

(2)

$$\bar{A} = (A | b) = \begin{pmatrix} 0.4 \cdot 10^{-2} & 0.1 \cdot 10^4 & | & 0.6 \cdot 10^4 \\ 0.1 \cdot 10^6 & 0.1 \cdot 10^6 & | & 0.2 \cdot 10^6 \end{pmatrix}$$

$$m_1 = \frac{0.1 \cdot 10^6}{0.4 \cdot 10^{-2}} = 0.25 \cdot 10^8$$

$$\leadsto \begin{pmatrix} 0.4 \cdot 10^{-2} & 0.1 \cdot 10^4 & | & 0.6 \cdot 10^4 \\ 0 & 0.1 \cdot 10^6 - 0.25 \cdot 10^8 & | & 0.2 \cdot 10^6 - 0.15 \cdot 10^{12} \end{pmatrix} \frac{1}{4}$$

$$\begin{aligned} 0.1 \cdot 10^6 - 0.25 \cdot 10^8 &= \\ = 0.000001 \cdot 10^8 - 0.25 \cdot 10^8 & \\ = -0.249999 \cdot 10^8 \approx -0.25 \cdot 10^8 & \text{ na margem} \end{aligned}$$

$$\begin{aligned} 0.2 \cdot 10^6 - 0.15 \cdot 10^{12} & \\ = 0.00000002 \cdot 10^{12} - 0.15 \cdot 10^{12} & \\ = -0.14999998 \cdot 10^{12} \approx -0.15 \cdot 10^{12} & \text{ na margem} \end{aligned}$$

$$\text{na marg.} \leadsto \begin{pmatrix} 0.4 \cdot 10^{-2} & 0.1 \cdot 10^4 & | & 0.6 \cdot 10^4 \\ 0 & -0.25 \cdot 10^8 & | & -0.15 \cdot 10^{12} \end{pmatrix} \frac{1}{4}$$

$$\Rightarrow x_2 = \frac{0.15 \cdot 10^{12}}{0.25 \cdot 10^8} = \frac{0.15}{0.25} \cdot 10 = 0.6 \cdot 10^1 = 6$$

$$x_1 = 0$$

$$\text{resultado o) do. na marg. } X = \begin{pmatrix} 0 \\ 6 \end{pmatrix} \frac{1}{4}$$