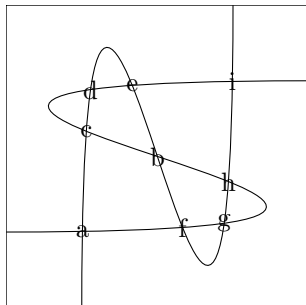
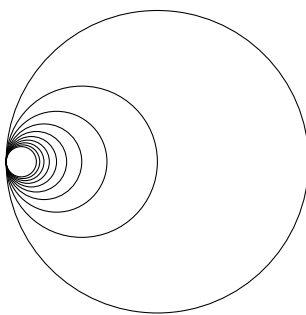


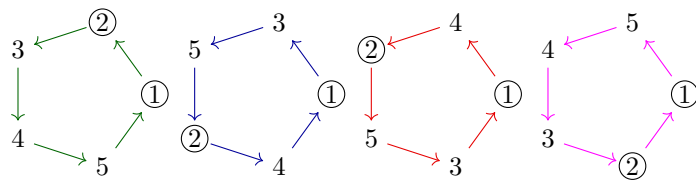
1 Intersections



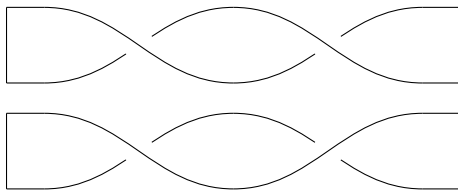
2 Hawaiian earring

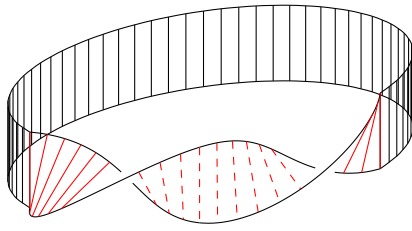


