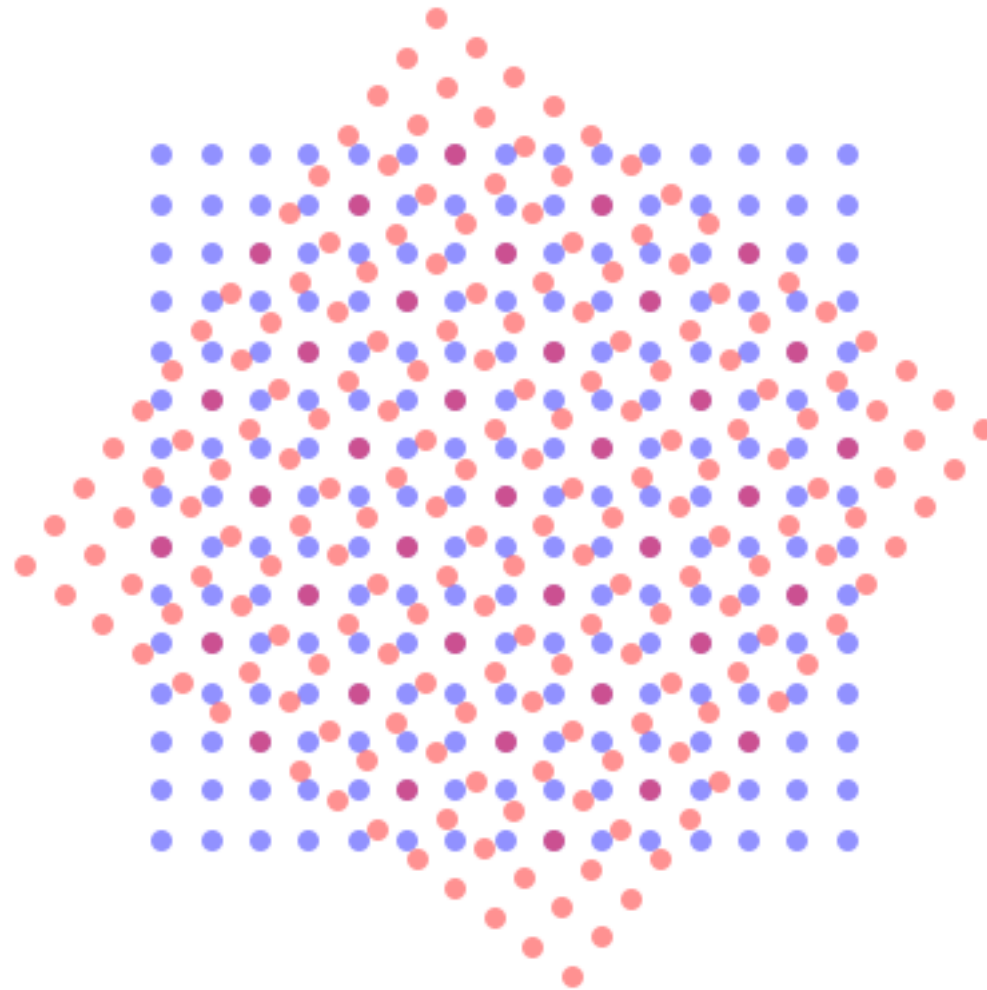


Drehung um $= \arccos\left(\frac{3}{5}\right) \approx 53.13^\circ$

