Secant Method – Chiranjeev Kashyap

```
"D:\College Files\Numerical Method Implementation\04 Secant MTHD.exe"
Enter the accuracy desired:
0.001
Enter the intial guesses:
x1 = 0
x2 = 5
Enter the max number of iterations to be performed: 10
iter    x1                x2                x3                f(x3)
_____
1       0.000000          5.000000          0.800000          -3.360000
2       5.000000          0.800000          1.379310          -2.097503
3       0.800000          1.379310          2.341772          1.483897
4       1.379310          2.341772          1.942991          -0.224785
5       2.341772          1.942991          1.995453          -0.018168
6       1.942991          1.995453          2.000066          0.000263

One of the roots is: 2.000066
Process returned 0 (0x0)    execution time : 6.610 s
Press any key to continue.
```
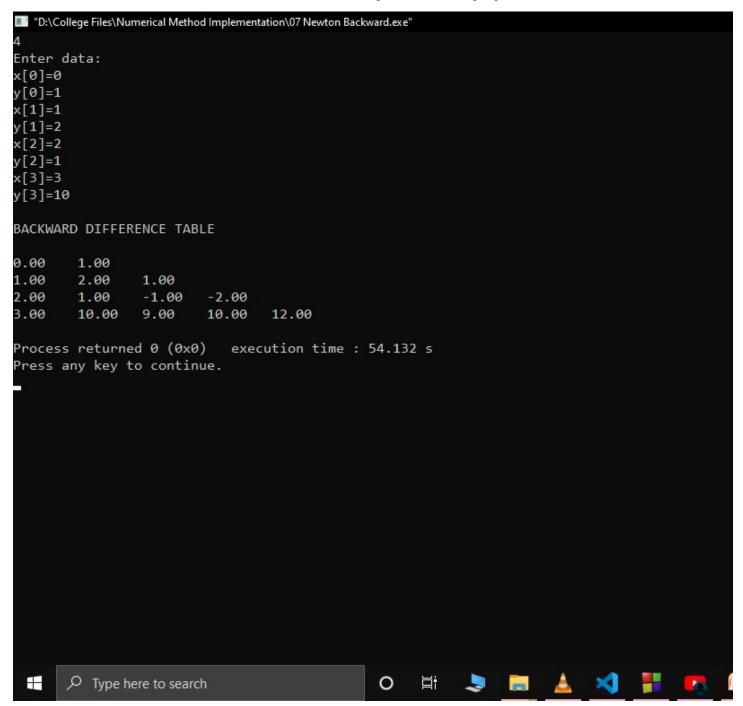
Type here to search

Gauss Elimination Method – Chiranjeev Kashyap

```
"D:\College Files\Numerical Method Implementation\05 Gauss Elimination.exe"
Enter number of unknowns: 3
a[1][1] = 1
a[1][2] = 1
a[1][3] = 1
a[1][4] = 9
a[2][1] = 2
a[2][2] = -3
a[2][3] = 4
a[2][4] = 13
a[3][1] = 3
a[3][2] = 4
a[3][3] = 5
a[3][4] = 40

Solution:
x[1] = 1.000
x[2] = 3.000
x[3] = 5.000
```

Type here to search

Gauss Seidal Method – Chiranjeev Kashyap

```
Enter tolerable error:
0.0001

Count    x         y         z
1        0.8500  -1.0275  1.0109
2        1.0025  -0.9998  0.9998
3        1.0000  -1.0000  1.0000
4        1.0000  -1.0000  1.0000

Solution: x=1.000, y=-1.000 and z = 1.000

Process returned 0 (0x0)   execution time : 42.272 s
Press any key to continue.
```
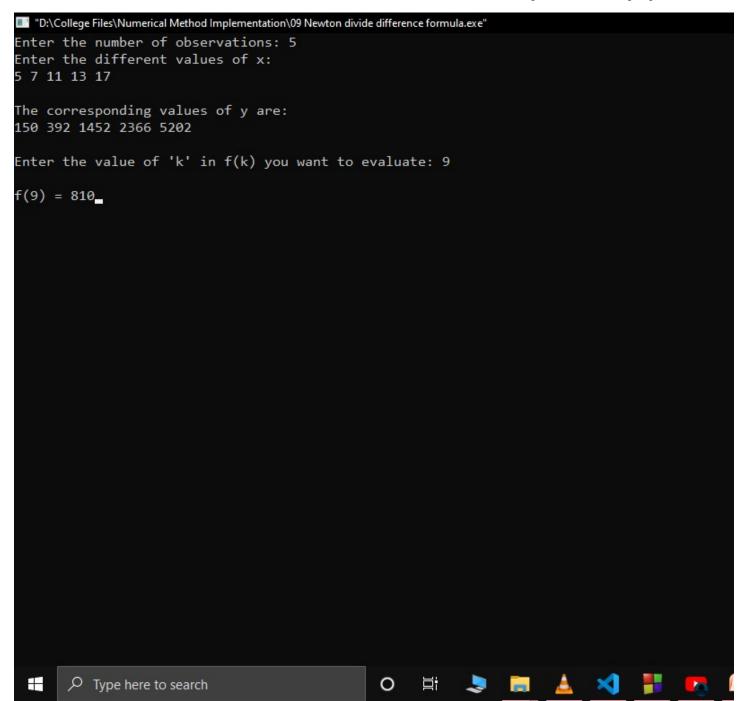
Type here to search

Newton Backward Method – Chiranjeev Kashyap

```
4
Enter data:
x[0]=0
y[0]=1
x[1]=1
y[1]=2
x[2]=2
y[2]=1
x[3]=3
y[3]=10

BACKWARD DIFFERENCE TABLE

0.00    1.00
1.00    2.00    1.00
2.00    1.00    -1.00    -2.00
3.00    10.00   9.00     10.00    12.00

Process returned 0 (0x0)   execution time : 54.132 s
Press any key to continue.
```

Newton Forward Method – Chiranjeev Kashyap

```
Enter number of data: 5
Enter data:
x[0]=40
y[0]=31
x[1]=50
y[1]=73
x[2]=60
y[2]=124
x[3]=70
y[3]=159
x[4]=80
y[4]=190

FORWARD DIFFERENCE TABLE

40.00    31.00    42.00    9.00      -25.00   37.00
50.00    73.00    51.00    -16.00    12.00
60.00    124.00   35.00    -4.00
70.00    159.00   31.00
80.00    190.00

Process returned 0 (0x0)     execution time : 48.537 s
Press any key to continue.
```

Newton divide difference formula Method – Chiranjeev Kashyap

```
"D:\College Files\Numerical Method Implementation\09 Newton divide difference formula.exe"
Enter the number of observations: 5
Enter the different values of x:
5 7 11 13 17

The corresponding values of y are:
150 392 1452 2366 5202

Enter the value of 'k' in f(k) you want to evaluate: 9

f(9) = 810_
```

LaGrange's Interpolation Method – Chiranjeev Kashyap

```
"D:\College Files\Numerical Method Implementation\10 Labrange's Interpolation.exe"
Enter number of data: 5
Enter data:
x[1] = 5
y[1] = 150
x[2] = 7
y[2] = 392
x[3] = 11
y[3] = 1452
x[4] = 13
y[4] = 2366
x[5] = 17
y[5] = 5202
Enter interpolation point: 9
Interpolated value at 9.000 is 810.000.
Process returned 13 (0xD)   execution time : 46.932 s
Press any key to continue.
```

Type here to search