3 5 cycles in S_5

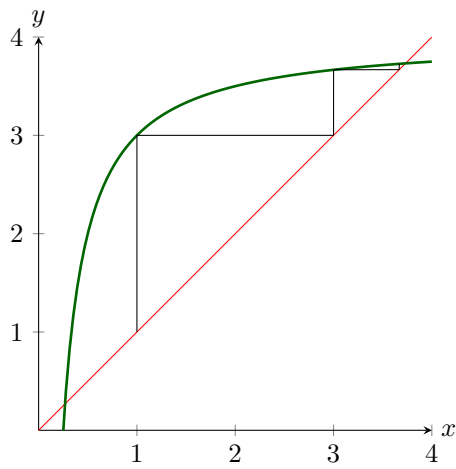


4 Isotopy of double möbius band

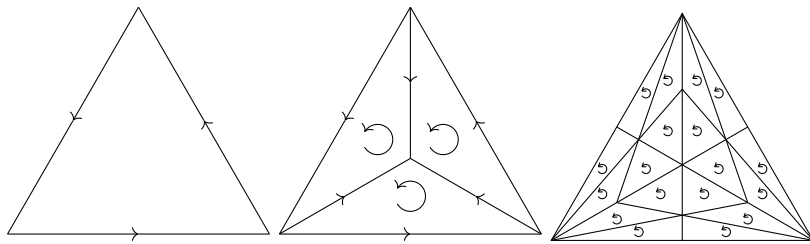




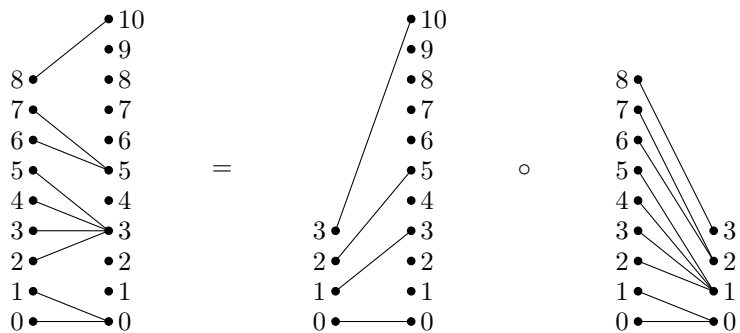
5 Invariant points



