

MATH 54 – HINTS TO HOMEWORK 12

PEYAM TABRIZIAN

Here are a couple of hints to Homework 12. Enjoy!

SECTION 4.7: CHANGE OF BASIS

Remember: To change coordinates $\mathcal{C} \xleftarrow{P} \mathcal{B}$ from \mathcal{B} to \mathcal{C} , just express the vectors in \mathcal{B} in terms of the vectors in \mathcal{C}

4.7.3. (ii), because P is just $\mathcal{W} \xleftarrow{P} \mathcal{U}$, so P goes from \mathcal{U} to \mathcal{W} .

4.7.5. (i), because P is just $\mathcal{A} \xleftarrow{P} \mathcal{D}$, so P goes from \mathcal{D} to \mathcal{A} .

4.7.11.

(a) **F**

(b) **T**

4.7.13. Notice that we have $[\mathbf{x}]_{\mathcal{C}} = P[\mathbf{x}]_{\mathcal{B}}$, where P is the matrix you found, and therefore $[\mathbf{x}]_{\mathcal{B}} = P^{-1}[\mathbf{x}]_{\mathcal{C}}$.