Download Divergence Math

where the surface integral gives the value of integrated over a closed infinitesimal boundary surface surrounding a volume element , which is taken to size zero using a limiting process.In this section we will introduce the concepts of the curl and the divergence of a vector field. We will also give two vector forms of Green’s Theorem and show how the curl can be used to identify if a three dimensional vector field is conservative field or not.In this section we will discuss in greater detail the convergence and divergence of infinite series. We will illustrate how partial sums are used to determine if an infinite series converges or diverges. We will also give the Divergence Test for series in this section.Divergence Theorem. The divergence theorem, more commonly known especially in older literature as Gauss's theorem (e.g., Arfken 1985) and also known as the Gauss-Ostrogradsky theorem, is a theorem in vector calculus that can be stated as follows.