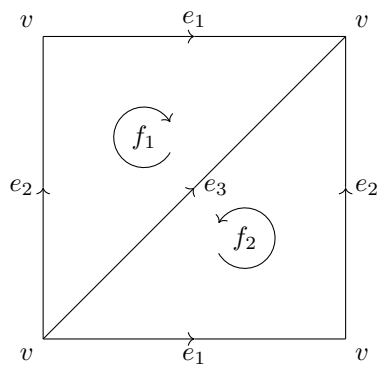
6 Simplicial complexes



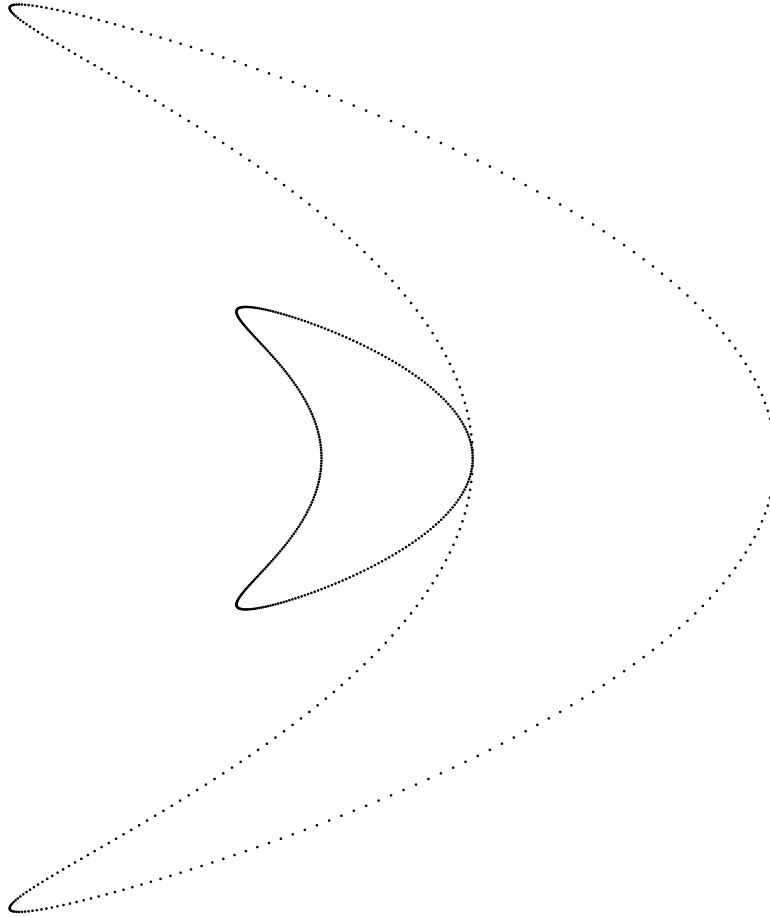
7 Face maps and degeneracy maps



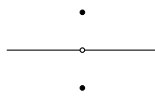
8 Torus



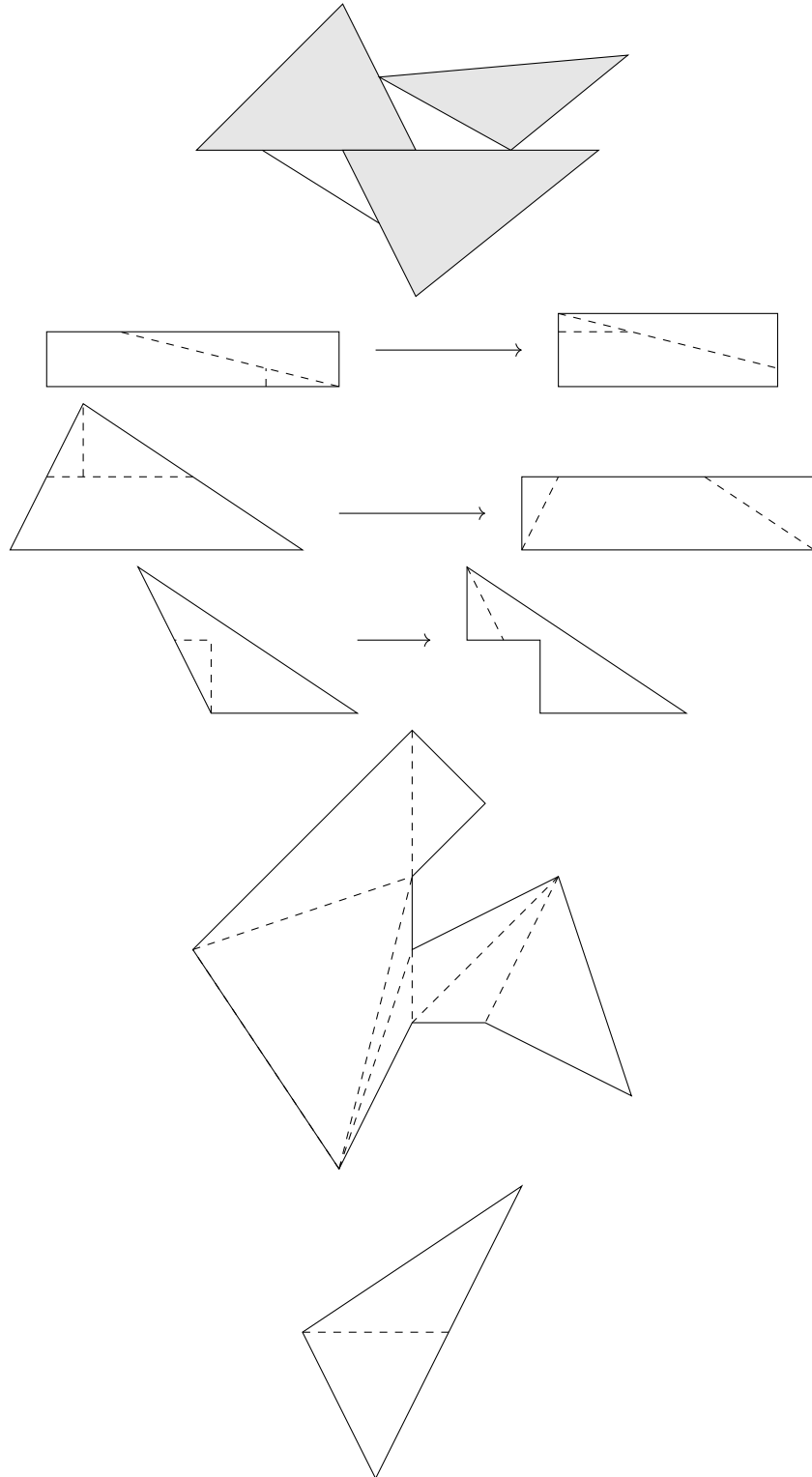
