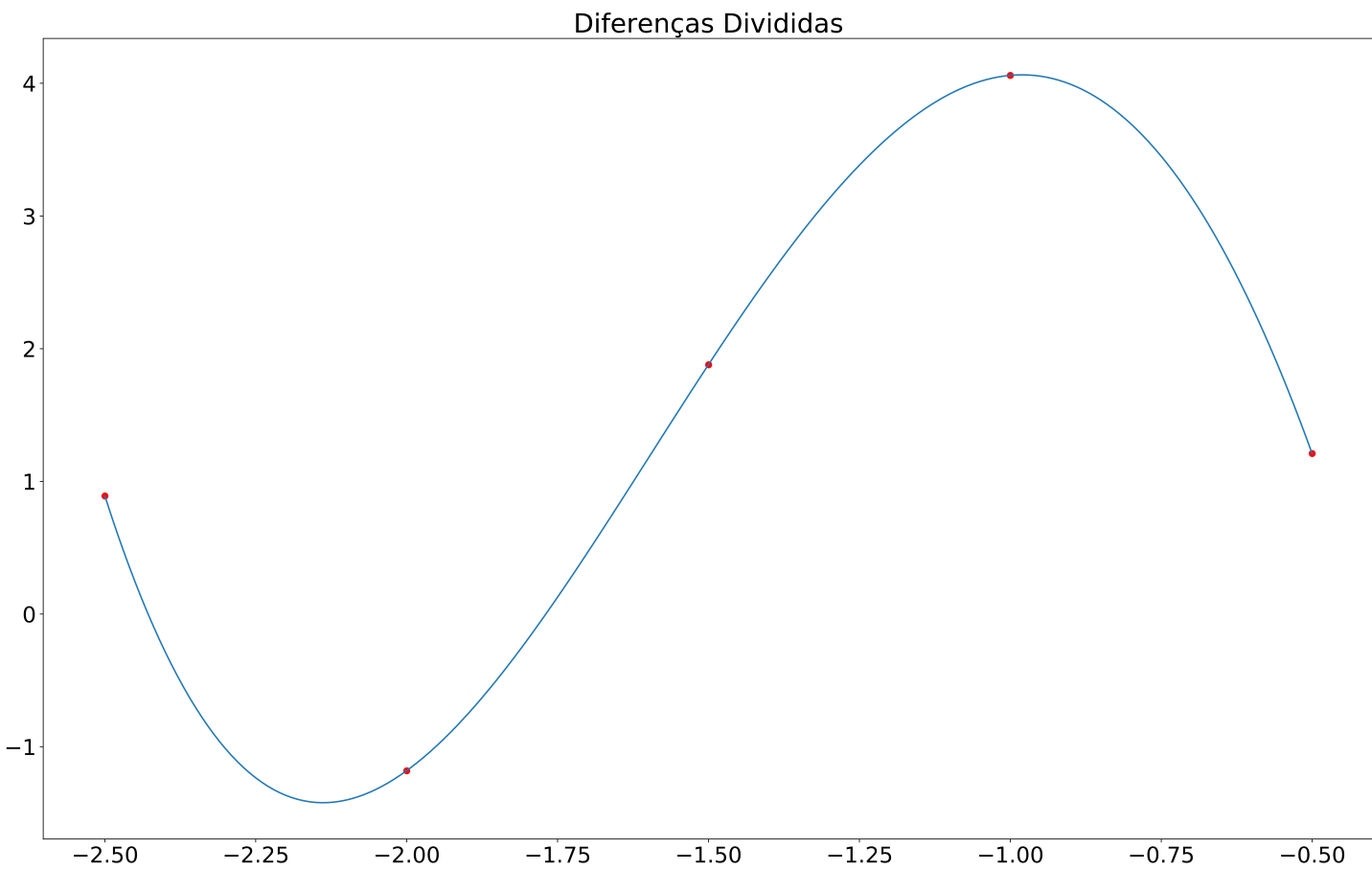


# Eliton Machado da Silva

4)

