

Tenth Homework Assignment for Math 232 (D200)

Due: Friday, December 4th.

All section references are to the Lay text.

Reminder:

The final exam is **Wednesday, December 11th** from 8:30 to 11:30. It covers everything we have studied. My tentative pre-exam office hours are 2:30 - 4:30 on Wednesday, December 9th, in the Open Lab. Watch for the full Open Lab schedule to be posted soon on WebCT.

Problems to hand in:

Section 6.1 problem 28.

Section 6.2 problems 4, 8, 16, 32.

Section 6.3 problems 6, 12, 16, 18.

Find the coordinates of the vector $\begin{bmatrix} 1 \\ 5 \\ -2 \end{bmatrix}$ in the basis $\mathcal{B} = \left\{ \begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix}, \begin{bmatrix} 1 \\ -1 \\ 0 \end{bmatrix}, \begin{bmatrix} 1 \\ 1 \\ -2 \end{bmatrix} \right\}$.

Some other problems you might try:

True-false questions can help you think about the reading. Try Section 6.1, 19-20, Section 6.2, 23-24, Section 6.3, 21-22, Section 6.4, 17-18 and Section 6.5, 17-18. With the exam so close, it will not be possible to collect an assignment covering the final sections. However, you might like to try the questions below:

Section 6.4, problems 4, 10.

Section 6.5, problems 6, 12, 24.

Section 6.6, problems 4, 6.

Remaining readings:

For Wednesday, Section 6.4.

For Friday, Sections 6.5 and 6.6.

(Optional) Chapter 7 has some good stuff, but it may be better to spend your time studying what we have covered. One useful fact, from Section 7.1, is that *all* symmetric matrices (i.e. where $a_{ij} = a_{ji}$) are diagonalizable.