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Laplace equation

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The scalar form of *Laplace's equation* is the partial differential equation

$$\nabla^2 f = 0$$

and the vector form is

$$\nabla^2 \mathbf{A} = 0,$$

where ∇^2 is the Laplacian. It is a special case of the Helmholtz differential equation with $k = 0$.

A function f which satisfies Laplace's equation is said to be *harmonic*. Since Laplace's equation is linear, the superposition of any two solutions is also a solution.