$\boxed{T_2 \text{ curs}}$

1) a) $\mathcal{M}_n(\mathbb{R}) = \mathcal{M}_n^{s}(\mathbb{R}) \oplus \mathcal{M}_n^{a}(\mathbb{R})$

b) Precizați $\dim_{\mathbb{R}} \mathcal{M}_n^{s}(\mathbb{R})$, $\dim_{\mathbb{R}} \mathcal{M}_n^{a}(\mathbb{R})$

2) a) $V' = \{ f \in \mathcal{F}(\mathbb{R}) \mid f \text{ bij} \} \subset \left(\mathcal{F}(\mathbb{R}) = \{ f : \mathbb{R} \to \mathbb{R} \mid f \text{ funcție} \}, +, \cdot\right)_{/\mathbb{R}}$

b) $V'' = \{ P \in \mathbb{R}_3[X] \mid \text{grad}\, P = 2 \} \subset (\mathbb{R}_3[X], +, \cdot)_{/\mathbb{R}}$

Precizați dacă V', V'' sunt subspații vect

3) $(\mathcal{M}_2^{\Delta}(\mathbb{R}), +, \cdot)$ $\quad \mathcal{R}_0 = \left\{ \begin{pmatrix} 1 & 0 \\ 0 & 0 \end{pmatrix}, \begin{pmatrix} 0 & 0 \\ 0 & 1 \end{pmatrix}, \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix} \right\}$ reper canonic

$\mathcal{R}' = \left\{ \begin{pmatrix} 1 & 1 \\ 1 & 3 \end{pmatrix}, \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}, \begin{pmatrix} 1 & 0 \\ 0 & 0 \end{pmatrix} \right\}$

a) $\mathcal{R}'$ reper în $\mathcal{M}_2^{\Delta}(\mathbb{R})$. Sunt $\mathcal{R}'$ și $\mathcal{R}_0$ la fel orientate?

b) $\mathcal{R}_0 \xrightarrow{A} \mathcal{R}'$, $\mathcal{R}' \xrightarrow{B} \mathcal{R}_0$, $A, B = ?$