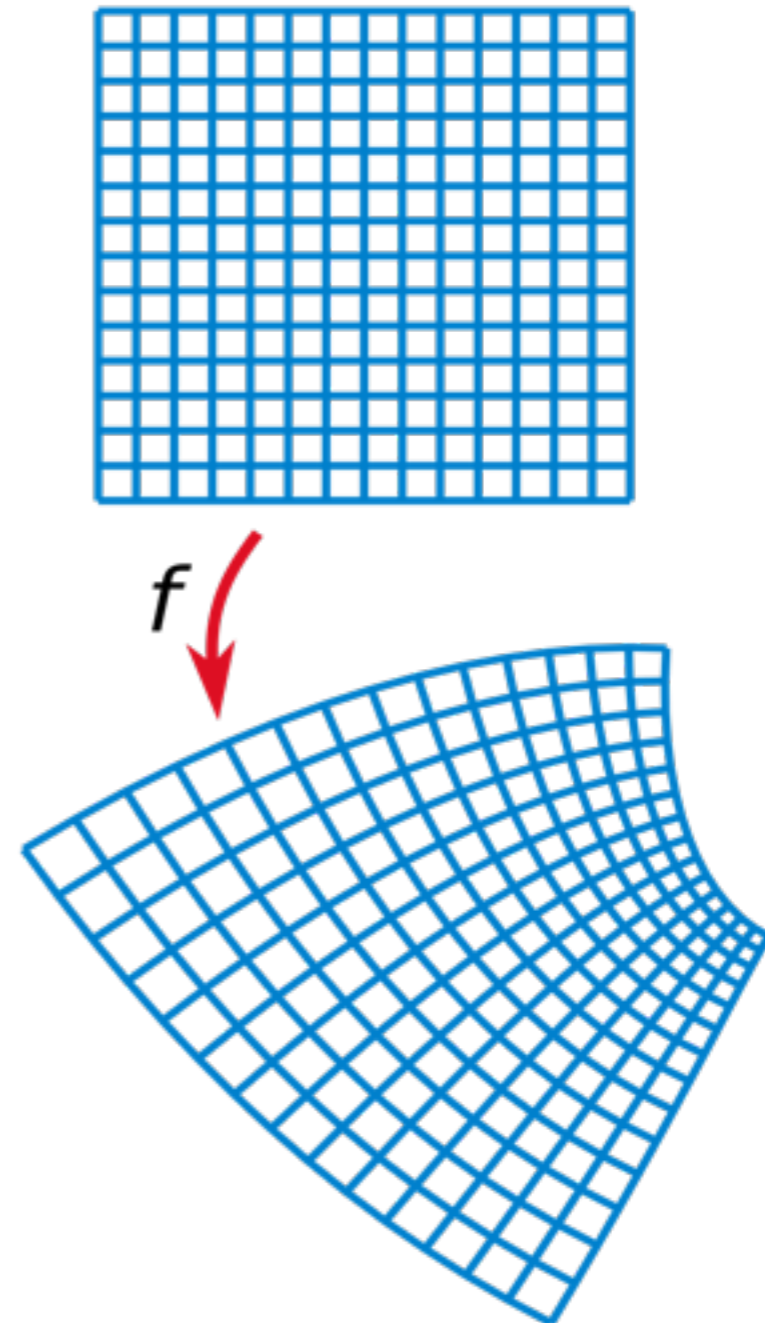
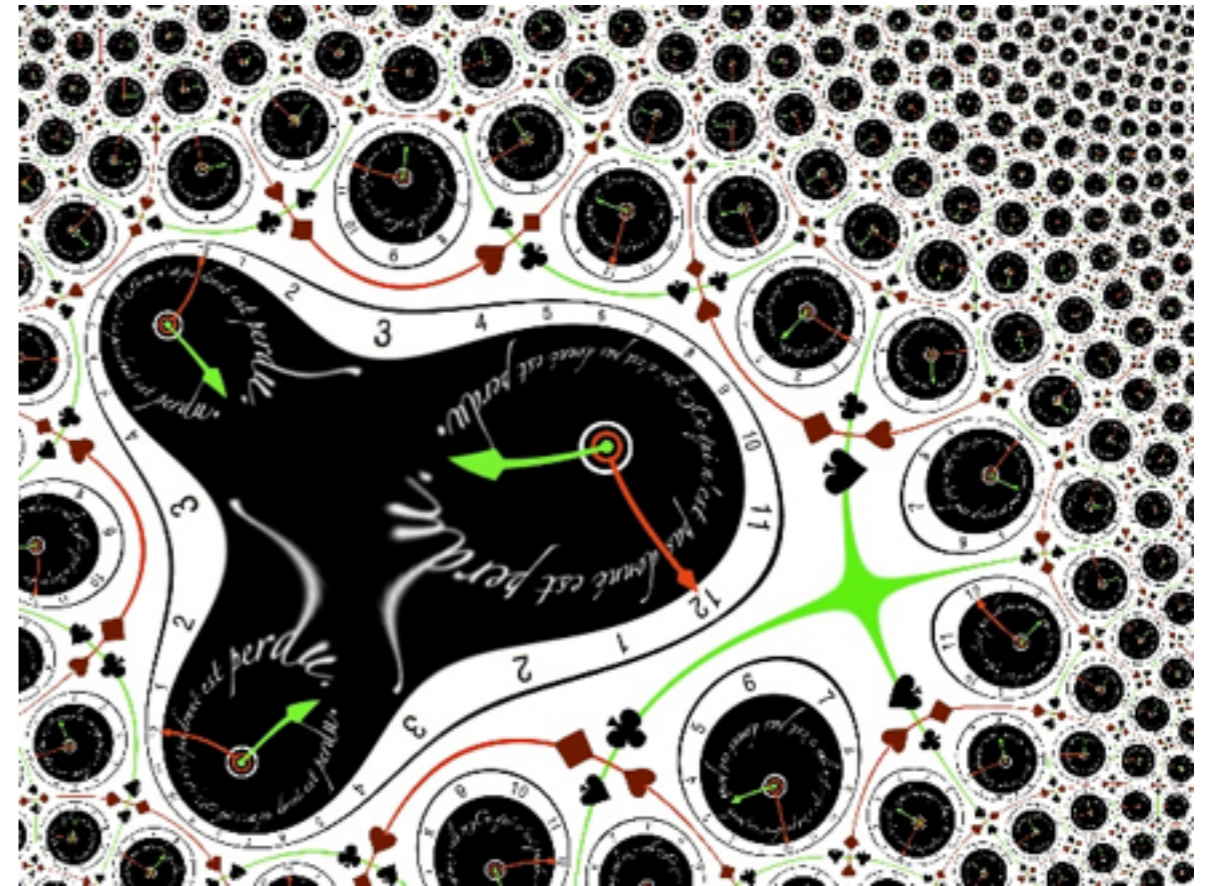
