

Float  $F_x(\text{Float } x)$

Declarar  $a = -2, b = 2, h = 0.25, n, x[n], f_{pa}[n], f_{pb}[n], f_{pc}[n],$   
 $sda[n], sdb[n], sdc[n], i$

For  $i = 0$  hasta  $n$

$$x[i] = a + i * h$$

For  $i = 0$  hasta  $i = n$

$$f_{pa}[i] = \frac{F(x[i+1]) - F(x[i])}{h}$$

$$f_{pb}[i] = \frac{F(x[i]) - F(x[i-1])}{h}$$

$$f_{pc}[i] = \frac{F(x[i+1]) - F(x[i-1])}{2 * h}$$

$f_{pa}$  } Primeras diferencias  
 $f_{pb}$  } Finitas  
 $f_{pc}$  } Adelante, atrás, centrado

$sda$  } Segunda diferencias  
 $sdb$  } Finitas  
 $sdc$  } Atrás, adelante, centrado

Imprimir "Primera derivada"

Imprimir "x Adelante Atrás Centrada",  $x[i], f_{pa}[i], f_{pb}[i], f_{pc}[i]$

For  $i = 0$  hasta  $i = n$

$$sda[i] = \frac{F(x[i+2]) - 2 * F(x[i+1]) + F(x[i])}{h * h}$$

$$sdb[i] = \frac{F(x[i-2]) - 2 * F(x[i-1]) + F(x[i])}{h * h}$$

$$sdc[i] = \frac{F(x[i+1]) - 2 * F(x[i]) + F(x[i-1])}{h * h}$$

Imprimir "Segunda derivada"

Imprimir "x Adelante Atrás Centrada",  $x[i], sda[i], sdb[i], sdc[i]$

Float  $F_x(\text{Float } x)$

regresar  $x * x * x - 2 * x + 4$



# Diagrama de Flujo

