```python
import math

# Function to calculate f(x)
def f(x):
    #return x*x*x - 2*x*x + x + 3
    #return math.sin(x)
    #return x * x + 2 * x + 1
    return -5 + 5*x

def dividedDiff(x, y, n, i, j):
    if (i == j):
        return y[i]
    else:
        return (dividedDiff(x, y, n, i+1, j) - dividedDiff(x, y, n, i, j-1)) / (x[j] - x[i])

def newtonDividedDiff(x, y, n, x0):
    sum = y[0]
    for i in range(1, n):
        sum += (dividedDiff(x, y, n, 0, i) * (x0 - x[i-1]))
    return sum

n = 2
x = [4, -6]
y = [15, -35]
'''
n = 3
x = [0, 1, 2]
y = [f(xi) for xi in x]
'''
x0 = -5
result = newtonDividedDiff(x, y, n, x0)
print(f"\nP({x0}) = {result}\n")

```

```
n3.11.exe "c:/Users/luisa/OneDrive -
 up.edu.mx/Documents/UP/CUARTO SEMES
TRE/CÁLCULO NUMÉRICO/DifDivNewton.py
"

P(-5) = -30.0

PS C:\Users\luisa\OneDrive - up.edu.
mx\Documents\UP\CUARTO SEMESTRE\CÁLC
```