ASSIGNMENT -2

1-Solve the following system of equation using Gauss-Seidal iteration method:

$2x+10y+z=51$
$10x+y+2z=44$
$x+2y+10z=61$

2-Solve the following system of equation by using Gauss-elimination method with pivoting
$2x+y+4z=12$, $8x-3y+2z=23$ and $4x+11y-z=33$

3-Use Gauss' forward formula to find a polynomial of degree four which takes the following values of the function f(x):

x:	1	2	3	4	5
f(x):	1	– 1	1	– 1	1

4- Compute **f(0.3)** for the data

x	**0**	**1**	**3**	**4**	**7**
f	**1**	**3**	**49**	**129**	**813**

using Lagrange's interpolation formula

5- Find **f(3)** for

x	**0**	**1**	**2**	**4**	**5**	**6**
f	**1**	**14**	**15**	**5**	**6**	**19**

Using Newton's divided difference formula.