

Rekenkunst met strepen

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Trefwoorden:

- frequentie
- richting
- digitaal
- rekenen:

$$0 + 0 = 0$$

$$0 + 1 = 1$$

$$1 + 0 = 1$$

$$1 + 1 = 0$$

$$0 \times 0 = 0$$

$$0 \times 1 = 0$$

$$1 \times 0 = 0$$

$$1 \times 1 = 1$$

Zebra:

- frequentie : $\frac{1}{2 \times \text{breedte zwarte strepen}}$
- richting : \perp zwarte strepen
- digitaal : wit/zwart

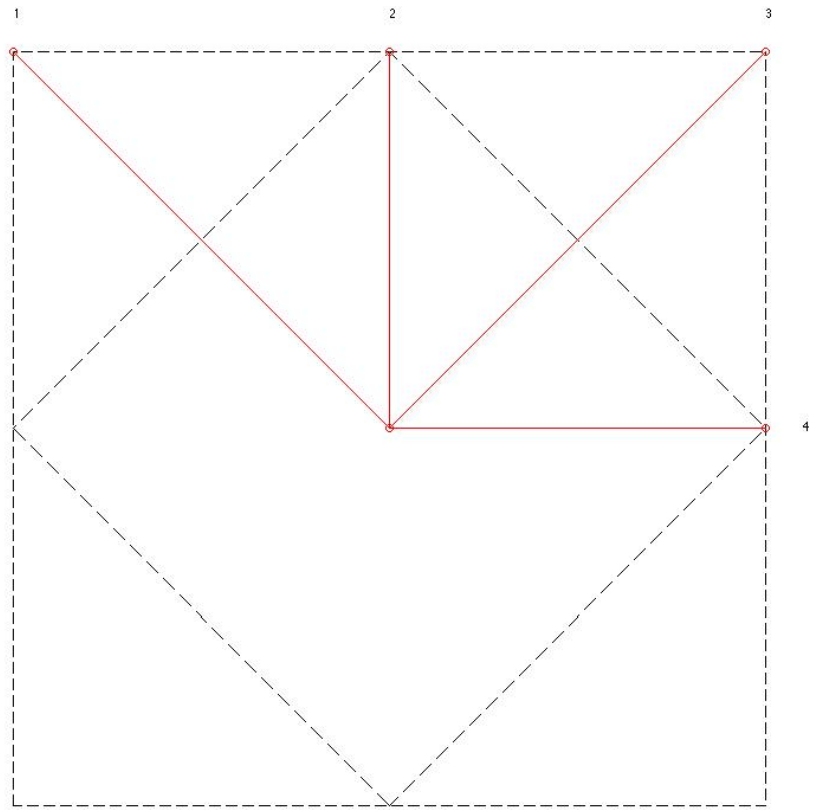


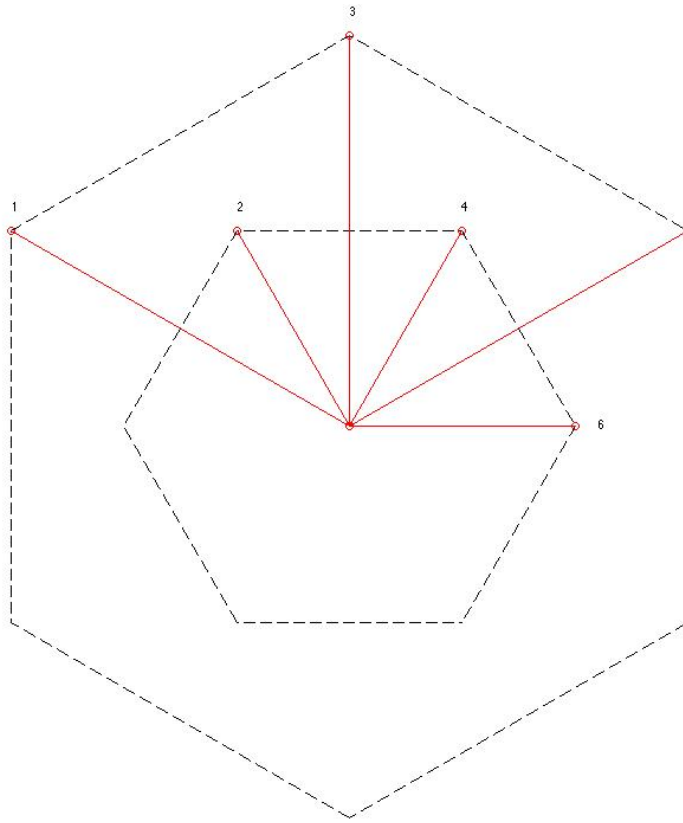
Standaardisatie:

- Kies vast referentiepunt O in het vlak.
- Bekijk alleen zebra's met een zwart/wit overgang in O .

Codeer beschrijving van **zebra** als **pijl**

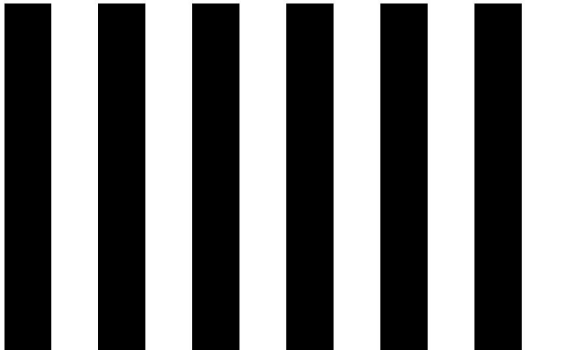
- vanuit O ,
- richting: wit \rightarrow zwart , \perp scheidingslijn,
- lengte = $\frac{1}{2 \times \text{breedte zwarte strepen}}$.



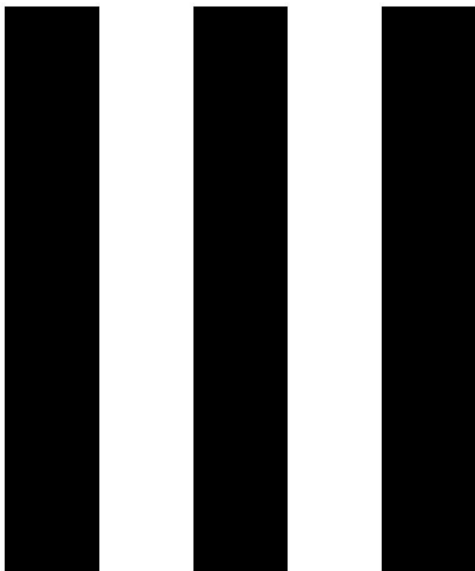




Z^{141}



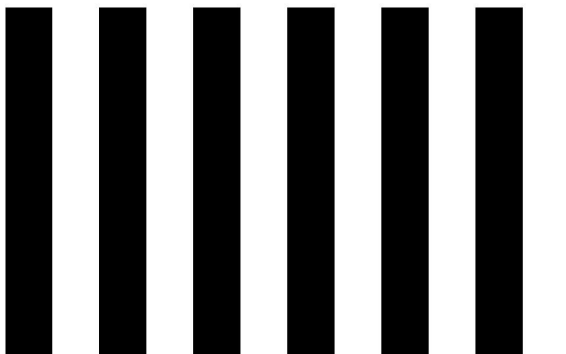