Algoritmo Diferenças Divididas

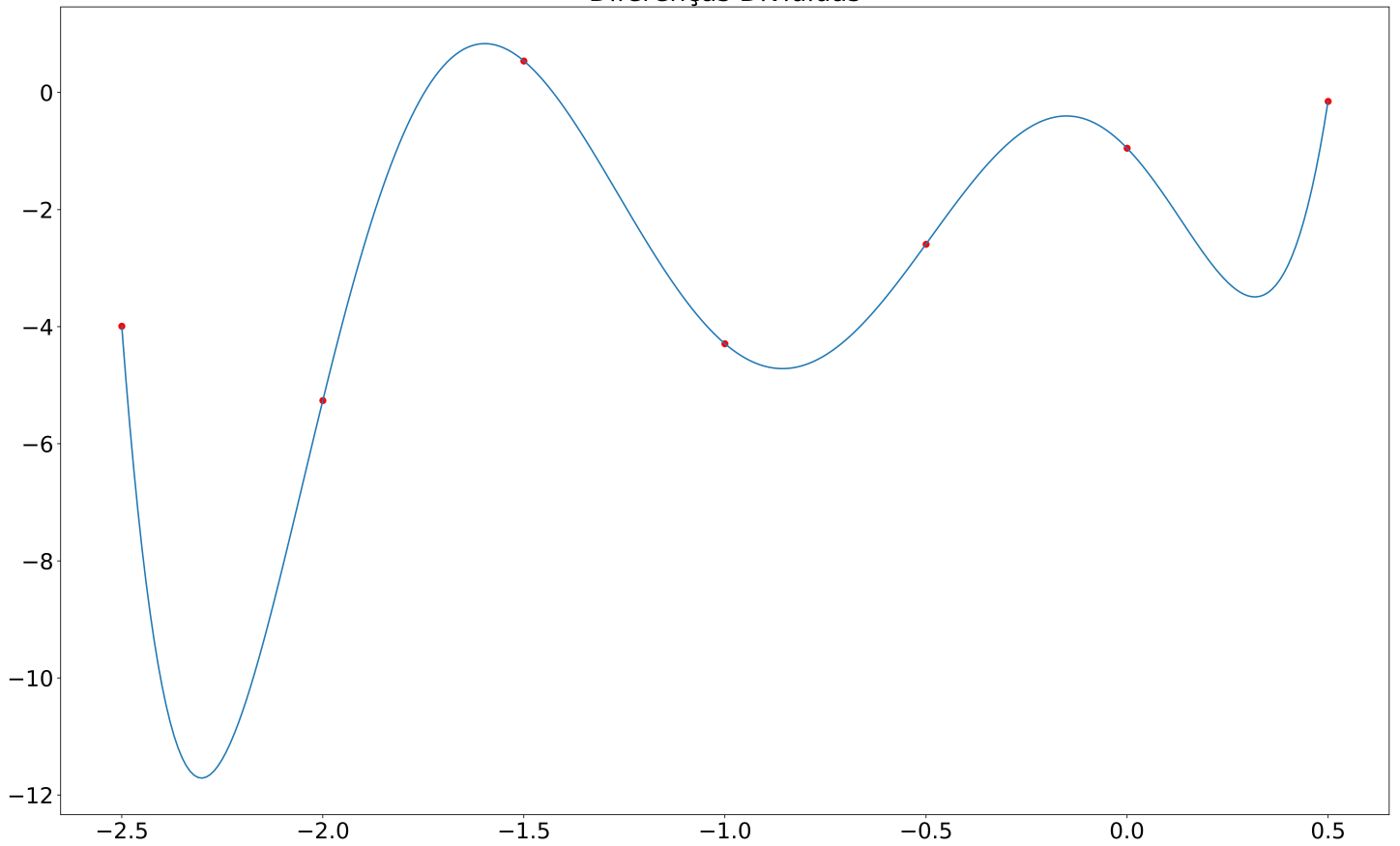
## Questão 1:



Polinômio:  
 $0.89 - 4.14(x + 2.5) + 10.259999999999998(x + 2.5)(x + 2.0) - 8.013333333333332(x + 2.5)(x + 2.0)(x + 1.5) + 1.2399999999999998(x + 2.5)(x + 2.0)(x + 1.5)(x + 1.0)$

