

1. a) Compute the divided difference table for the tabulated function $f(x) = 3 \cdot 2^x$. b) Write down the Newton polynomials $P_3(x)$ and $P_4(x)$. c) Evaluate the Newton polynomials at point $x = 1.5$ and compare them to function value $f(1.5)$.

k	x_k	$f(x_k)$	1 st dd	2 nd dd	3 rd dd	4 th dd
0	-1	1.5				
1	0	3.0				
2	1	6.0				
3	2	12.0				
4	3	24.0				

2. Find the least-squares line $y = Ax + B$ for the data given in table below. Draw a graph of a given data and the least-squares line.

k	x_k	y_k
1	-2	1.4
2	-1	1.7
3	0	2.7
4	1	3.4
5	2	3.8