Z^{142}



$Z^{141} + Z^{142}$



Z^{141}



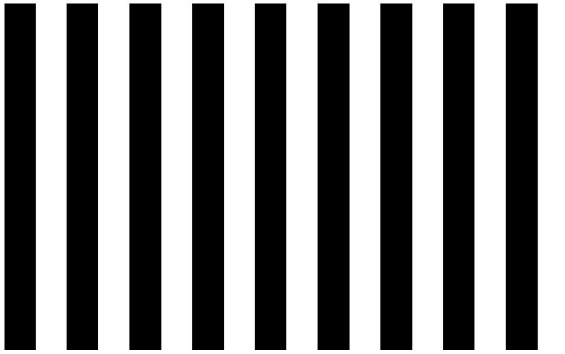
Z^{142}



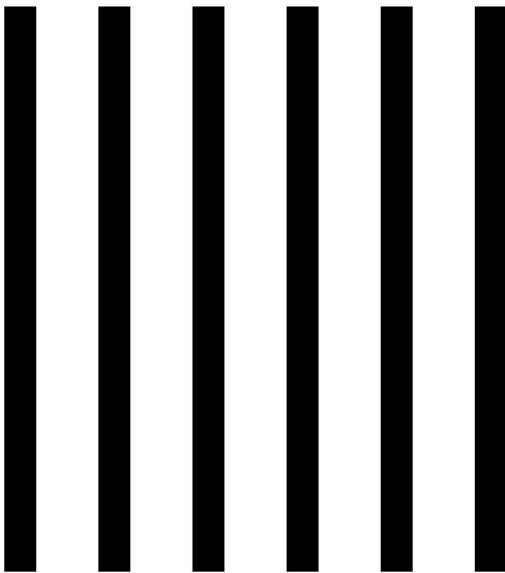
$Z^{141} \times Z^{142}$



Z^{141}



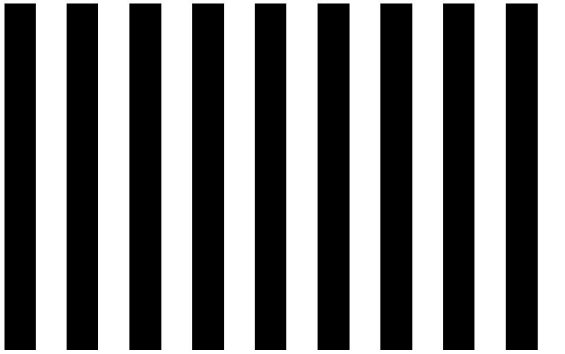
Z^{143}



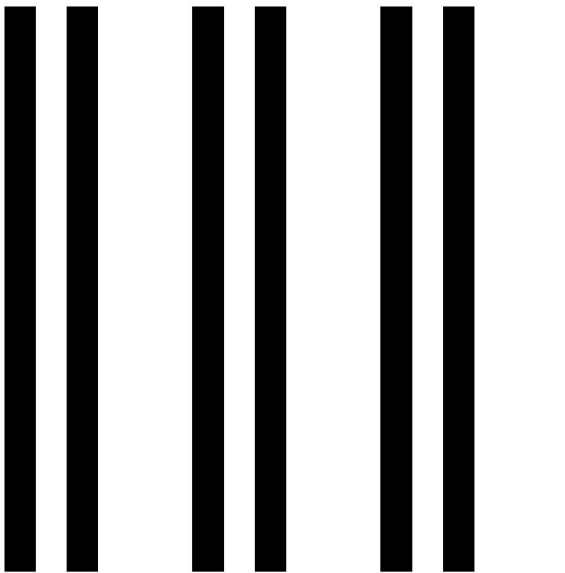
$Z^{141} + Z^{143}$



$$\mathbb{Z}^{141}$$



$$\mathbb{Z}^{143}$$



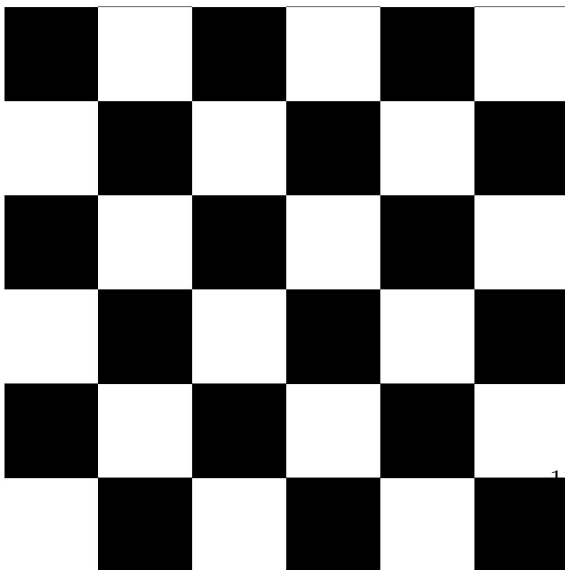
$$\mathbb{Z}^{141} \times \mathbb{Z}^{143}$$