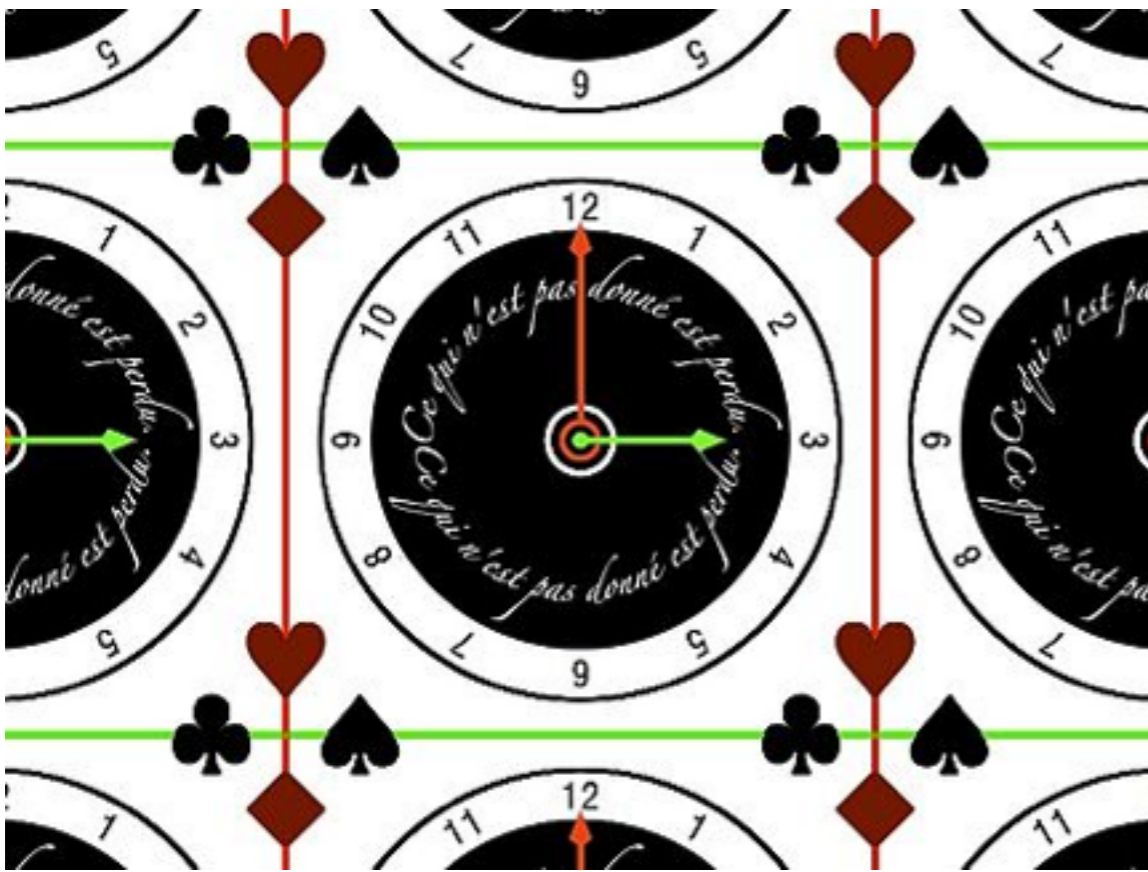


