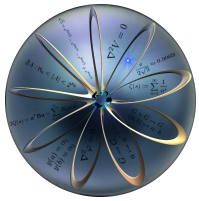

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Vandermonde interpolation approach

Canonical name	VandermondeInterpolationApproach
Date of creation	2013-03-22 14:19:56
Last modified on	2013-03-22 14:19:56
Owner	mathcam (2727)
Last modified by	mathcam (2727)
Numerical id	8
Author	mathcam (2727)
Entry type	Definition
Classification	msc 65D05
Classification	msc 41A05

The Vandermonde approach for interpolation is when we wish to determine the interpolating polynomial $p(x) = a_0 + a_1x + a_2x^2 + \ldots + a_nx^n$ for the $n + 1$ points (x_i, y_i), $i = 0, 1, \ldots, n$ by forming the equations $y_i = a_0 + a_1x_i + a_2x_2^2 + \ldots + a_nx_n^n$ for $i = 0, 1, \ldots, n$, and solving for the unknown coefficients $a_0, a_1, \ldots, a_n$.

The system of equations can be written by using matrices $Y = XA$ where X is a Vandermonde matrix.