

Topics appearing on final of MATH 2164 Spring 2008

1. Find an inverse matrix using two methods: Typical problems are those problems assigned among Sec.2.2 #29 – #32 and Sec. 3.3 #11 – #16.
2. Solving a system by using Cramer's rule: Typical problems are those problems assigned among Sec. 3.3 #1 – #6.
3. Computing a determinant by combining the methods of row reduction and cofactor expansion: Typical problems are those problems assigned among Sec. 3.2 #11 – #14.
4. Find a linearly independent set from a set of vectors, bases and dimensions of subspaces (Null space, Column space, and Row space), and rank of a matrix: Typical problems are those problems assigned among Sec. 4.3 #1 – #16, Sec. 4.5 #11 – #18, and Sec. 4.6 #1 – #3.
5. Find characteristic equations, eigenvalues, and eigenvectors of an $n \times n$ matrix, and diagonalize a matrix: Typical problems are those problems assigned among Sec. 5.2 #1 – #14 and Sec. 5.3 #7 – #18.
6. Coordinates and linear transformation: Typical problems are those problems assigned among Sec. 4.4 #1 – #8, #11 – #14 and Sec. 5.4 #1 – #8, #13 – #16.
7. Applications: Typical problems are such as Sec. 5.2 #25.
8. True/false problems: Typical problems are those true/false problems of Chapters 4 and 5 which are assigned and those word problems assigned among Sec. 4.6 #5 – #15 and #23 – #24, and Sec. 5.3 #25 – #28.