## Questão 2:

Diferenças Divididas

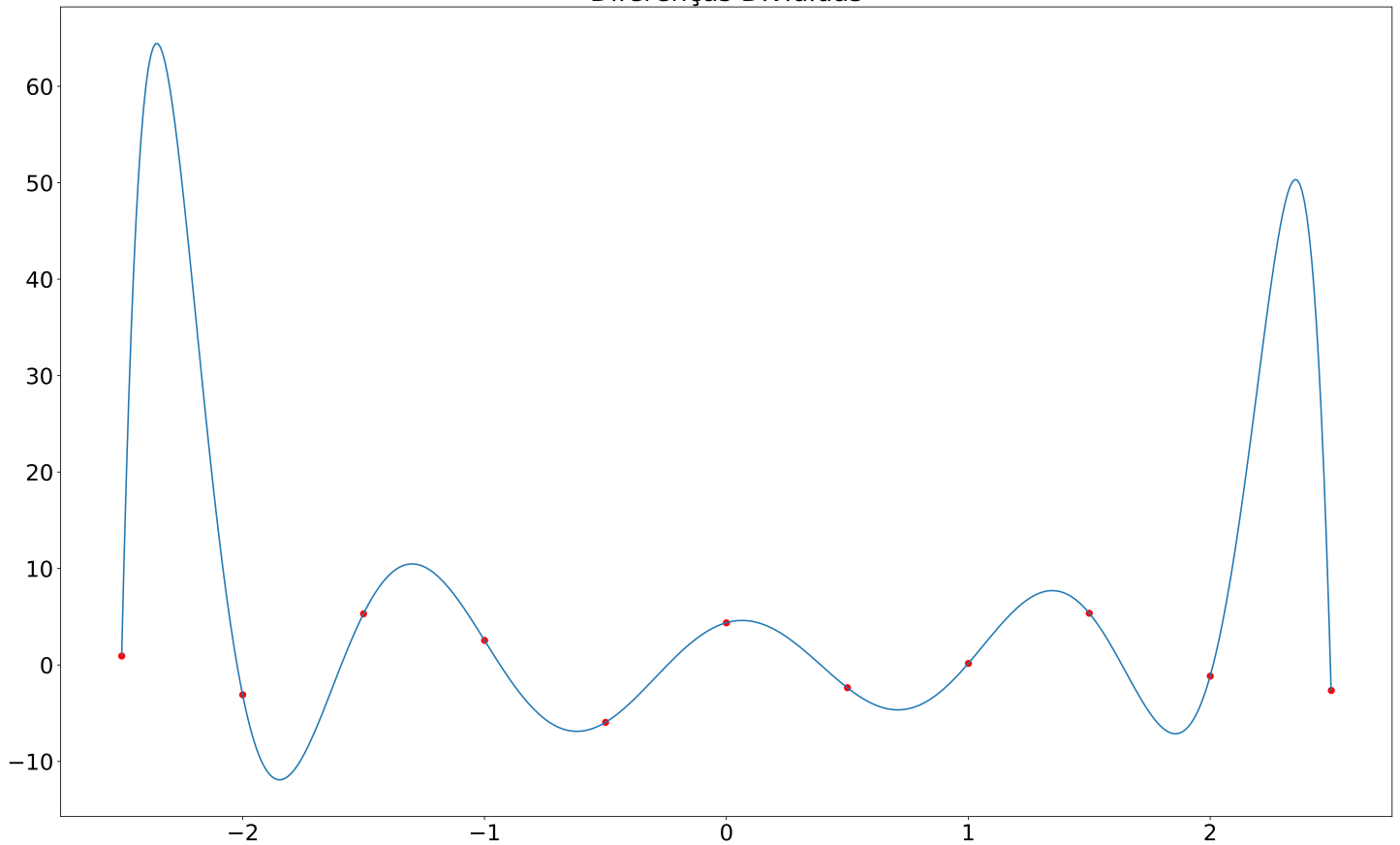


Polinômio:

$$\begin{aligned}
 & -3.99 - 2.5399999999999999(x+2.5) + 14.139999999999999(x+2.5) \\
 & (x+2.0) - 23.599999999999998(x+2.5)(x+2.0)(x+1.5) + 23.24(x+2.5)(x+2.0)(x+1.5) \\
 & (x+1.0) - 15.629333333333332(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5) + 7.837333333333335(x+2.5) \\
 & (x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)
 \end{aligned}$$