$$Z^{141}$$



$$Z^{121}$$



$$Z^{121} + Z^{141}$$



$$\mathbb{Z}^{141}$$

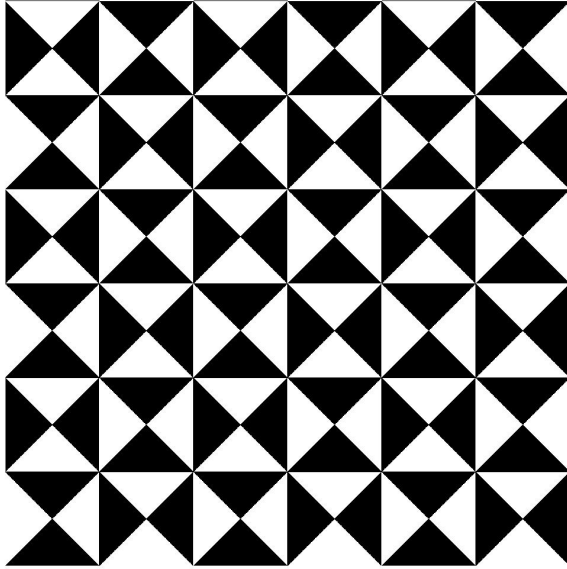


$$\mathbb{Z}^{121}$$

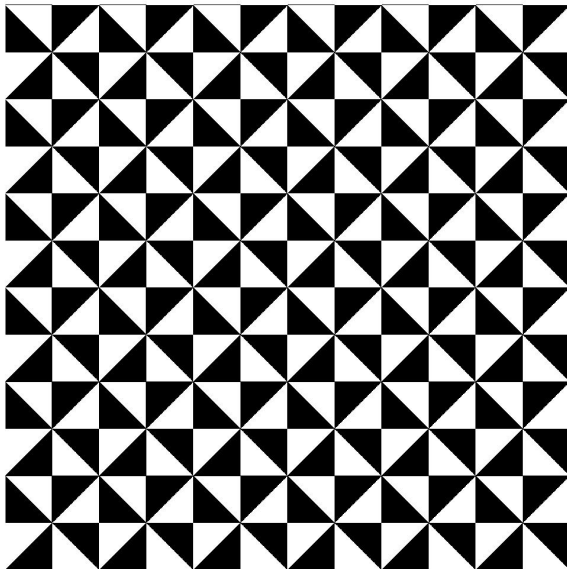


$$\mathbb{Z}^{121} \times \mathbb{Z}^{141}$$

