

**PRACTICE 1m:** p.226 B6, D2 Note that the standard basis for the vector space of  $2 \times 2$  diagonal matrices is  $\left\{ \begin{bmatrix} 1 & 0 \\ 0 & 0 \end{bmatrix}, \begin{bmatrix} 0 & 0 \\ 0 & 1 \end{bmatrix} \right\}$ . Also note that, in question D2, you should be looking for the matrix  $P$  such that  $P[\mathbf{x}]_{\mathcal{B}} = [\mathbf{x}]_{\mathcal{C}}$ . The text mistakenly uses the notation  $\vec{x}$  instead of  $\mathbf{x}$  here.