angle preserving



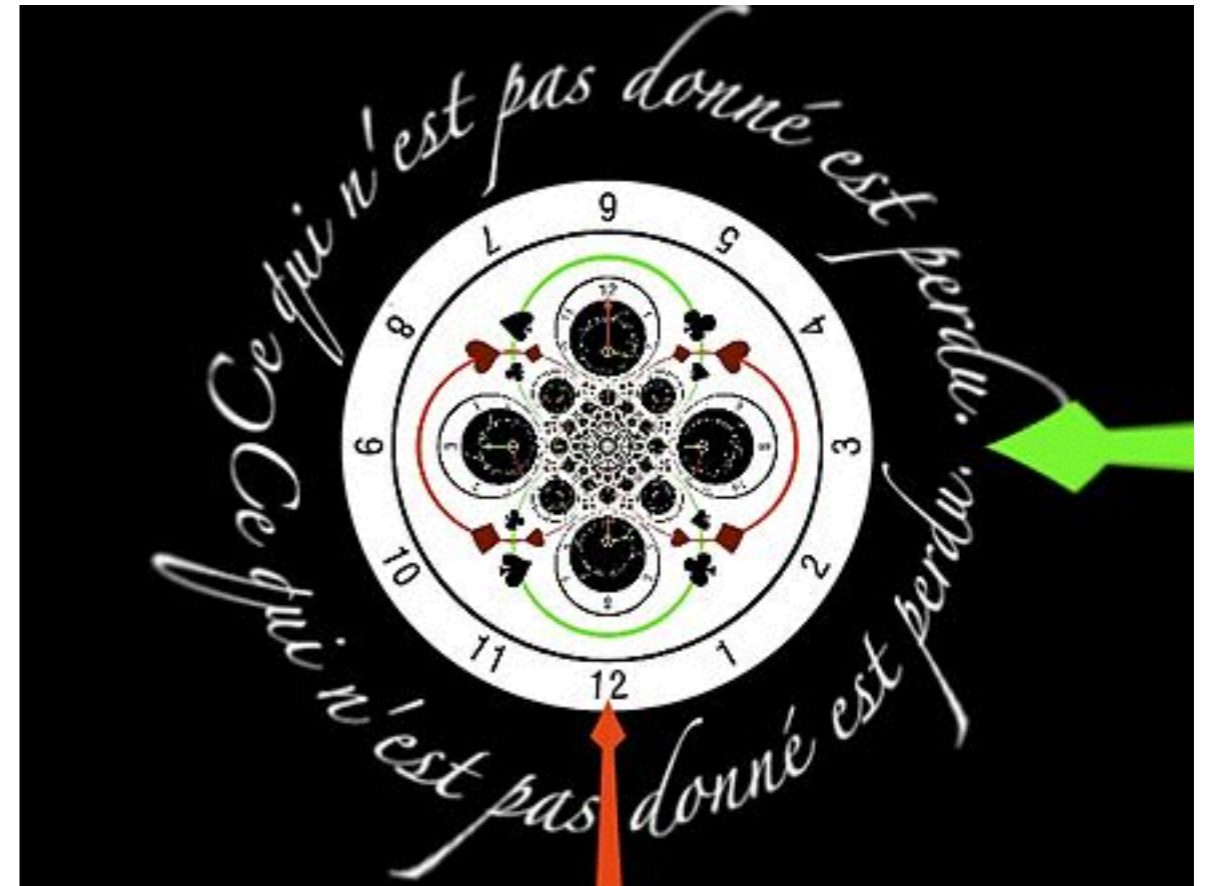
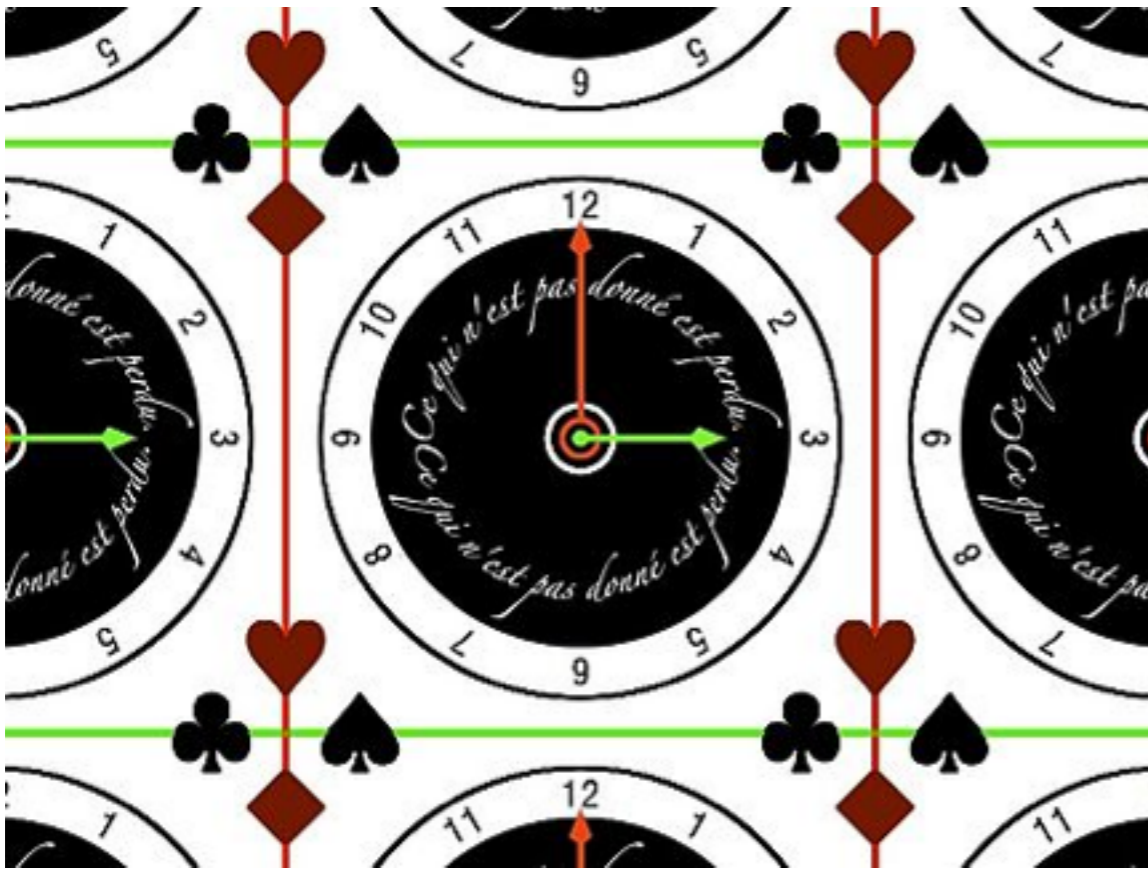
Examples