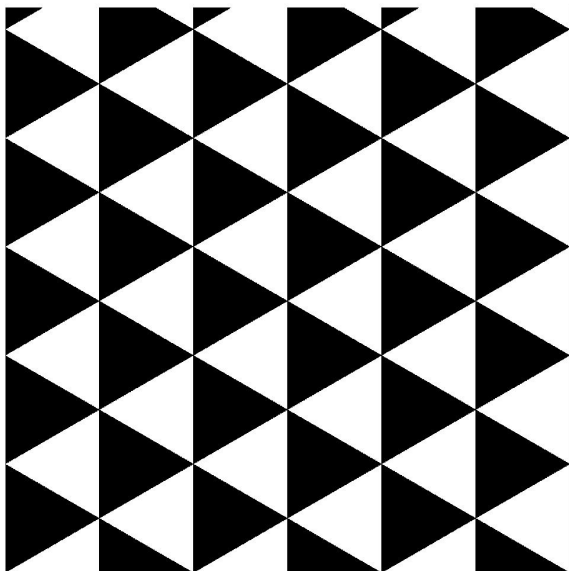




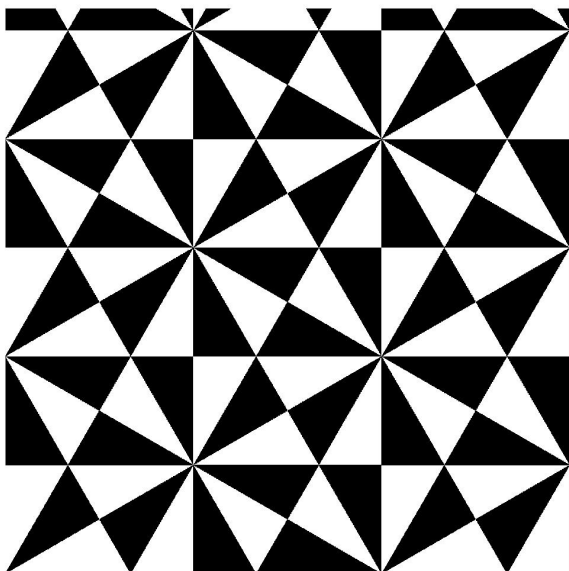
$$Z^{111} + Z^{121} + Z^{131} + Z^{141}$$



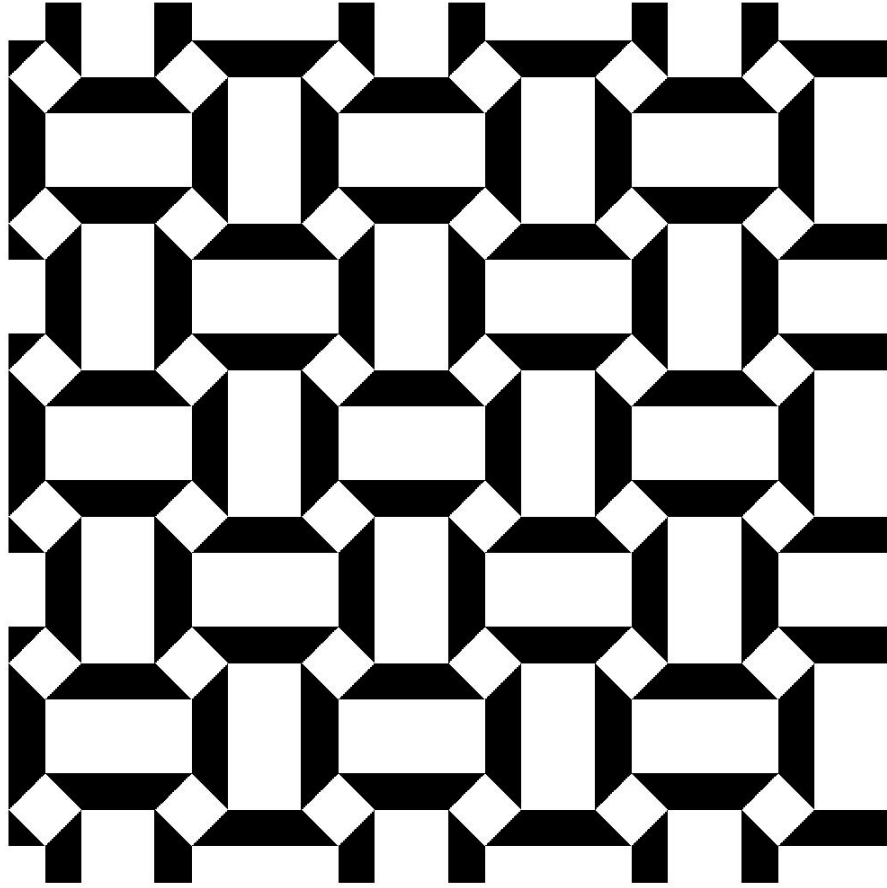
$$Z^{111} + Z^{122} + Z^{131} + Z^{142}$$