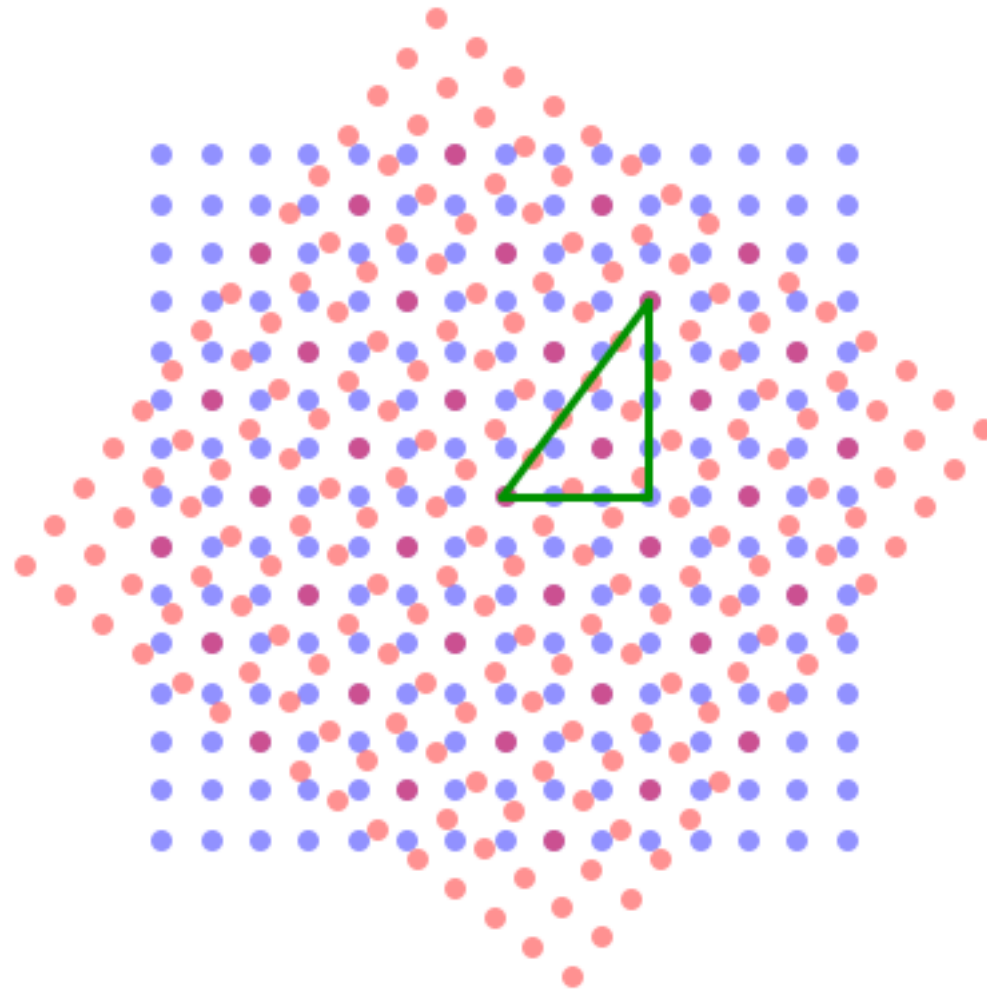
Demo mit Folie



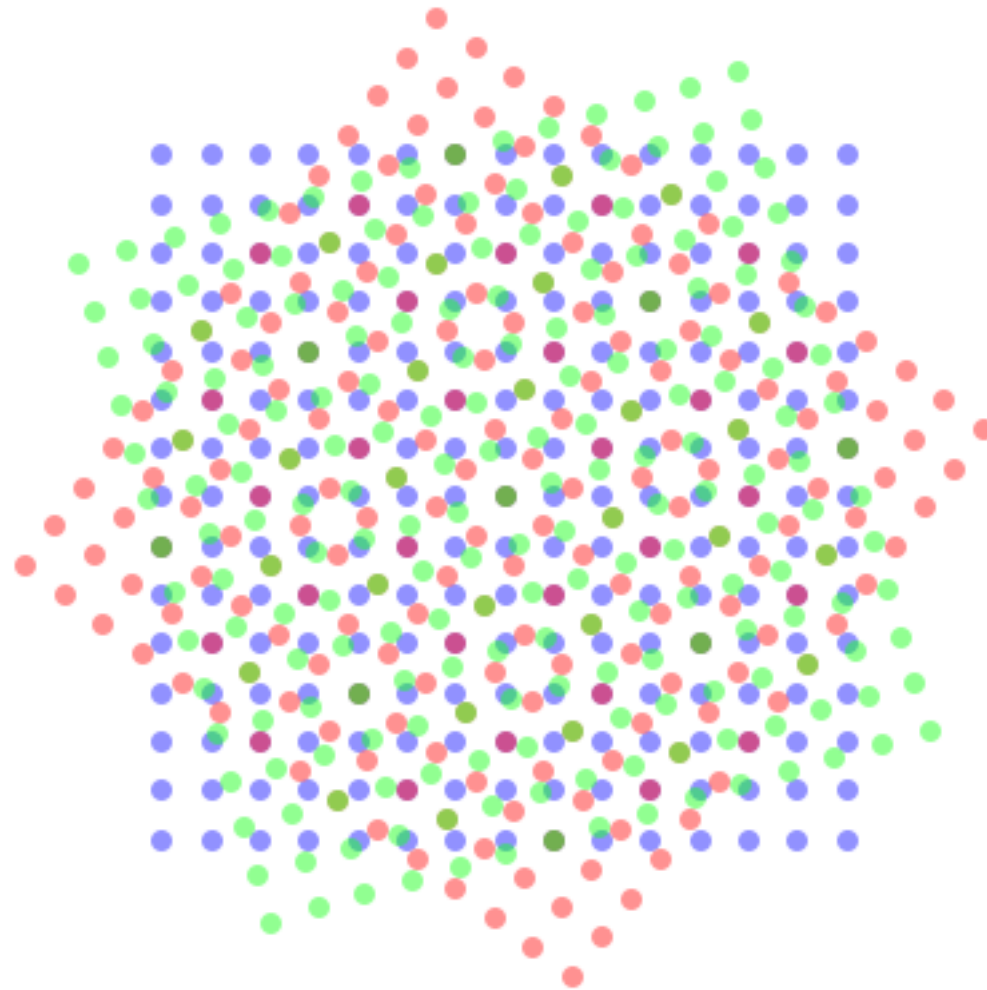
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