



# Interpolation by elliptic functions<sup>†</sup>

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## Abstract

This is a mixed type paper: we define and list basic properties of elliptic functions, and consider problems of different types of interpolations by these functions.

**Keywords:** Elliptic functions, interpolation.

**MSC:** Primary 33E05, 30E05; Secondary 41A05.

## §1. Definitions

Let  $\mathbb{C}$ ,  $\mathbb{R}$ ,  $\mathbb{Z}$  denote the set of complex numbers, real numbers and integers, respectively. Let  $0 \neq \omega_1, \omega_2 \in \mathbb{C}$ ,  $\omega_1/\omega_2 \in \mathbb{C} \setminus \mathbb{R}$ , and define

$$\Omega := \{m\omega_1 + n\omega_2 : m, n \in \mathbb{Z}\}.$$

$\Omega$  is an infinite set of lattice points in  $\mathbb{C}$ . We will say that  $z_1 \equiv z_2 \pmod{\Omega}$  if and only if  $z_1 - z_2 \in \Omega$ . Further let

$$Q := \{u\omega_1 + v\omega_2 : 0 \leq u, v < 1\}.$$

This is a half-open parallelogram with vertices  $0, \omega_1, \omega_2, \omega_1 + \omega_2$ .

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