

If  $f(x) = x^3$ , find the value of  $f[a, b, c]$   
 $a + b + c$

If  $f(x) = 2x^3 + 3x^2 - x + 1$ , find  $f[1, -1, 2, 3]$   
2

Which of the following methods is not applicable in solving interpolation of equal spaced nodes  
Newton's differences

If  $f_1 = -3$ ,  $f_3 = 9$ ,  $f_4 = 30$ ,  $f_6 = 132$ . Find the Lagrange's interpolation polynomial of  $f(x)$   
 $\frac{1}{30}(x^3 - 8x^2 + 19x - 12)$

Which of the following correctly defined Lagrange's polynomial  
 $P_n(x) = \sum_{i=0}^n f(x_i) L_i(x)$

$\sum_{k=0}^n f_k$  can be defined as  
 $f_{k+2} - f_{k+1} + f_k$

\_\_\_\_\_ is a method used to determine an approximate value of  $f(x)$  or  $f'(x)$  for some values  $x$  at a given interval  
Finite difference method

Determine the value that satisfied the Lagrange's polynomial  $\sum_{i=0}^n L_i(x)$   
1

Evaluate  $x = 1.4$  using Lagrange's interpolation formula given  
 $f_{1.2} = 3.3201$ ,  $f_{1.7} = 5.4739$ ,  $f_{1.8} = 6.0496$ ,  $f_{2.0} = 7.3891$   
4.05826

Find the divided differences interpolation polynomial for the data  $f_0 = -4$ ,  $f_2 = 6$ ,  $f_3 = 26$ ,  $f_4 = 64$   
 $P(x) = x^3 + x - 4$

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