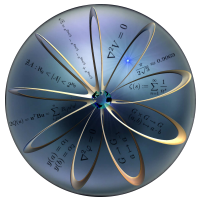

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identity theorem of power series

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If the http://planetmath.org/RadiusOfConvergenceradii of convergence of the power series $\sum_{n=0}^{\infty} a_n(z-z_0)^n$ and $\sum_{n=0}^{\infty} b_n(z-z_0)^n$ are positive and the sums of the series are equal in infinitely many points which have z_0 as an accumulation point, then the both series are identical, i.e. $a_n = b_n$ for each $n = 0, 1, 2, \ldots$