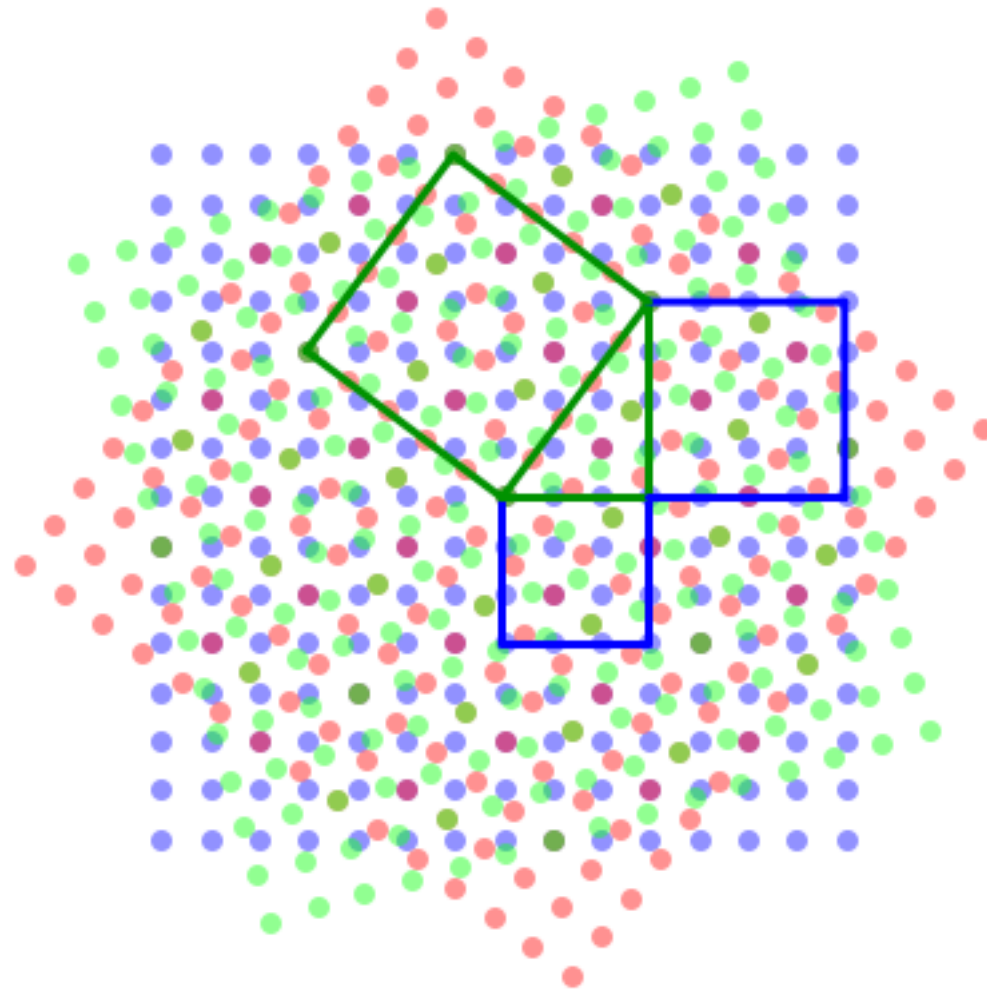
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Dreiecksraster

