

Math 341. Fall 2019

Guide for Midterm Exam 2

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Solve the following problems.

§2.4: 3, 4, 7, 12, 13.

§3.1: 5, 11, 16.

§3.2: 2, 4, 7.

§3.3: 2, 3, 8, 9, 10.

§3.4: 2, 4(a, e, h), 5(a, b, d), 6, 7, 8, 13, 15, 18.

Concentrate on the following concepts.

- Singular and nonsingular
- Inverse matrix
- Submatrix
- Minor
- Cofactor
- Determinant
- Determinant criterion for singularity
- Determinant by row reduction
- Classical adjoint
- Adjoint inverse matrix formula
- General cofactor expansion
- Cramer's rule
- Characteristic polynomial
- Eigenvalue
- Eigenvector
- Eigenspace
- Similar matrices
- Diagonalizable matrix

Solve the following true/false problems.

§2.4: 22.

§3.1: 18.

§3.2: 17.

§3.3: 20.

§3.4: 24.