polynomial of degree 4



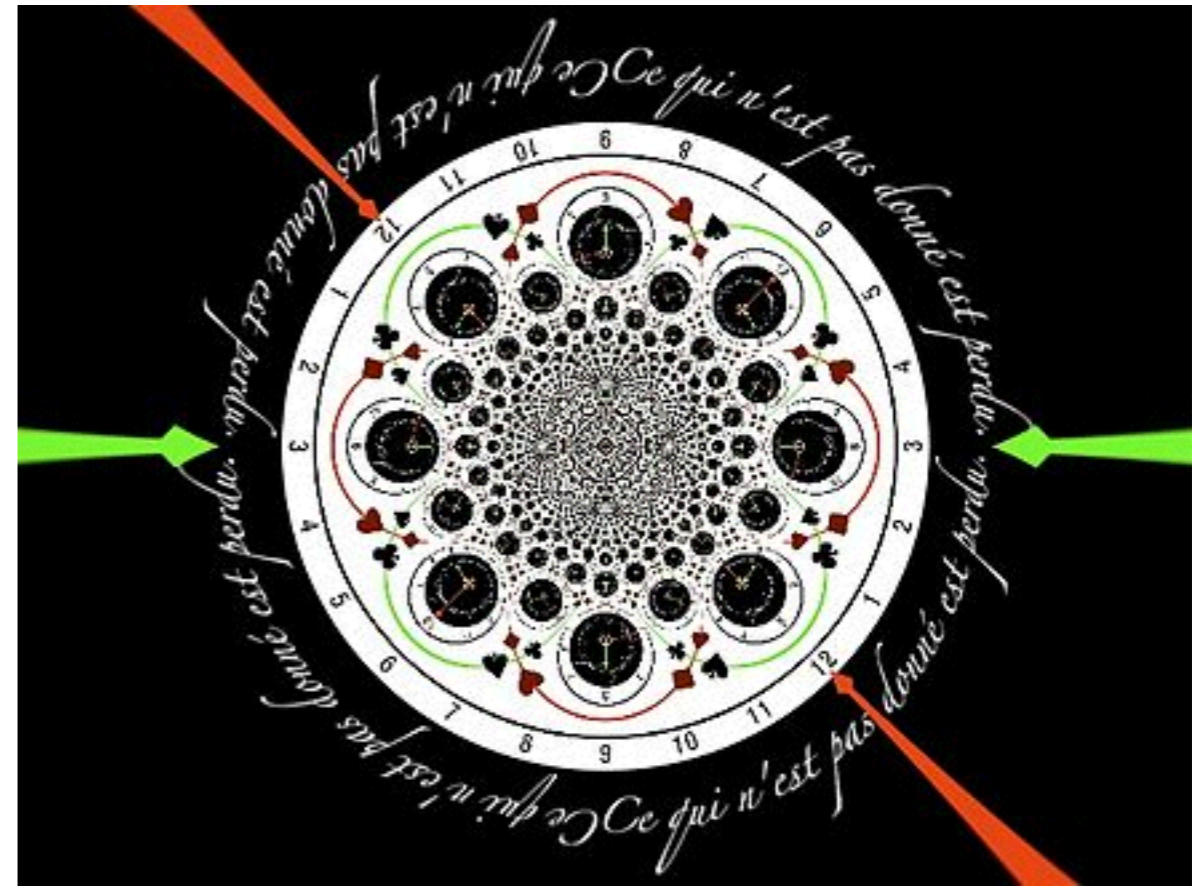
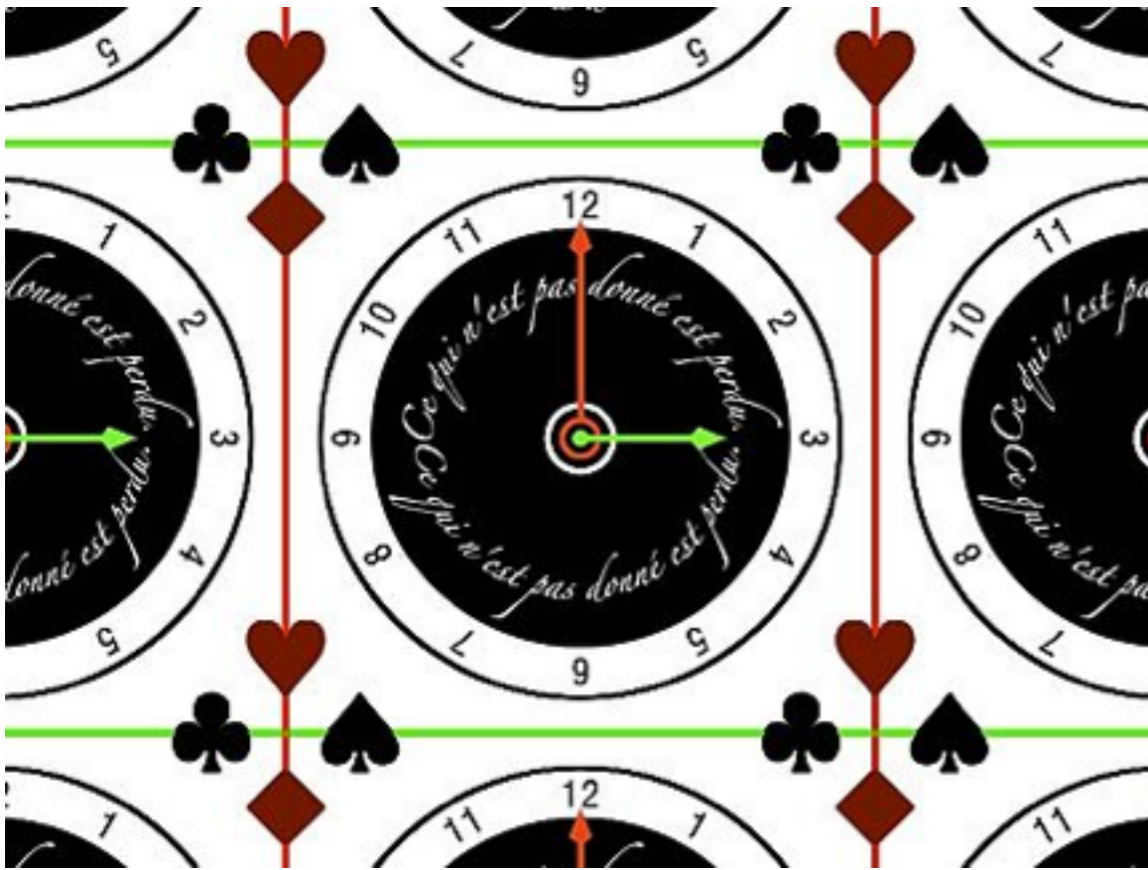
Examples