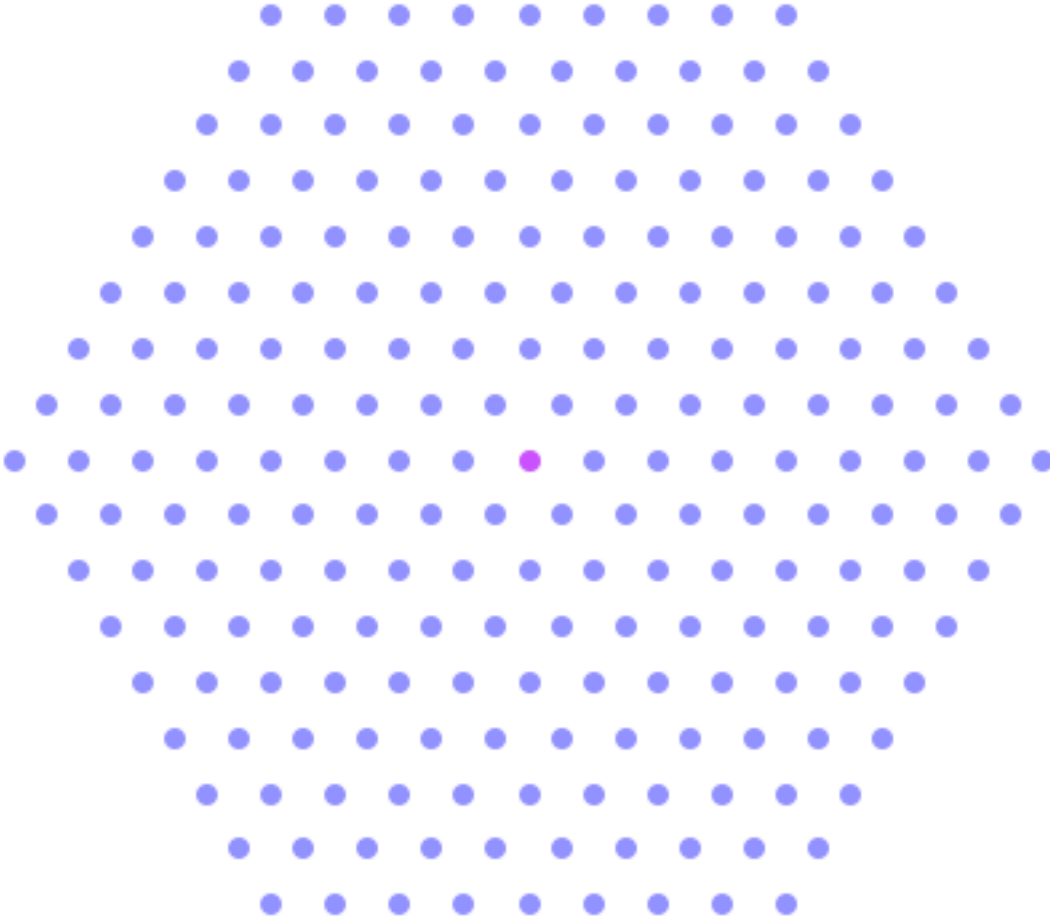
Roy Fox Lichtenstein, 1923-1997

Dreiecksraster

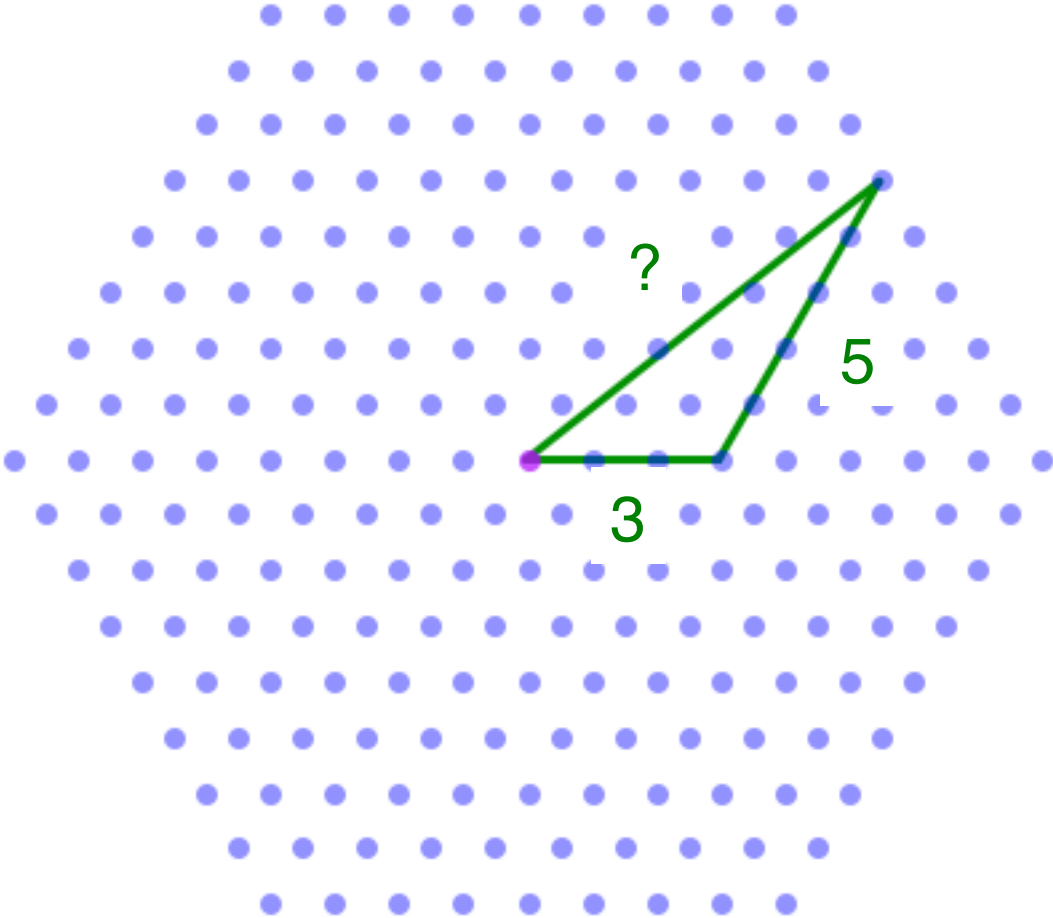
