

Q1 Encontre os coeficientes do polinômio de grau 14

$$p(x) = a_0(x - x_1)(x - x_2) \cdots (x - x_{14}) + a_1(x - x_0)(x - x_2) \cdots (x - x_{14}) + \cdots + a_{14}(x - x_0)(x - x_1) \cdots (x - x_{13})$$

que passa pela seguinte lista de 15 pontos

$(-5.0, 3.18), (-4.5, -4.77), (-4.0, 1.91), (-3.5, 2.26), (-3.0, 3.85), (-2.5, 0.02), (-2.0, 1.81), (-1.5, -0.1), (-1.0, -3.22),$
 $(-0.5, -2.97), (0.0, -4.12), (0.5, 0.25), (1.0, 3.48), (1.5, -3.32), (2.0, 3.03)$

$$\underline{a_7} \quad 0.000064499874024$$

$$\underline{a_5} \quad -0.000007524985303$$

$$\underline{a_{11}} \quad -0.000017102239324$$

$$\underline{a_1} \quad 0.000012550412550$$

$$\underline{a_{12}} \quad 0.000059515792849$$

$$\underline{a_6} \quad 0.001021516754850$$

$$\underline{a_{13}} \quad 0.000008735297624$$

$$\underline{a_8} \quad -0.001817283950617$$

$$\underline{a_3} \quad -0.000154604243493$$

$$\underline{a_{14}} \quad 0.000000569448188$$

$$\underline{a_4} \quad 0.000724279835391$$

$$\underline{a_9} \quad 0.001117460317460$$

$$\underline{a_{10}} \quad -0.000775073486185$$

$$\underline{a_0} \quad 0.000000597638693$$

$$\underline{a_2} \quad 0.000032665277110$$