

The section on Green's function depends on harmonic functions, not only of the Ω 's, but also of their parts. Here is a list of what seem to be some essentials on the topic:

A function is harmonic if $\partial_x^2 + \partial_y^2 = 0$. (p. 498)

A sourceless field is irrotational if and only if its stream function is harmonic. (p. 498)

A conservative force field is sourceless if and only if its potential function is harmonic. (p. 500)

The real and imaginary parts of an analytic function are automatically harmonic. (p. 511)

Every harmonic function is the real (or imaginary) part of some analytic function. (p. 511)

If v is a harmonic dual then so is $v + \text{const.}$ (p. 511)

The harmonic dual of a given harmonic function Φ is the stream function of the vector field $\nabla\Phi$. (p. 511)

The average value of a harmonic function on a circle is equal to the value of the function at the centre of the circle. (p. 511)

If a function is harmonic in some region, its maximum occurs on the boundary of that region. (p. 511)

Harmonicity is conformally invariant. $\tilde{\Phi}(w)$ is harmonic if and only if $\Phi(z)$ is harmonic. (3), (p. 513)

Since f is analytic, so is its composition with $\tilde{\Omega}$. (p. 513)

A real function Φ is harmonic if and only if it passes the grid test. (p. 513) and [4] (p. 514)