



planetmath.org

Math for the people, by the people.

abelian function

Canonical name	AbelianFunction
Date of creation	2013-03-22 14:43:34
Last modified on	2013-03-22 14:43:34
Owner	vmoraru (1243)
Last modified by	vmoraru (1243)
Numerical id	5
Author	vmoraru (1243)
Entry type	Definition
Classification	msc 26-00
Synonym	hyperelliptic function

An abelian or hyperelliptic function is a generalisation of an elliptic function. It is a function of two variables with four periods. In a similar way to an elliptic function it can also be regarded as the inverse function to certain integrals (called abelian or hyperelliptic integrals) of the form

$$\int \frac{dz}{R(z)}$$

where R is a polynomial of degree greater than 4.