6. Para un sistema de ecuaciones $Ax = b$ siendo A una matriz triangular superior tenemos:

$$\begin{pmatrix} A_{11}x_1 + A_{12}x_2 + A_{13}x_3 + \cdots A_{1n}x_n \\ 0 \quad A_{22}x_2 + A_{23}x_3 + \cdots A_{2n}x_n \\ \vdots \quad + \quad 0 \quad A_{33}x_3 + \cdots A_{3n}x_n \\ \vdots \\ 0 \quad + \quad 0 \quad + \quad \cdots \quad A_{n-1}x_n \\ 0 \quad + \quad 0 \quad + \quad 0 \quad \cdots \quad A_{nn}x_n \end{pmatrix} = \begin{pmatrix} b_1 \\ b_2 \\ \vdots \\ b_{n-1} \\ b_n \end{pmatrix}$$

$$x_n = \frac{b_n}{A_{nn}} \qquad x_{n-1} = \frac{b_{n-1} - A_{n-1,n}x_n}{A_{n-1,n-1}} \qquad x_{n-2} = \frac{b_{n-2} - A_{n-1,n-1}x_{n-1} - A_{n-1,n}x_n}{A_{n-2,n-2}}$$

$$\Longrightarrow \quad x_i = \frac{b_i - \sum_{k=i+1}^{n} A_{ii}x_i}{A_{ii}}$$