2.1-2.3

- Demonstrate understanding of properties of and theorems on matrix operations.
- Compute results of matrix operations.
- Find the inverse of a matrix.
- Solve linear systems using inverse matrices.
- Apply row reduction to find inverses of matrices.
- Explain the reasons why row reduction can be used to find inverses.
- Determine if a matrix is invertible.

2.8-2.9

- Define and identify subspaces of Rn.
- Find the basis of the Column Space and Null Space of a matrix.
- Identify if a set of basis is a basis for a subspace.
- State and use the Rank Theorem, the Basis Theorem, and the Invertible Matrix Theorem to solve problems.

3.1-3.3

- Compute determinants using cofactor expansion.
- Demonstrate an understanding of the

properties of determinants.

- Compute determinants using row reduction.
- Compute areas of triangles and parallelograms using determinants.
- Apply Cramer's rule to solve linear systems

5.1-5.2

- Compute and define eigenvalues and eigenvectors of matrices.
- Derive properties of eigenvalues and eigenvectors.
- Define similar matrices and properties

of them.

5.3-5.5

- Apply the diagonalization theorem.
- Demonstrate knowledge of concepts related to diagonalization.
- Find complex eigenvalues and decompose matrices with complex eigenvalues into their polar decomposition.