inversion $z \mapsto 1/z$



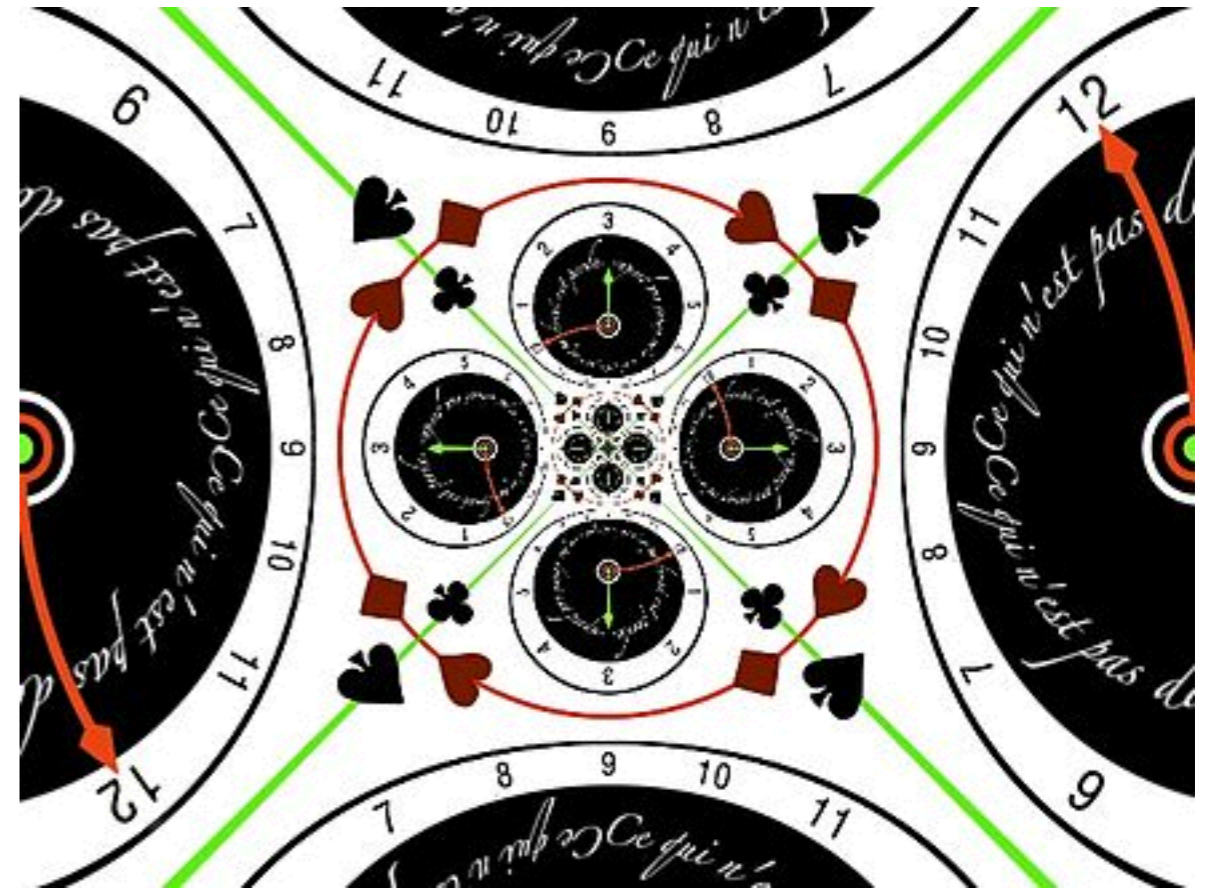
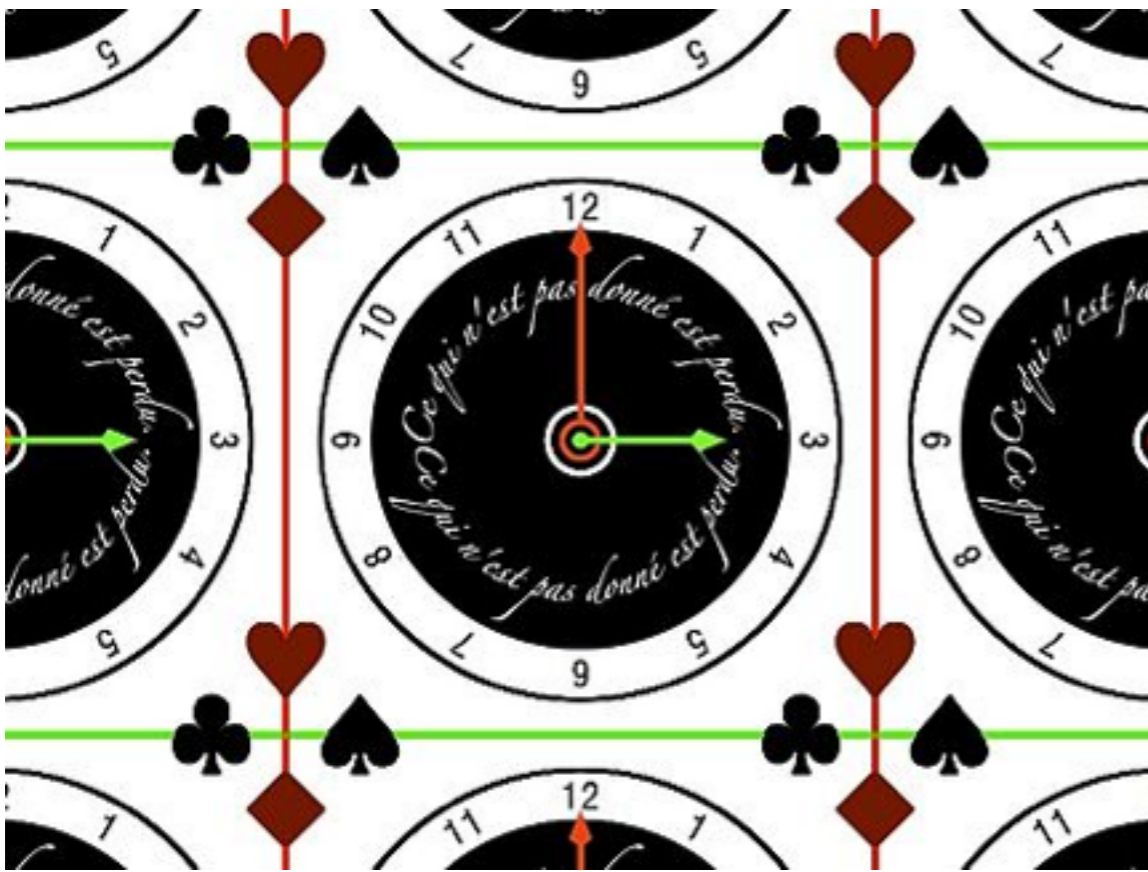
Examples