Lochschablone

Roy Fox Lichtenstein, 1923-1997

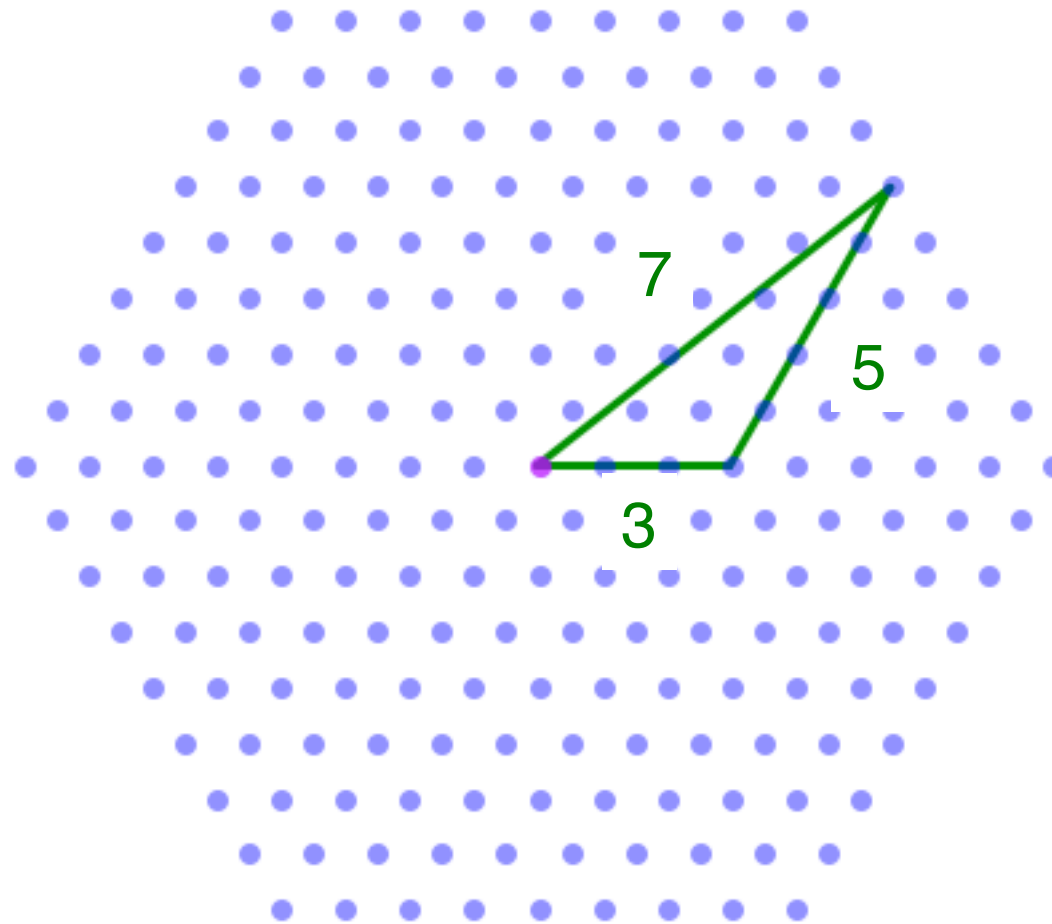
Dreiecksraster



