

OUTPUT 1:

(0, 2), (1, 3), (2, 12), (5, 147). Estimate f(3) and f(7).

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PS D:\Engineering_BEI\Sem IV\Numerical Methods\NM_Lab\Lab6_Lagrange_Interpolationn> gcc 1.c
PS D:\Engineering_BEI\Sem IV\Numerical Methods\NM_Lab\Lab6_Lagrange_Interpolationn> .\a.exe
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Lagrange's Interpolation

Enter the value of number of data points n: 4

Enter the respective values of x and y in pair:

0 2

1 3

2 12

5 147

The table of the data you entered is as follows:

0.00	2.00
1.00	3.00
2.00	12.00
5.00	147.00

Enter the value of xp at which the value of yp(x) is to be estimated: 3

The value of yp(x) at xp = 3.0000 is yp(x) = 35.0000.

If you want to continue PRESS 1, otherwise press any key.1

Enter the value of xp at which the value of yp(x) is to be estimated: 7

The value of yp(x) at xp = 7.0000 is yp(x) = 387.0000.

If you want to continue PRESS 1, otherwise press any key.0

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OUTPUT 2:

(0, 18), (1, 10), (3, -18), (6, 90). Estimate $f(2)$, $f(4)$ and $f(8)$.

PS D:\Engineering_BEI\Sem IV\Numerical Methods\NM_Lab\Lab6_Lagrange_Interpolationn> .\a.exe

Lagrange's Interpolation

Enter the value of number of data points n: 4

Enter the respective values of x and y in pair:

0 18

1 10

3 -18

6 90

The table of the data you entered is as follows:

0.00	18.00
1.00	10.00
3.00	-18.00
6.00	90.00

Enter the value of x_p at which the value of $y_p(x)$ is to be estimated: 2

The value of $y_p(x)$ at $x_p = 2.0000$ is $y_p(x) = -6.0000$.

If you want to continue PRESS 1, otherwise press any key.1

Enter the value of x_p at which the value of $y_p(x)$ is to be estimated: 4

The value of $y_p(x)$ at $x_p = 4.0000$ is $y_p(x) = -14.0000$.

If you want to continue PRESS 1, otherwise press any key.1

Enter the value of x_p at which the value of $y_p(x)$ is to be estimated: 8

The value of $y_p(x)$ at $x_p = 8.0000$ is $y_p(x) = 402.0000$.

If you want to continue PRESS 1, otherwise press any key.0