Third Homework Assignment for Math 232 (D200)

Due: Friday, October 2nd.

All section references are to the Lay text.

Reminder:

  The first midterm is Wednesday, October 7th.

Problems to hand in:

  Section 1.5 problems 20, 26, 32
  Section 1.6 problems 8, 14
  Section 1.7 problems 6, 12, 18, 26
  Consider the matrix:

$$A = [\mathbf{a_1} \quad \mathbf{a_2} \quad \mathbf{a_3} \quad \mathbf{a_4} \quad \mathbf{a_5}] = \begin{bmatrix} 1 & -2 & 0 & 1 & 2 \\ -1 & 3 & 1 & 0 & 1 \\ 2 & 0 & 4 & 1 & 1 \end{bmatrix}$$

Which of the following subsets of the columns are linearly independent?

$$\{\mathbf{a_1}, \mathbf{a_2}, \mathbf{a_3}\}; \quad \{\mathbf{a_1}, \mathbf{a_4}, \mathbf{a_5}\}; \quad \{\mathbf{a_1}, \mathbf{a_3}, \mathbf{a_4}\}; \quad \{\mathbf{a_3}, \mathbf{a_4}, \mathbf{a_5}\}$$

Some other problems you should try:

  More true-false questions: Section 1.7 numbers 21 and 22. To practice expressing solutions in parametric form, try Section 1.5 problems 5, 7, 9, 13, 15.

Reading for this week:

  For Wednesday, Section 1.8.
  For Friday, Sections 1.9 and 1.10.