TEXTBOOK: Linear Algebra
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READ: Sections 2.3.

PROBLEMS:

1. Section 2.3: # 2, 4, 10 12, 14, 16, 21, 23, 24, 29, 30, 32, 34.

2. Let $T : \mathbf{R}^n \longrightarrow \mathbf{R}^m$ be a linear transformation and W be a subspace of $\mathbf{R}^n$. Prove that $T[W]$ is a subspace of $\mathbf{R}^m$,

3. Let $T : \mathbf{R}^3 \to \mathbf{R}^3$ is a linear transformation and let $B = \{\mathbf{v}_1, \mathbf{v}_2, \mathbf{v}_3\}$ be a basis for $\mathbf{R}^3$. Assume $T(\mathbf{v}_1) = \begin{bmatrix} -2 \\ 1 \end{bmatrix}$, $T(\mathbf{v}_2) = \begin{bmatrix} 0 \\ 1 \end{bmatrix}$ and $T(\mathbf{v}_3) = \begin{bmatrix} -2 \\ 2 \end{bmatrix}$.