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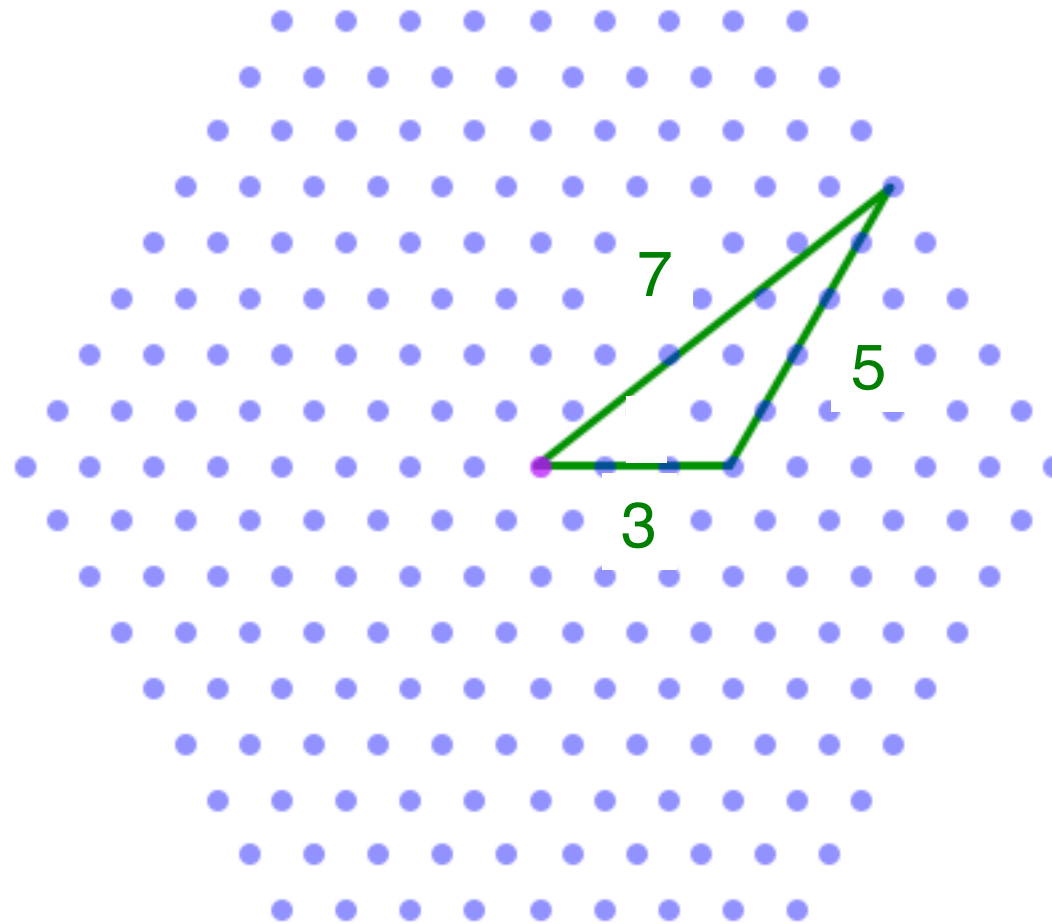
Dreiecksraster