9 Calculation based

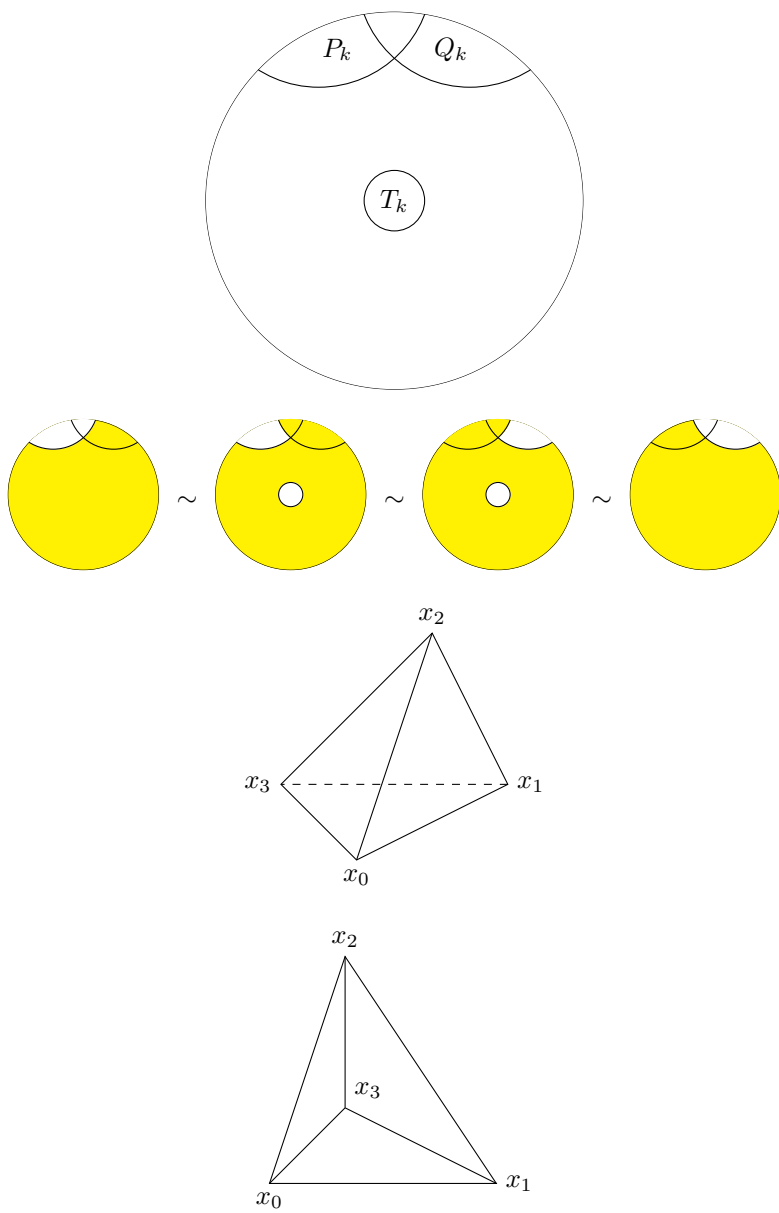


10 One line with two origins

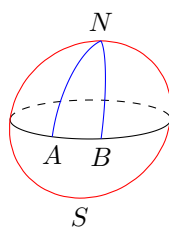


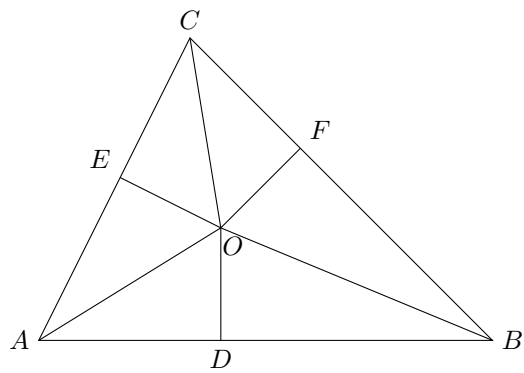
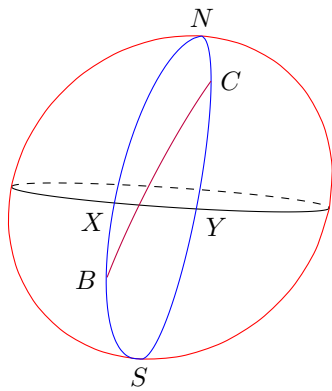
11 Polyhedra