**Questão 3:**

Diferenças Divididas

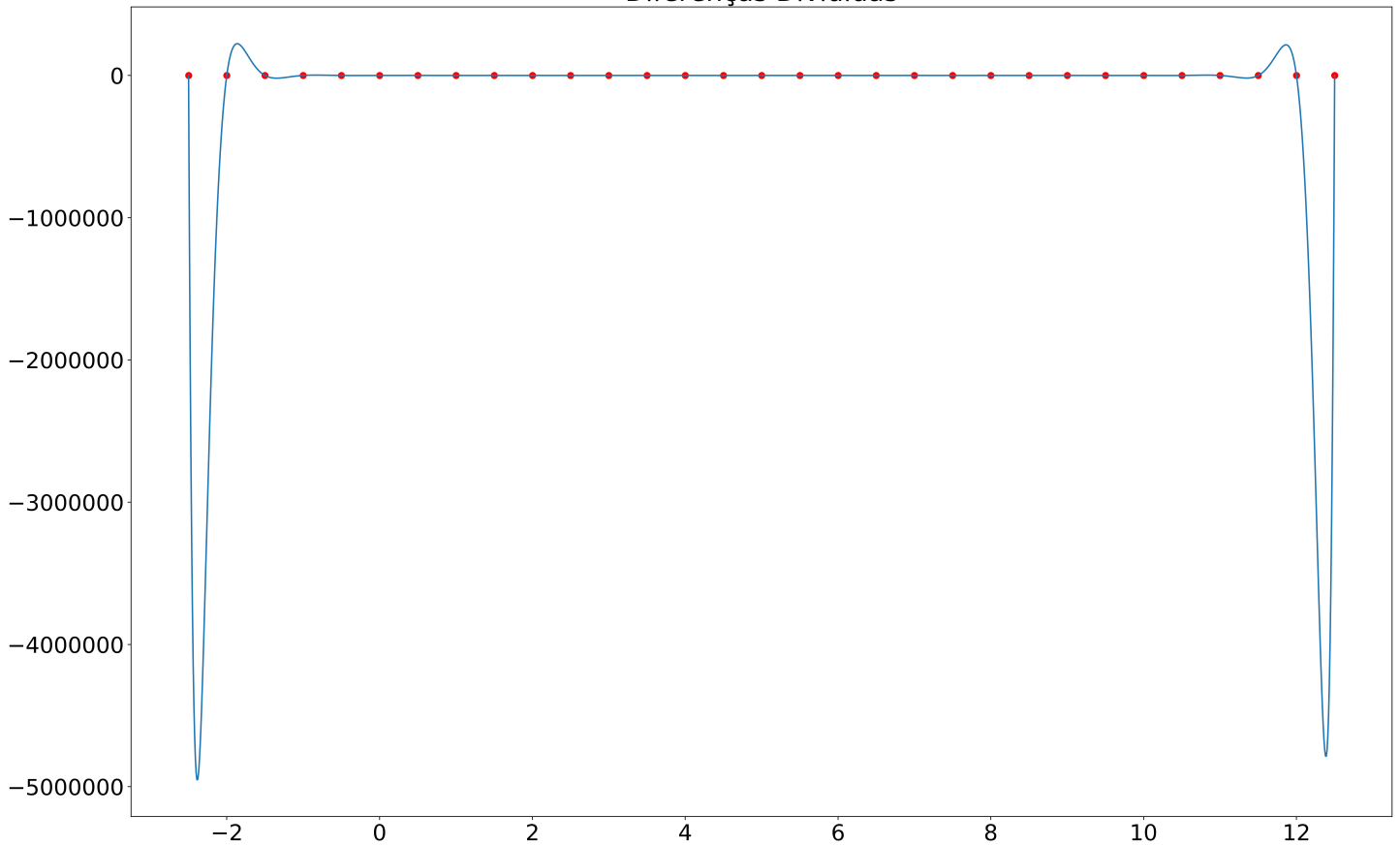


Polinômio:

$$\begin{aligned}
 &0.94 - 8.04(x+2.5) + 24.86(x+2.5)(x+2.0) - 31.46666666666667(x+2.5)(x+2.0) \\
 &(x+1.5) + 19.346666666666668(x+2.5)(x+2.0)(x+1.5)(x+1.0) - 2.6266666666666665(x+2.5)(x+2.0) \\
 &(x+1.5)(x+1.0)(x+0.5) - 6.206222222222222(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x- \\
 &0.0) + 6.913777777777779(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5) - 4.396952380952381* \\
 &(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0) + 2.047111111111111(x+2.5)(x+2.0)(x+1.5) \\
 &(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-1.5) - 0.7488169312169312(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5) \\
 &(x-0.0)(x-0.5)(x-1.0)(x-1.5)*(x-2.0)
 \end{aligned}$$

**Questão 4:**

Diferenças Divididas



Polinômio:

