MATH 544 (Section 001) University of South Carolina
D. Meade Fall 1996

# Homework Problems for Chapter 2
# The Vector Space $R^n$

| Section | Page | Problems |
|---|---|---|
| 2.1 | 120 | # 13, 14*, 15, 18, 21, 23, 24, 26, 29* |
| 2.2 | 127 | # 1, 2, 4, 5, 7*, 9, 10, 12, 13, 14, 15, 18*, 20, 29, 30 |
| 2.3 | 139 | # 5, 6, 15, 16*, 17, 21, 22, 27, 28, 31*, 34, 40, 42 |
| 2.4 | 153 | # 1, 2, 6, 9, 12, 13*, 19, 21, 25, 26, 27*, 32, 33 |
| 2.5 | 166 | # 2, 4, 5, 6, 9*, 15, 16, 19, 22*, 25, 28, 32, 35 |
| 2.6 | 177 | # 3*, 5, 8, 9, 10, 13, 14*, 15 |
| 2.7 | 193 | # 2, 3*, 6, 7, 9, 10, 11, 19*, 22, 25, 26, 32, 40bc |
| 2.8 | 204 | # 1, 4*, 11, 13, 19* |
| 2.9 | 213 | # 1*, 2, 4, 6, 7, 8*, 13 |
| Review | 214 | Supplemental Computational Exercises # 1–9, 11, 12–15 |
| Review | 216 | Supplemental Conceptual Exercises # 1–12, 13–18 |

Notes

- Problems marked with an asterisk (*) will be collected and graded. In general, problems will be due the day following the lecture in which the section was discussed.
- The selected problems require a mixture of computation and theory to answer. In most cases the problems are not difficult once the question is identified and understood. The key to this is a thorough understanding of the vocabulary and various connections between the concepts.
- If you need more practice, there are many other problems in the text that are similar to the ones I have assigned.
- There are two sections of review problems at the end of each chapter. None of these problems will be collected for grading. These problems should be a good test of your understanding of the main points in the chapter. I suggest solving these problems as one part of your preparation for an exam.
- Be sure you know how to do all of these problems. Do not hesitate to ask questions – in class, by e-mail, or during office hours.