

Newberger, College Algebra 112-10, Spring 2005

Exam 2 Review sheet This exam covers Sections 7.1 and 7.2.

- I. You will be asked to convert a system of equations into an augmented matrix and solve if possible. You may be asked if the system is consistent or inconsistent. There are three possible answers for these problems:
 - a. The system has a unique solution. The answer will be of the form $x = a$, $y = b$ and so on. Systems with unique solutions are consistent systems.
 - b. The system has an infinite number of solutions. The answer should be stated as a complete solution in terms of at least one parameter (like t), and you should include the explanation that the parameter(s) can be any real number. Systems with an infinite number of solutions are consistent systems. Practice with
 - c. The system has no solution. Systems with no solutions are inconsistent systems.

Practice problems with unique solutions, page 526, #15-24. Practice problems with no solution or infinitely many solutions, page 526 #25-34. Mixed problems page 527 #35-46.

- II. You will be asked to determine the dimensions of a matrix. You may be asked to determine how many variables and equations you have, given an augmented matrix.
- III. You will be asked to determine whether or not it is possible to multiply two matrices and to multiply if possible. The dimensions of the matrices can make it impossible to perform the multiplication. Practice the multiplication problems from page 537 #3-10 and 17-38.
- IV. You may be asked to write the matrix equation See Example 6 in Section 7.2 and practice problems #43-46 on page 537.
- V. You will be asked to use matrices in an application. See Example 7 page 534, and practice problems #49-52 on page 538.

Good luck!