1 Text: Set 1.9 : Practice Ex # 2; and Exercices15, 17, 21. Set 2.1 : Pr. Exercise # 2; and exercises: 5, 9, 17, 19.

2 Let T be a linear mapping from $\mathbb{R}^2$ to $\mathbb{R}^3$. T is represented by a matrix A ('standard matrix'). What is size is this matrix? Determine A if we know that

$$T\left(\begin{bmatrix} -1 \\ 1 \end{bmatrix}\right) = \begin{bmatrix} 3 \\ 0 \\ -1 \end{bmatrix} \quad \text{and} \quad T\left(\begin{bmatrix} -1 \\ 2 \end{bmatrix}\right) = \begin{bmatrix} 5 \\ 1 \\ 0 \end{bmatrix}$$

3 Calculate the product matrix $C = AB$ in the following case:

$$A = \begin{bmatrix} 2 & 0 & -1 \\ 1 & 1 & 2 \\ 0 & 1 & -2 \end{bmatrix} \quad B = \begin{bmatrix} -2 & -1 \\ -1 & 3 \\ -2 & 1 \end{bmatrix}$$