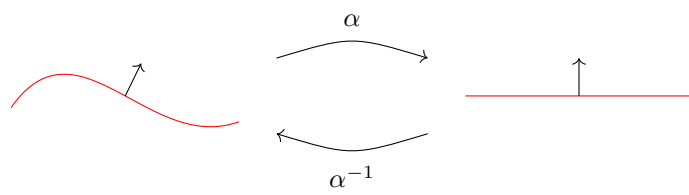


12 Sphere

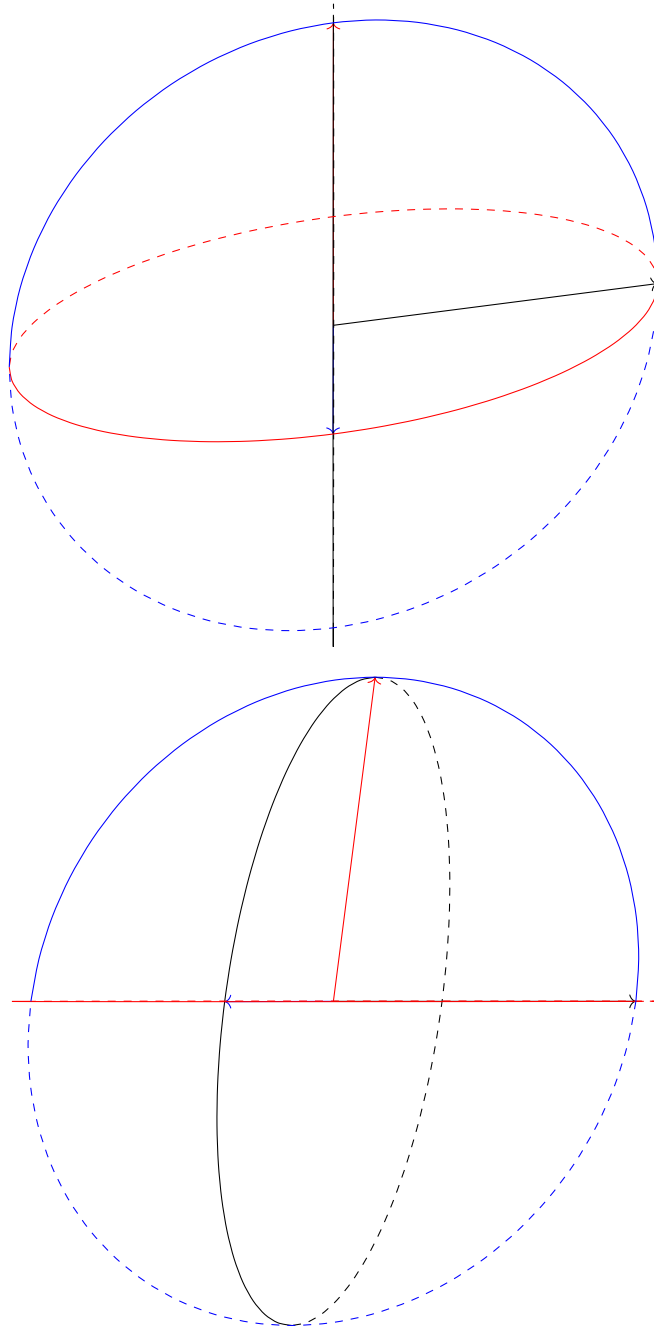


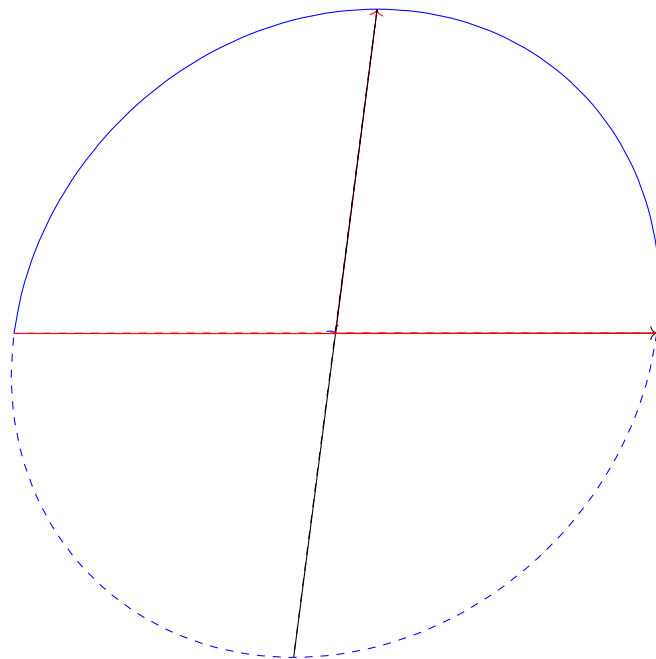


13 Smooth curve