“squared” inversion $z \mapsto 1/z^2$



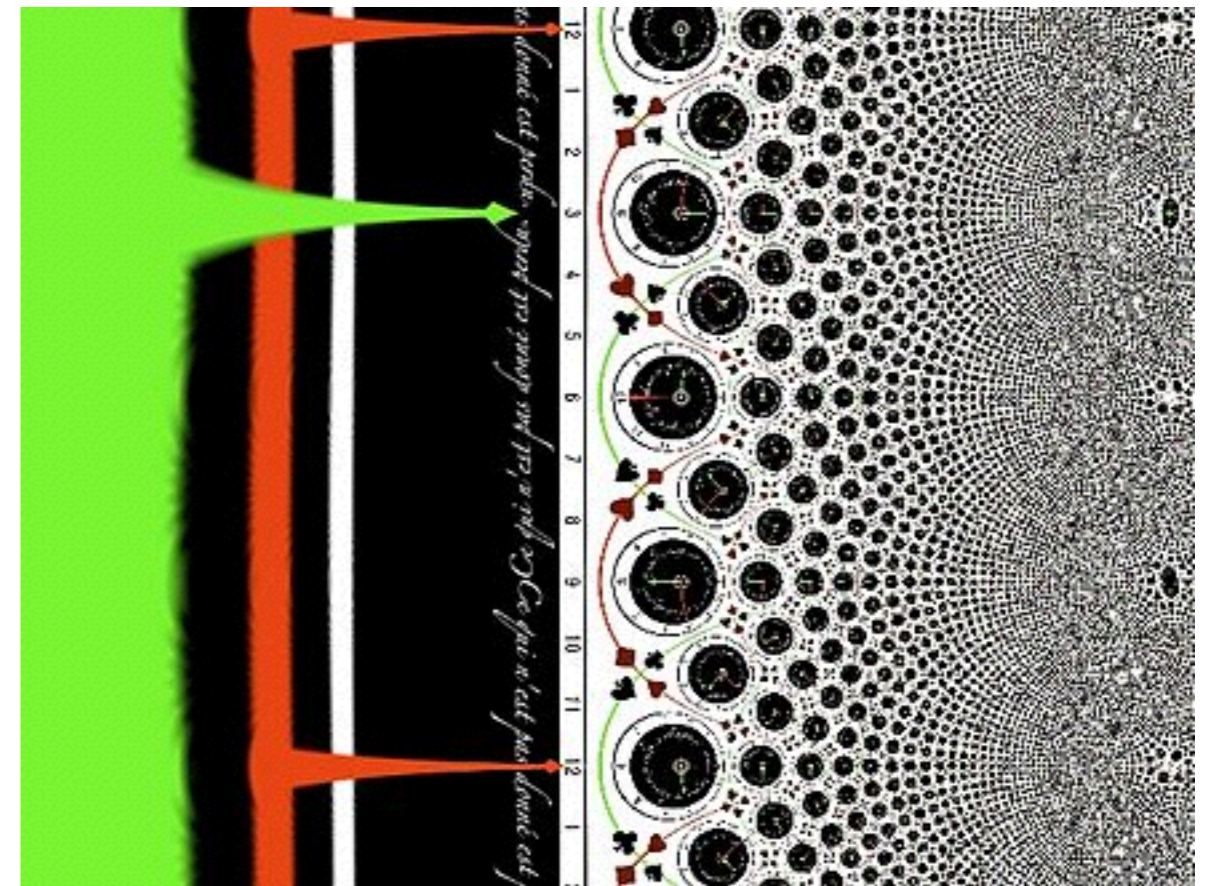
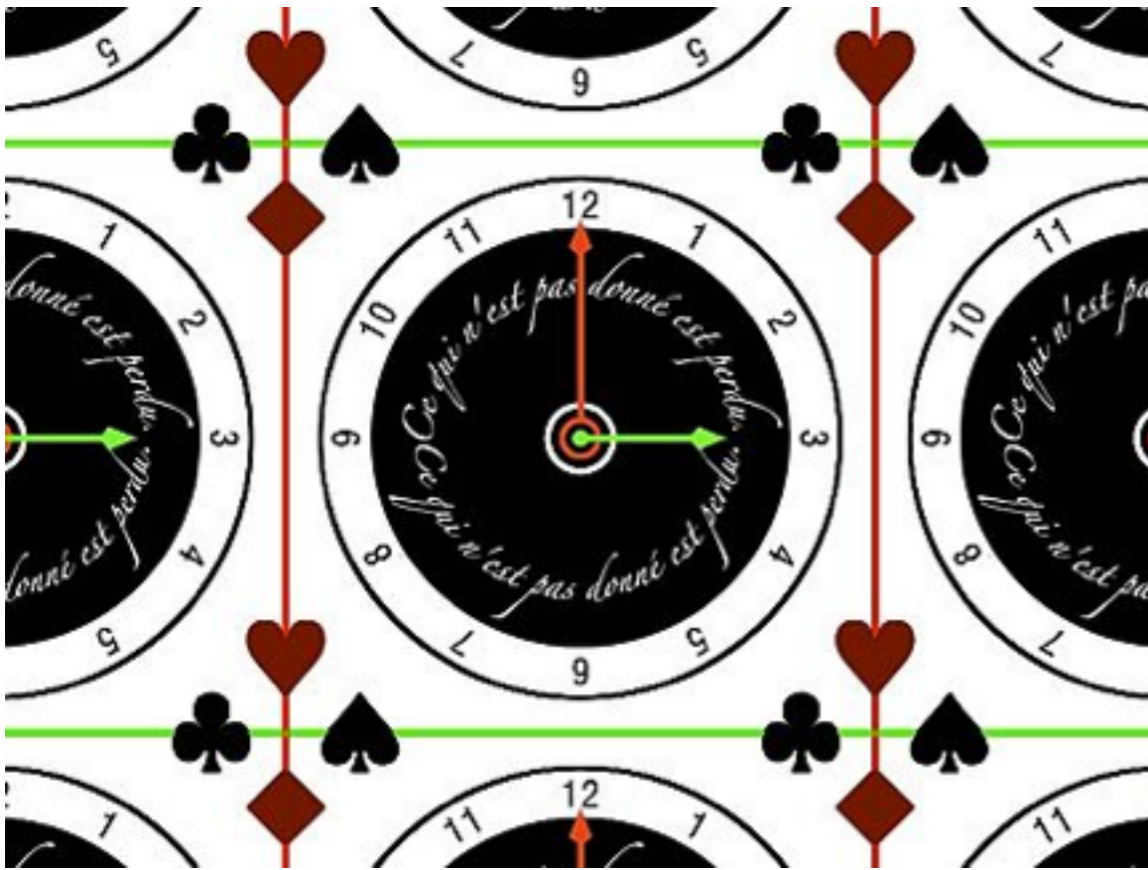
Examples

