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Q1 Encontre os coeficientes do polinômio de grau 20

 $p(x) = a_0 + a_1(x - x_0) + a_2(x - x_0)(x - x_1) + a_3(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_1)(x - x_2) + \dots + a_{20}(x - x_0)(x - x_0)(x - x_0)(x - x_0) + \dots + a_{20}(x - x_0)(x - x_0)(x - x_0)(x - x_0) + \dots + a_{20}(x - x_0)(x - x_0)$

que passa pela seguinte lista de 21 pontos

 $(-5.0, 3.41), (-4.5, -0.07), (-4.0, -3.9), (-3.5, -4.57), (-3.0, 1.66), (-2.5, -3.92), (-2.0, -2.47), (-1.5, -2.94), \\ (-1.0, 2.72), (-0.5, -1.12), (0.0, 4.2), (0.5, 1.47), (1.0, -4.17), (1.5, 3.8), (2.0, 4.94), (2.5, 1.56), (3.0, 1.16), (3.5, 4.71), \\ (4.0, -1.49), (4.5, 4.15), (5.0, -4.71)$

- a6 7.349333333333334
- a7 ____ -5.283047619047620
- a10 0.475583774250441
- a14 0.005101904327301
- _a4 ___ 0.15333333333333334
- a16 0.000319419620160
- a15 -0.001347119210400
- all _____ -0.168632868366202
- a9 ___ -1.233947089947090
- a0 3.4100000000000000
- a19 0.000001988183620
- a13 -0.017596323018545
- a2 _____ -0.70000000000000000
- a20 0.000000264024418
- _as ___ 2.815809523809524
- a3 4.6800000000000000
- _a1_____-6.96000000000000000
- a12 0.056206338517450
- <u>a17</u> _ -0.000067270772132
- _a18__ 0.000012445404662