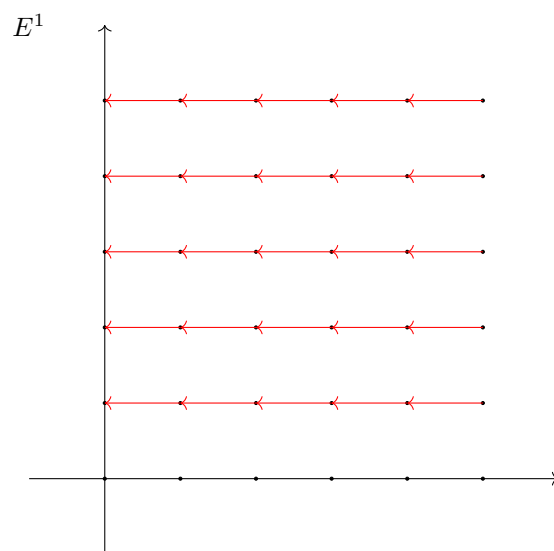


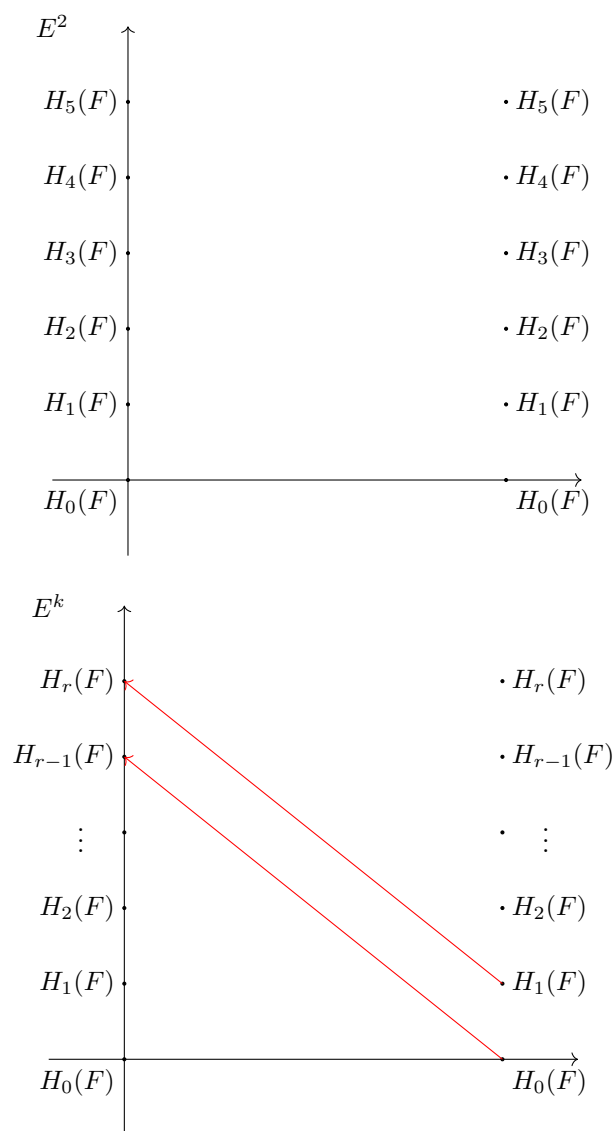
14 3d

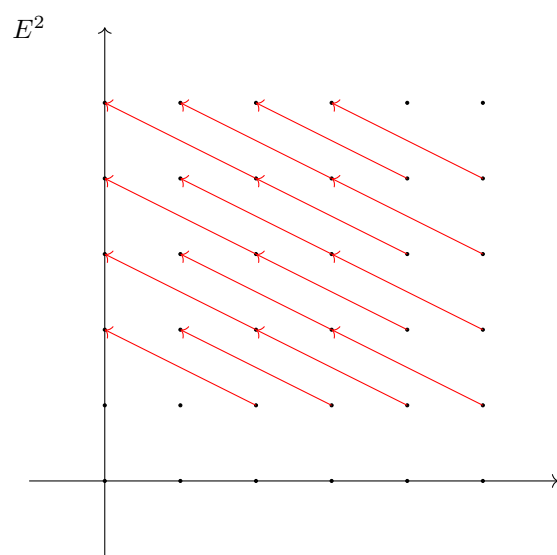
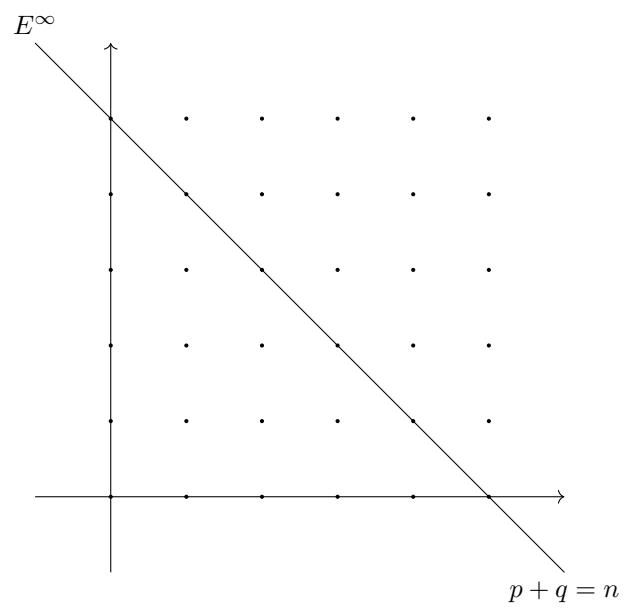


