15, 3)

$$\begin{bmatrix} 1 & 3 & 9 & 27 \\ 1 & 4 & 16 & 64 \\ 1 & 5 & 25 & 125 \\ 1 & 7 & 49 & 343 \\ 1 & 8 & 64 & 512 \\ 1 & 9 & 81 & 729 \\ 1 & 11 & 121 & 1331 \\ 1 & 12 & 144 & 1728 \end{bmatrix} \begin{bmatrix} a_0 \\ a_1 \\ a_2 \\ a_3 \end{bmatrix} = \begin{bmatrix} 1.6 \\ 3.6 \\ 4.4 \\ 3.4 \\ 2.2 \\ 2.8 \\ 3.8 \\ 4.6 \end{bmatrix}$$

$a_0 = -11,4887$
$a_1 = 7,1438$
$a_2 = -1,0417$
$a_3 = 0,0467$

$$S_r = \sum_{i=1}^{8} (y_i - a_0 - a_1 x_i - \dots a_m x_i^m)^2$$

$$= 1,2997$$

$$S_{y/x} = \sqrt{\frac{S_r}{8-(3+1)}} = 0,57000317$$

$$r^2 = 0,828981$$