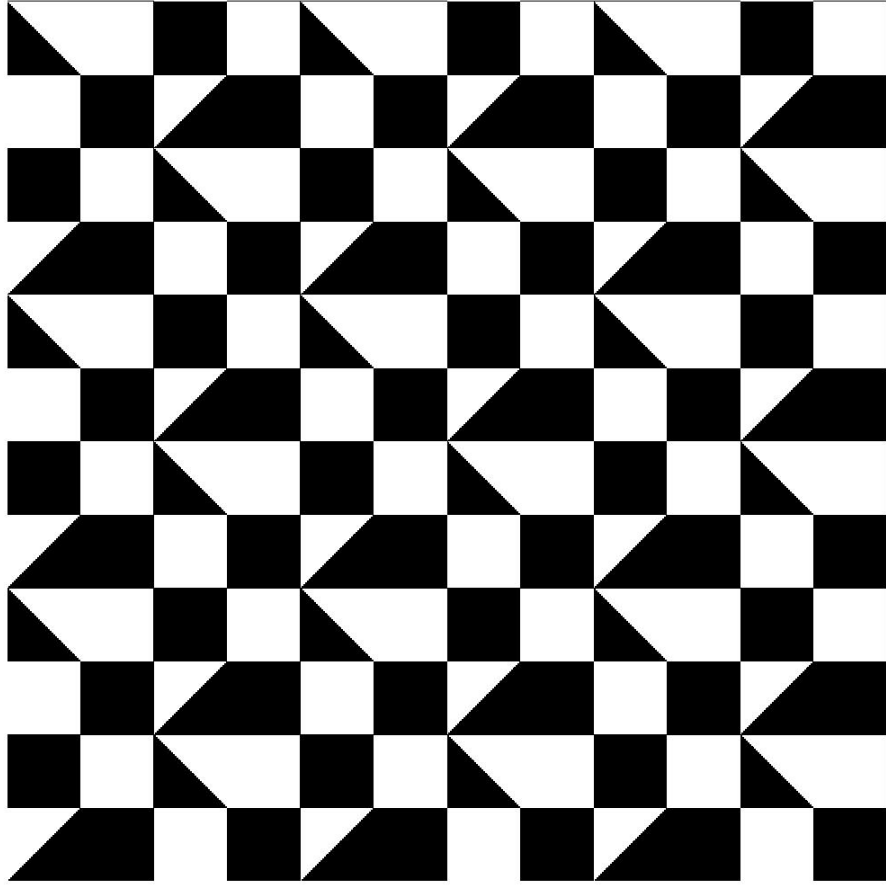
$$Z^{221} + Z^{241} + Z^{261}$$



$$Z^{211} + Z^{221} + Z^{231} \\ + Z^{241} + Z^{251} + Z^{261}$$



$$\begin{aligned}
& Z^{124} + Z^{121} Z^{142} + Z^{141} Z^{142} + Z^{122} Z^{142} \\
& + Z^{122} Z^{141} + Z^{121} Z^{122} + Z^{124} Z^{141} \\
& + Z^{121} Z^{124} + Z^{122} Z^{124} + Z^{142} Z^{144} \\
& + Z^{112} Z^{122} Z^{142} + Z^{122} Z^{132} Z^{142} \\
& + Z^{112} Z^{124} Z^{142} + Z^{124} Z^{132} Z^{142} \\
& + Z^{122} Z^{142} Z^{144} + Z^{124} Z^{142} Z^{144}
\end{aligned}$$



$$\begin{aligned}
& Z^{122} + Z^{142} \\
& + Z^{131} Z^{141} Z^{142} + Z^{111} Z^{141} Z^{142} \\
& + Z^{121} Z^{131} Z^{142} + Z^{111} Z^{121} Z^{142} \\
& + Z^{122} Z^{131} Z^{142} + Z^{111} Z^{122} Z^{142} \\
& = \\
& Z^{122} + Z^{142} (1 + (Z^{111} + Z^{131})(Z^{121} + Z^{122} + Z^{141}))
\end{aligned}$$