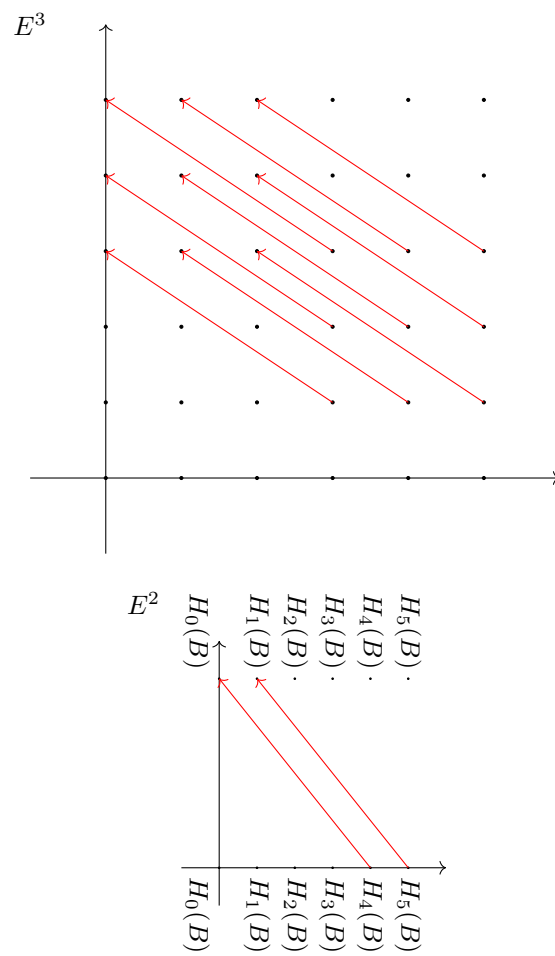


15 Spectral sequence

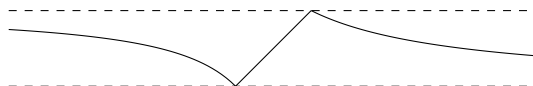


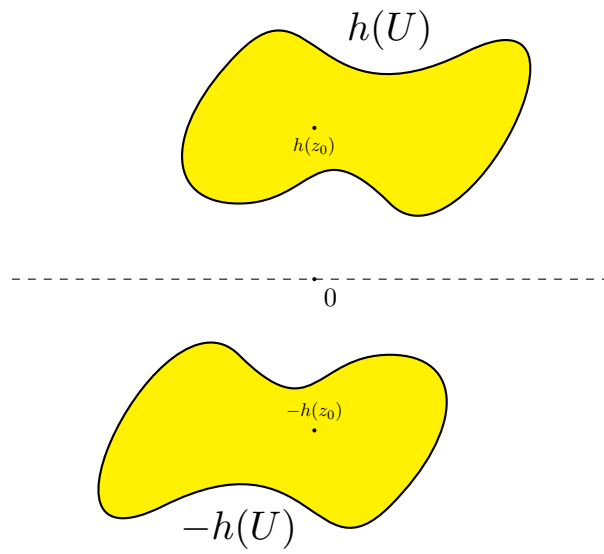






16 Warsaw circle





17 Tikzcd

$$\begin{array}{ccccccc}
 & & \xrightarrow{w_*} & \ker a & \xrightarrow{u_*} & \ker b & \xrightarrow{v_*} & \ker c & & \\
 & & & \downarrow & & \downarrow & & \downarrow & & \\
 D & \longrightarrow & A & \xrightarrow{u} & B & \xrightarrow{v} & C & \longrightarrow & 0 & \\
 & & \downarrow a & & \downarrow b & & \downarrow c & & & \\
 0 & \longrightarrow & A' & \xrightarrow{u'} & B' & \xrightarrow{v'} & C' & \longrightarrow & D' & \\
 & & \downarrow & & \downarrow & & \downarrow & & & \\
 & & \text{coker } a & \xrightarrow{u'_*} & \text{coker } b & \xrightarrow{v'_*} & \text{coker } c & & & \\
 & & & & & & & & & \uparrow
 \end{array}$$

δ