Homework

HW1: Problem 3.1 in Text

Should submit the report within one week after finishing the lecture of this chapter

HW2

Given $A = \begin{bmatrix} 2 & 1 & 0 & 0 \\ 0 & 2 & 1 & 0 \\ 0 & 0 & 2 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}$ $b = \begin{bmatrix} 0 \\ 0 \\ 1 \\ 1 \end{bmatrix}$ $\bar{b} = \begin{bmatrix} 1 \\ 1 \\ 1 \\ 1 \end{bmatrix}$

What are the representations of A with respect to the basis $\{b, Ab, A^2b, A^3b\}$ and the basis $\{\bar{b}, A\bar{b}, A^2\bar{b}, A^3\bar{b}\}$, respectively? Drive using the definition of representation.