Kosinus-Satz: Längste Seite = 7

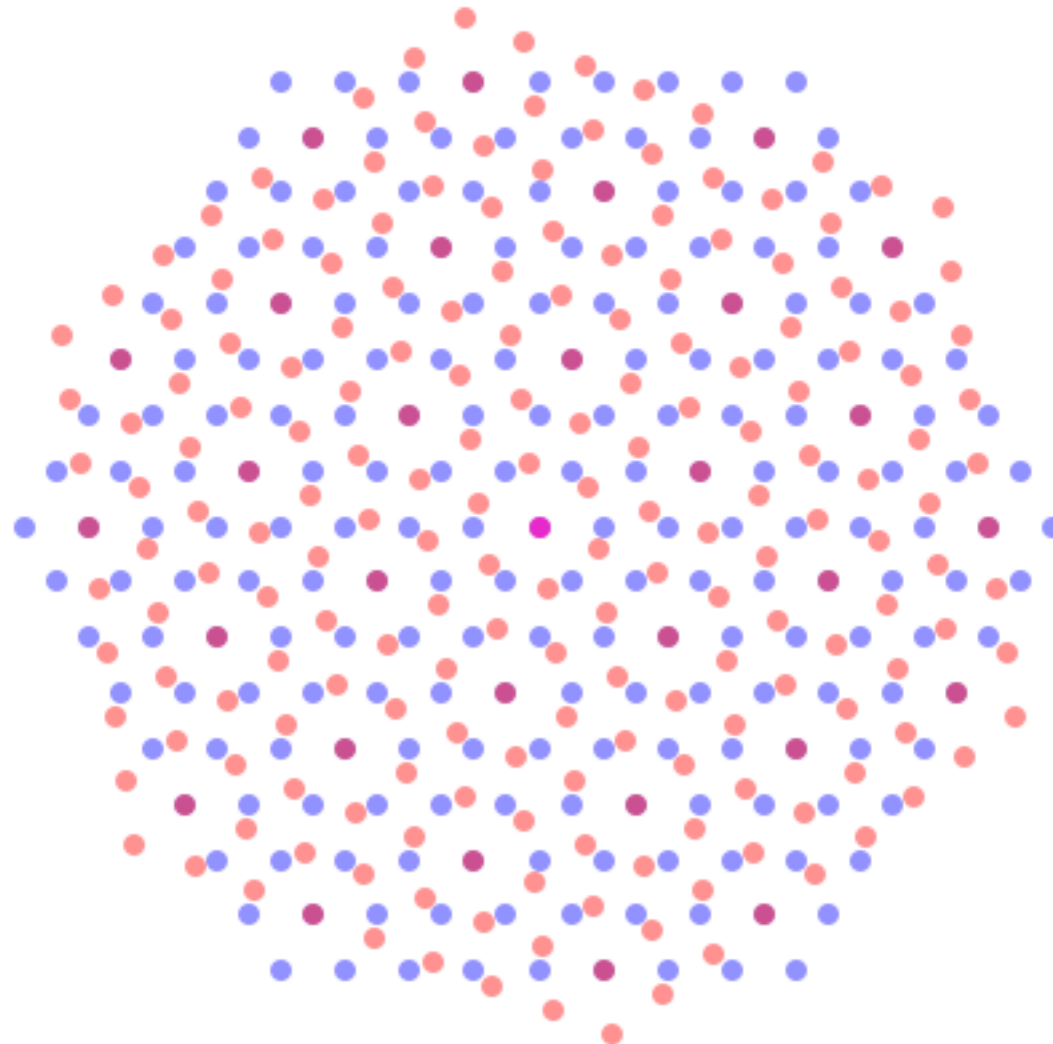
Dreiecksraster

Demo mit Folie



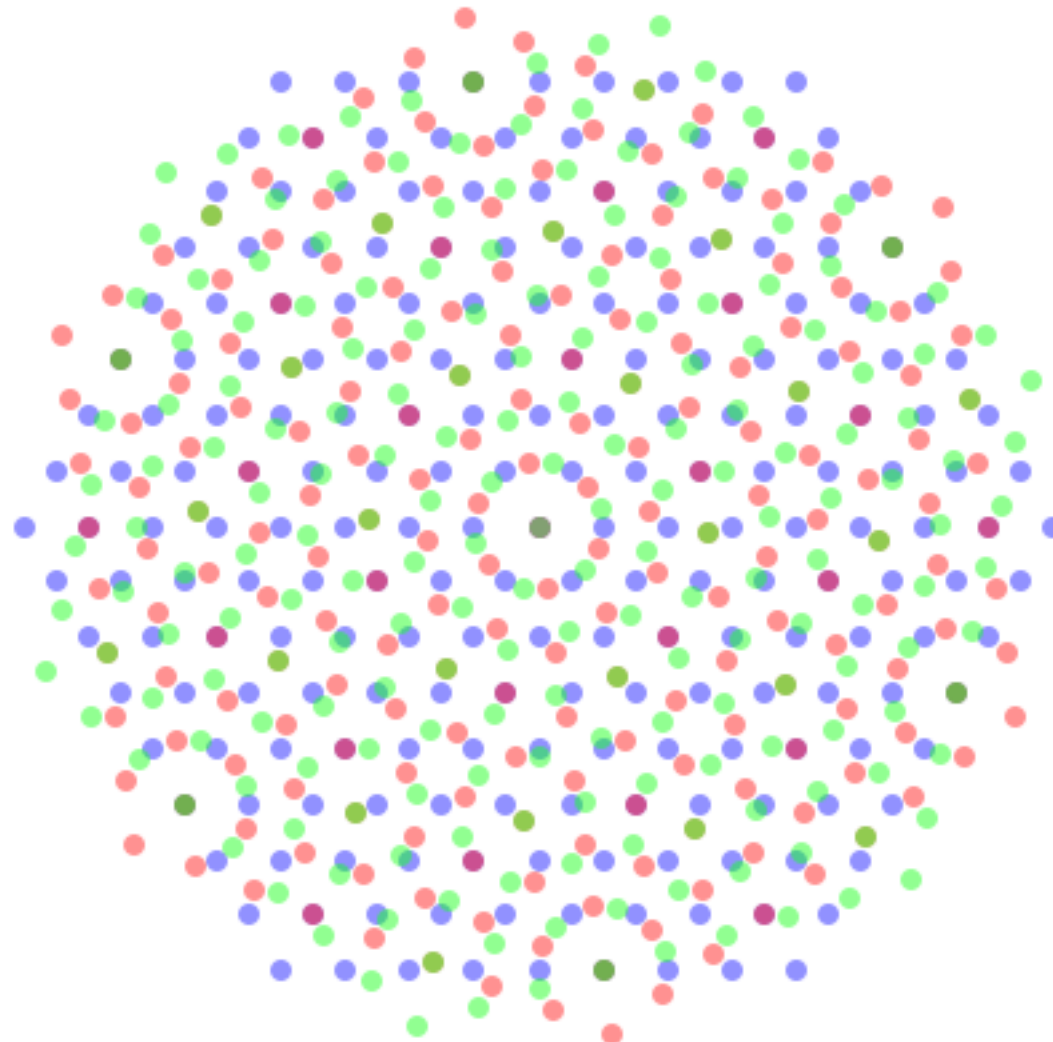
$$= \arctan\left(\frac{5}{11}\sqrt{3}\right) \approx 38.21^\circ$$

