

$$x_k \quad y_k$$

$$-2 \quad 1$$

$$-1 \quad 2$$

$$1 \quad 10$$

$$2 \quad 29$$

$$3 \quad 106$$

$$\frac{12-1}{-1+2} = 1$$

$$\frac{10-1}{1+1} = 4$$

$$\frac{29-10}{2-1} = 19$$

$$\frac{106-29}{3-2} = 77$$

$$\frac{4-1}{1-(-1)} = \frac{3}{2} = 1$$

$$\frac{19-4}{2-1} = 15$$

$$\frac{77-19}{3-2} = \frac{58}{1} = 58$$

$$\frac{5-1}{2+1} = 1$$

$$\frac{106-29-5}{4} = 6$$

$$\frac{106-29-5}{5} = 1$$

$$L_4(x) = 1 + (x+2) + (x+2)(x+1) + (x+2)(x+1)(x-1) + (x+2)(x+1)(x-1)(x-2) + (x+2)(x+1)(x-1)(x-2)(x-3)$$