

Paper Title:

Newton's forward interpolation: representation of numerical data by a polynomial curve.

Where Published?

Math's Journal.

What is Newton's forward interpolation?

Newton's forward difference formula is a finite difference identity giving an interpolated value between tabulated points in terms of the first value and the powers of the forward difference. This formula is particularly useful for interpolating the values of $f(x)$ near the beginning of the set of values given.

Why we used Newton's forward interpolation?

Newton's forward difference formula is particularly useful for interpolating the values of $f(x)$ near the beginning of the set of values given h is called the interval of difference and $u = (x - a) / h$, Here is the first term. The value of other missing variable can be determined by this technique.

How can we used Newton's forward interpolation?

Newton's forward interpolation technique is to be used when the x - data point is near the beginning. That is, if you have four data points, say $X = 3, 6, 9, 12$ and 15 . If you are looking for value of y at $x = 5$ which is near the beginning of the table, then Newton's forward interpolation works best.

Limitations:

If the data has large number of swings, then the relations take unnatural curve. If we calculate a missing value, it will not be accurate and also fails if the given values of the independent variable are not at equal interval.

Future work:

Newton's forward interpolation formula could be used in real life in the future.