

Newton's Divided Difference Table.

i	x_i	y_i	a_i	b_i	c_i	d_i	$\dots$
0	x_0	y_0					
1	x_1	y_1	$\frac{y_1 - y_0}{x_1 - x_0}$				
2	x_2	y_2	$\frac{y_2 - y_1}{x_2 - x_1}$	$\frac{a_2 - a_1}{x_2 - x_0}$			
3	x_3	y_3	$\frac{y_3 - y_2}{x_3 - x_2}$	$\frac{a_3 - a_2}{x_3 - x_1}$	$\frac{b_3 - b_2}{x_3 - x_0}$		
4	x_4	y_4	$\frac{y_4 - y_3}{x_4 - x_3}$	$\frac{a_4 - a_3}{x_4 - x_2}$	$\frac{b_4 - b_3}{x_4 - x_1}$	$\frac{c_4 - c_3}{x_4 - x_0}$	
$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\dots$