



SNS COLLEGE OF ENGINEERING

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AN AUTONOMOUS INSTITUTION



Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

Tutorial

Newton's divided difference method:

1. Using Newton's divided difference formula, find the value of $f(2)$, $f(8)$ and $f(15)$ given the following table

x:	4	5	7	10	11	13
f(x):	48	100	294	900	1210	2028

2. Determine $f(x)$ as a polynomial in x for the following data, using Newton's divided difference formulae. Also find $f(2)$.

x:	-4	-1	0	2	5
f(x):	1245	33	5	9	1335

Interpolating with a cubic spline:

3. Using cubic spline find $y(1.5)$ & $y'(1)$

x	1	2	3
y	-8	-1	18