exponential $z \mapsto \exp(z)$



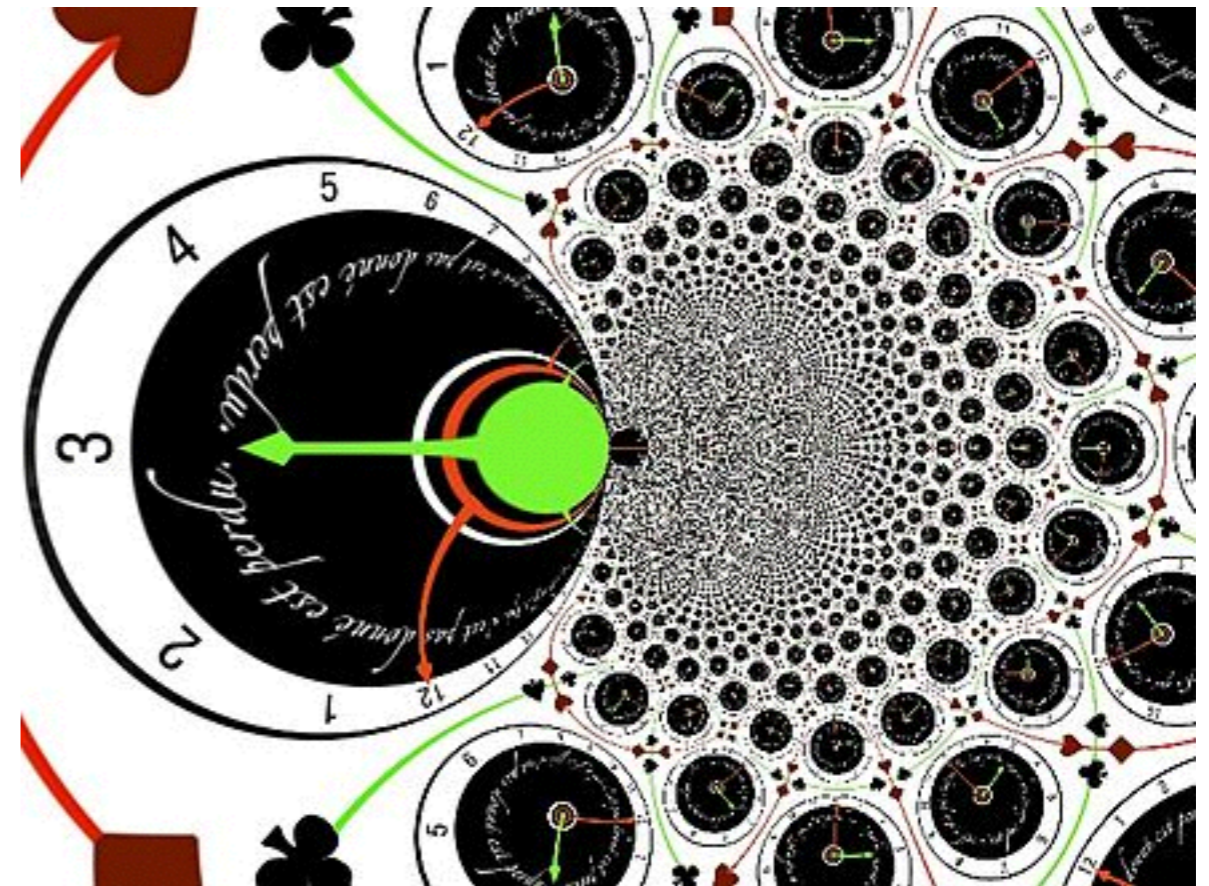
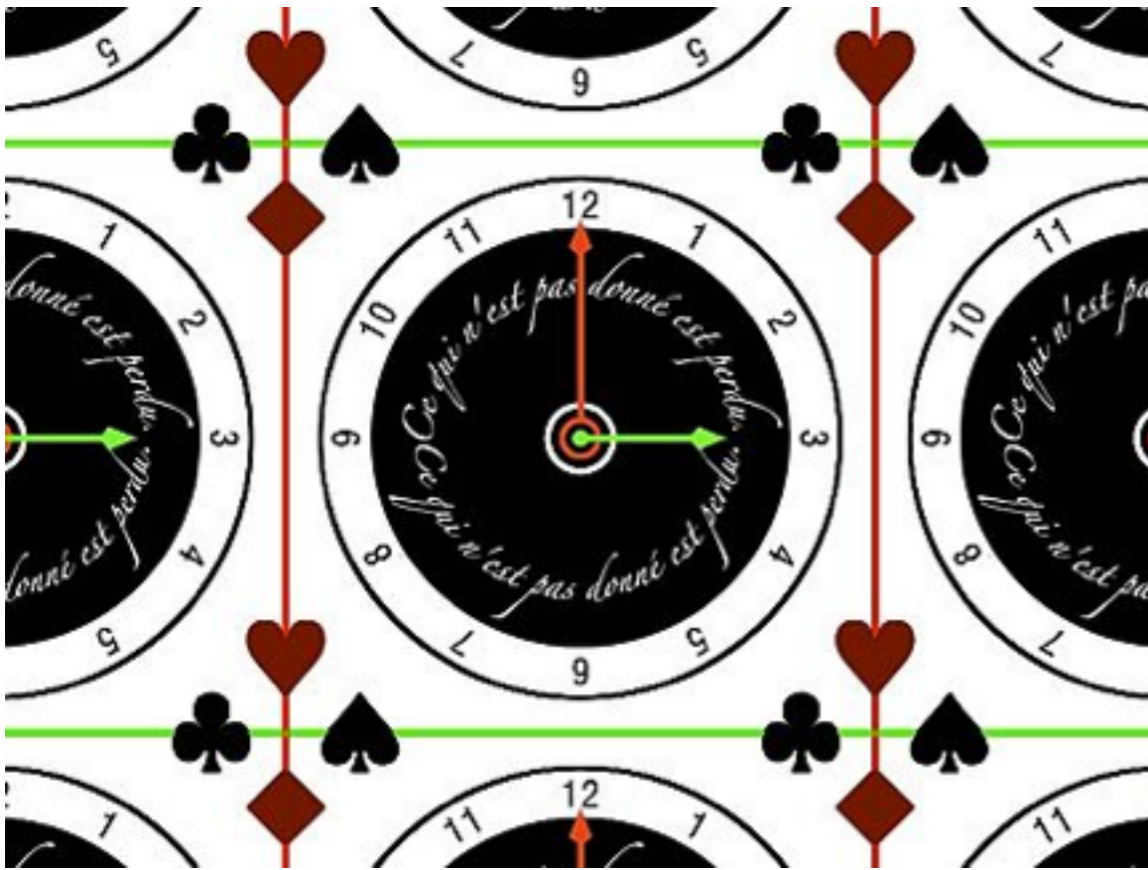
Examples

