Interpolation
Prior Knowledge

MathForCollege.com
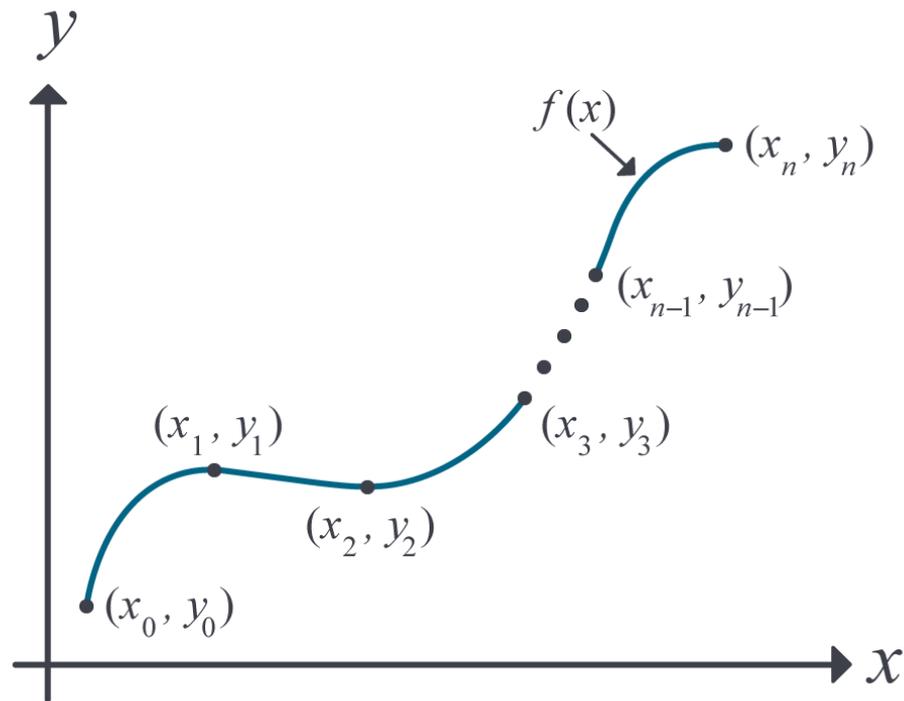Open Education Resources

For more details on this topic

➤ Go to http://nm.MathForCollege.com

➤ Click on Prerequisites to Interpolation

What is interpolation?

Given $n + 1$ data points $(x_0, y_0), (x_1, y_1), (x_2, y_2), \ldots \ldots, (x_n, y_n)$, interpolate the data to a function $f(x)$

Example of interpolation

The specific heat of air at constant volume is given for air

Temperature, T K	Specific heat, c_v kJ/kg-K
700	1.364
800	1.354
900	1.344
1000	1.336

Estimate the specific heat at constant volume at a temperature of 960K using a straight-line interpolation.

Temperature, T K	Specific heat, c_v kJ/kg-K
700	1.364
800	1.354
900	1.344
1000	1.336

You are free

- to **Share** – to copy, distribute, display and perform the work
- to **Remix** – to make derivative works

under the following conditions

- **Attribution** — You must attribute the work in the manner specified by the author or licensor (but not in any way that suggests that they endorse you or your use of the work).
- **Noncommercial** — You may not use this work for commercial purposes.
- **Share Alike** — If you alter, transform, or build upon this work, you may distribute the resulting work only under the same or similar license to this one.

Acknowledgement

MathForCollege.com
Open Education Resources

Like what you see - tell your friends.
Subscribe to the NumericalMethodsGuy Channel – help us reach our goal of 100,000 subscribers.