$$\begin{aligned}
 & -5.6 + 3.1399999999999999(x+2.5) + 4.1200000000000002(x+2.5)(x+2.0) - 8.546666666666669(x+2.5) \\
 & (x+2.0)(x+1.5) + 9.406666666666668(x+2.5)(x+2.0)(x+1.5)(x+1.0) - 7.018666666666666(x+2.5)(x+2.0) \\
 & (x+1.5)(x+1.0)(x+0.5) + 3.1253333333333333(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x- \\
 & 0.0) - 0.2791111111111111(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5) - 0.764761904761905* \\
 & (x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0) + 0.7265326278659613(x+2.5)(x+2.0)(x+1.5) \\
 & (x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-1.5) - 0.410799294532628(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x- \\
 & 0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0) + 0.17390873817540486(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x- \\
 & 0.5)(x-1.0)(x-1.5)(x-2.0)(x-2.5) - 0.05914835123724014(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x- \\
 & 0.5)(x-1.0)(x-1.5)(x-2.0)(x-2.5)(x-3.0) + 0.016702836258391817(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x- \\
 & 0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0)(x-2.5)(x-3.0)(x-3.5) - 0.003989516421262454(x+2.5)(x+2.0)(x+1.5) \\
 & (x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0)(x-2.5)(x-3.0)(x-3.5)(x- \\
 & 4.0) + 0.0008147221150395755(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0) \\
 & (x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5) - 0.0001428165407001386(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x- \\
 & 0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0)(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)(x-5.0) + 2.132834232429626e- \\
 & 05(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0)(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x- \\
 & 4.5)(x-5.0)(x-5.5) - 2.6042727789105345e-06(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0) \\
 & (x-1.5)(x-2.0)(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)(x-5.0)(x-5.5)(x-6.0) + 2.1226222531955982e-07(x+2.5) \\
 & (x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0)(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)(x-5.0) \\
 & (x-5.5)(x-6.0)(x-6.5) + 8.865965886330927e-09(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x- \\
 & 1.0)(x-1.5)(x-2.0)(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)(x-5.0)(x-5.5)(x-6.0)(x-6.5)(x- \\
 & 7.0) - 9.961724633991642e-09(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0)(x- \\
 & 2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)(x-5.0)(x-5.5)(x-6.0)(x-6.5)(x-7.0)(x-7.5) + 3.2711979636731787e-09*
 \end{aligned}$$

$(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0)(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)$   
 $(x-5.0)(x-5.5)(x-6.0)(x-6.5)(x-7.0)(x-7.5)(x-8.0)-8.379296547675404e-10(x+2.5)(x+2.0)(x+1.5)(x+1.0)$   
 $(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0)(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)(x-5.0)(x-5.5)(x-6.0)(x-6.5)(x-$   
 $7.0)(x-7.5)(x-8.0)(x-8.5)+1.8759352067960524e-10*(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)$   
 $(x-1.0)(x-1.5)(x-2.0)(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)(x-5.0)(x-5.5)(x-6.0)(x-6.5)(x-7.0)(x-7.5)(x-8.0)(x-$   
 $8.5)(x-9.0)-3.782756197781066e-11(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-1.5)(x-$   
 $2.0)(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)(x-5.0)(x-5.5)(x-6.0)(x-6.5)(x-7.0)(x-7.5)(x-8.0)(x-8.5)(x-9.0)(x-$   
 $9.5)+6.943641131785192e-12*(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0)$   
 $(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)(x-5.0)(x-5.5)(x-6.0)(x-6.5)(x-7.0)(x-7.5)(x-8.0)(x-8.5)(x-9.0)(x-9.5)(x-$   
 $10.0)-1.1664580942293249e-12(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0)$   
 $(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)(x-5.0)(x-5.5)(x-6.0)(x-6.5)(x-7.0)(x-7.5)(x-8.0)(x-8.5)(x-9.0)(x-9.5)(x-$   
 $10.0)(x-10.5)+1.8001380951747296e-13*(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-$   
 $1.5)(x-2.0)(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)(x-5.0)(x-5.5)(x-6.0)(x-6.5)(x-7.0)(x-7.5)(x-8.0)(x-8.5)(x-$   
 $9.0)(x-9.5)(x-10.0)(x-10.5)(x-11.0)-2.5605131066592025e-14(x+2.5)(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-$   
 $0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0)(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)(x-5.0)(x-5.5)(x-6.0)(x-6.5)(x-7.0)(x-$   
 $7.5)(x-8.0)(x-8.5)(x-9.0)(x-9.5)(x-10.0)(x-10.5)(x-11.0)(x-11.5)+3.3673798826272728e-15*(x+2.5)$   
 $(x+2.0)(x+1.5)(x+1.0)(x+0.5)(x-0.0)(x-0.5)(x-1.0)(x-1.5)(x-2.0)(x-2.5)(x-3.0)(x-3.5)(x-4.0)(x-4.5)(x-5.0)$   
 $(x-5.5)(x-6.0)(x-6.5)(x-7.0)(x-7.5)(x-8.0)(x-8.5)(x-9.0)(x-9.5)(x-10.0)(x-10.5)(x-11.0)(x-11.5)*(x-12.0)$