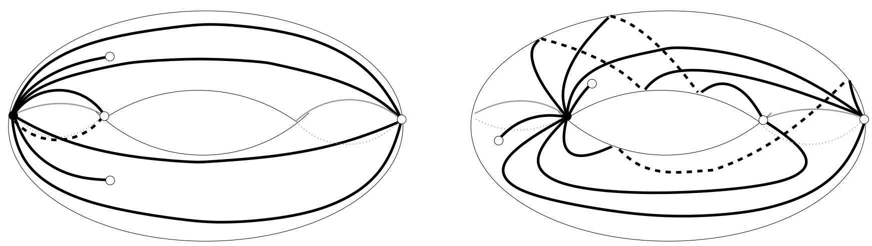
**Riemann surfaces and dessins d'enfants**

A Riemann surface is simply a surface endowed with an atlas in which the transition functions are holomorphic.

The theory of compact Riemann surfaces is a meeting point for topology, geometry and algebra. This is because compact Riemann surfaces can be regarded as complex irreducible curves "$F(x,y) = \sum a_{ij}x^iy^j = 0$", and, moreover, the case in which the coefficients $a_{ij}$ are algebraic numbers corresponds to certain simple graphs embedded in a compact oriented topological surface called dessins d'enfants (Grothendieck's-Belyi theory of dessins).

$y^2 = x(x-1)(x-\sqrt{2})$ $\qquad$ $y^2 = x(x-1)(x+\sqrt{2})$

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