

This note, that [was found here](#), as a part of [a collection](#) is written (completely with human hands) by [Rupadarshi Ray](#), was created on December 7, 2025 3:21:10 PM, was last modified on April 28, 2026 2:39:01 PM, and was exported on September 7, 2026 3:10:01 PM.

Hyperelliptic Riemann surfaces

Definition. Hyperelliptic Riemann surfaces

A compact Riemann surface X is **hyperelliptic** if there is a non-constant holomorphic map of degree 2

$$\begin{array}{ccc} X & & \mathcal{M}(X) \\ \downarrow 2 & & \uparrow 2 \\ \mathbb{C}P^1 & & \mathbb{C}(z) \end{array}$$

Current note has 0 direct children and 0 total descendants.

- [stem](#)
 - [Objects stemming from \$\mathbb{R}\$ -spaces of dimension 2](#)
 - [Riemann surfaces](#)
 - [Hyperelliptic Riemann surfaces](#)

And it has 16 siblings.

- [stem](#)
 - [Objects stemming from \$\mathbb{R}\$ -spaces of dimension 2](#)
 - [Riemann surfaces](#)
 - [Vector bundles on complex 1-manifolds](#)
 - [Classification of complex 1-manifold](#)
 - [Riemann's existence of holomorphic maps between compact Riemann surfaces](#)
 - [Divisors on compact Riemann surfaces](#)
 - [Fluid](#)
 - [Meromorphic differentials on Riemann surfaces](#)
 - [Holomorphic functions on a complex 1-manifold](#)
 - [Holomorphic maps of type \$0 \xrightarrow{3} 0\$](#)
 - [Rational maps](#)
 - [Hurwitz scheme](#)
 - [Moduli space of \$\mathbb{C}\$ -manifolds](#)
 - [Meromorphic functions on a Riemann surface](#)
 - [Normalization of plane projective \$\mathbb{C}\$ -curves and Riemann surfaces](#)
 - [Riemann surfaces defined over a number field](#)
 - [Hyperelliptic Riemann surfaces](#)
 - [Riemann surfaces with a holomorphic 1-form](#)