logarithm $z \mapsto \log(z)$



Examples

$$z \mapsto \exp(1/z)$$

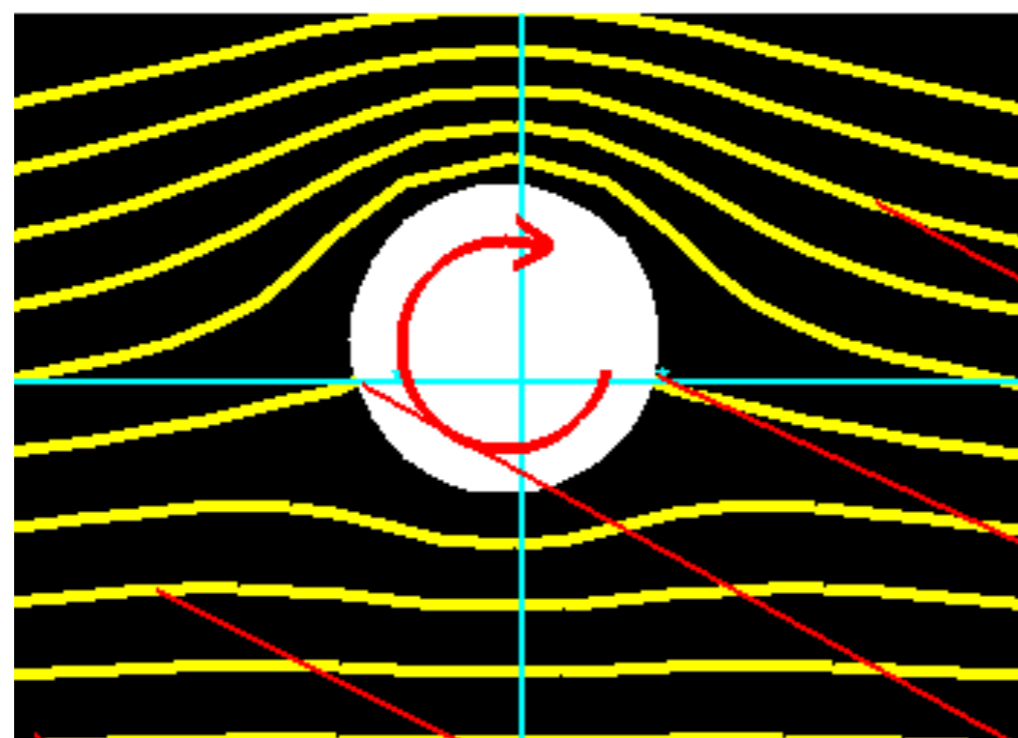




Conformal Mapping

Joukowski Transformation

Glenn
Research
Center

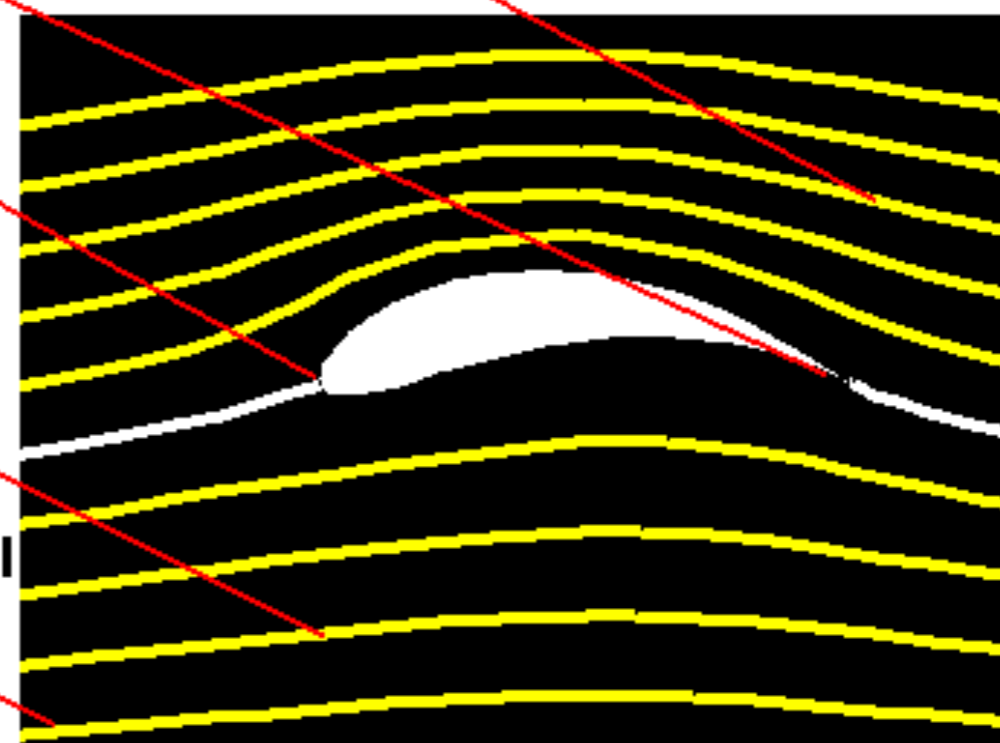


Rotating Cylinder

$$z = x + iy$$

$$A = z + \frac{1}{z}$$

$$A = B + iC$$



Airfoil

Use **complex variables**
to map from one geometry
to another

