

Enter the x-coordinates of the data points as row vector: [1 2 3 4]

Rule of the given function is : $f(x)=x\cos(x)-2x^2+3x-1$.

The data is given in a table as:

x	f(x)	df(x)	Hermite divided difference table is given as:						
0.10000000	-0.62049958	3.58502082							
0.20000000	-0.28398668	3.14033271							
0.30000000	0.00660095	2.66668043							
0.40000000	0.24842440	2.16529366							
Hermite divided difference table is given as:									
0.10000000	-0.62049958	3.58502082	-2.19891833	-0.49044455	0.03719244	0.04047793	-0.00219554	-0.00133225	
0.10000000	-0.62049958	3.36512899	-2.24796279	-0.48300606	0.04528803	0.03981927	-0.00259521	0.00000000	
0.20000000	-0.28398668	3.14033271	-2.34456400	-0.47394846	0.05723381	0.03904071	0.00000000	0.00000000	
0.20000000	-0.28398668	2.90587631	-2.39195885	-0.46250170	0.06504195	0.00000000	0.00000000	0.00000000	
0.30000000	0.00660095	2.66668043	-2.48445918	-0.44949331	0.00000000	0.00000000	0.00000000	0.00000000	
0.30000000	0.00660095	2.41823451	-2.52940852	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	
0.40000000	0.24842440	2.16529366	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	
0.40000000	0.24842440	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	

In the above table the entries of the first rows (from 2nd to 9th columns) are required to construct the interpolating polynomial.

Enter the point at which we want to find the value of the function : .25

The value of the Hermite interpolating polynomial (of degree less than or equal to 7 for the given data) at 0.25 is : -0.13277189

>>