a course in analysis

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elliptic functions

obs. an entire, doubly periodic function must be constant.

ergo, one must allow poles

def.

$$\mathtt{ELP}_L = \{f \in \mathtt{MER}(\mathbf{C}) : f(z) = f(z+\ell) \ \ \forall z \in \mathbf{C}, \ell \in L\}$$

are the *elliptic* functions wrt L.

as ELP is a field, a non-constant elliptic f must have a root. otherwise $1/f$ has no poles. generally,

obs. a non-constant elliptic function does not omit any value in $\mathbf{P}$.