



SNS COLLEGE OF ENGINEERING

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AN AUTONOMOUS INSTITUTION



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

Topic: 4.8 –Tutorial 11

1. Find $y(22)$ and $y(43)$ using Newtons formula , given that

X: 20 25 30 35 40 45

Y(x): 354 332 291 260 231 204

2. Using Newton's forward interpolation formula, find the polynomial $f(x)$ satisfying the following data. Hence evaluate $f(x)$ at $x(5)$

x: 4 6 8 10

f(x): 1 3 8 16

3. Find $y(1976)$ from the following

x : 1941 1951 1961 1971 1981 1991

y : 20 24 29 36 46 51

4. Given the following data, find $y'(6)$ and the maximum value of y .

x:	0	2	3	4	7	9
f(x)	4	26	58	112	466	922

5. Find the first , second and third derivatives of $f(x)$ at $x=1.5$ if

x:	1.5	2	2.5	3	3.5	4
f(x):	3.375	7	13.625	24	38.875	59