Dreiecksraster



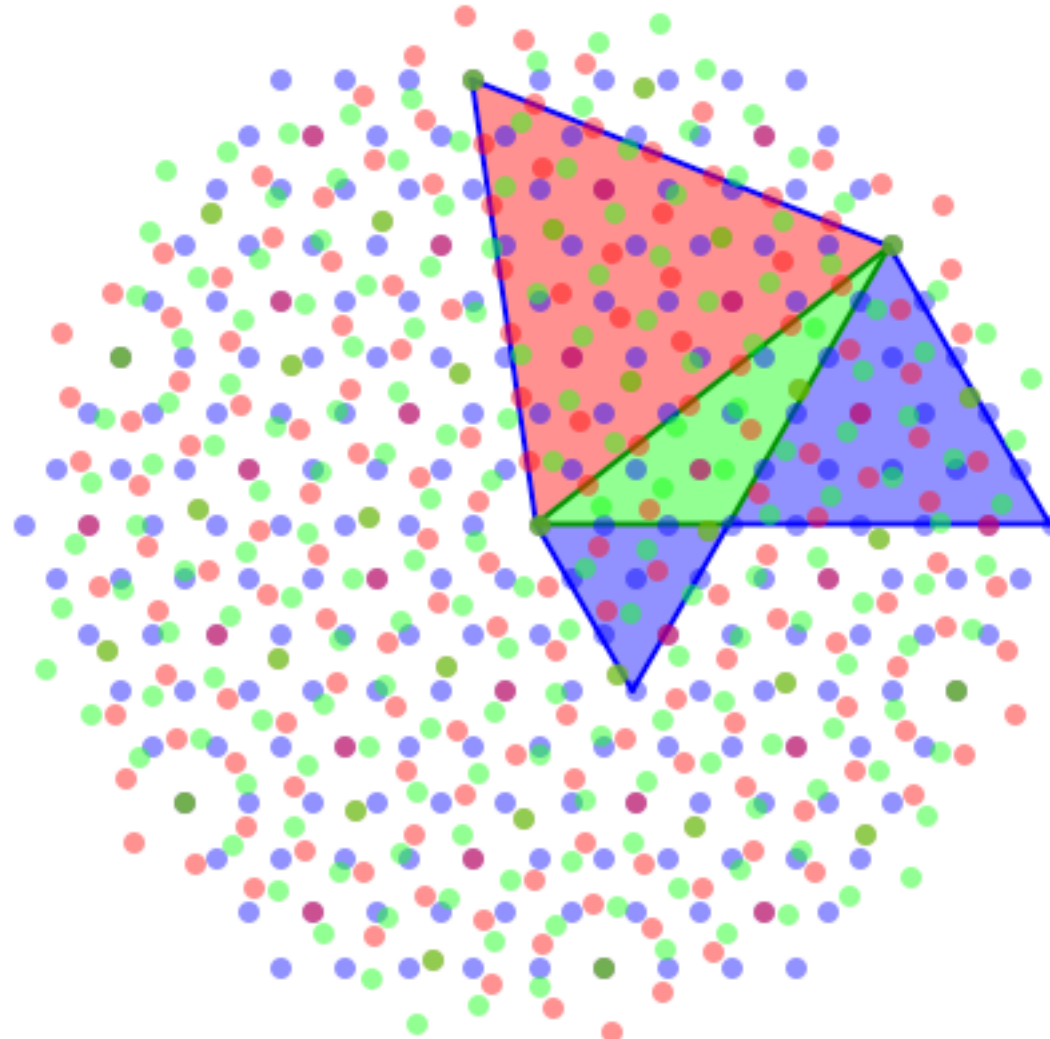
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