Instructional Flow – Unit 2 – Linear Systems and Matrices

3.6 Solving Systems of Linear Equations in Three Variables
- applications using systems of two equations and two unknowns
- modeling systems of three equations in three unknowns geometrically
- solutions of systems of three equations in three unknowns algebraically

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4.1 Matrix Operations
- data organization
- properties
- addition, subtraction, and scalar multiplication
- applications

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4.2 Multiplying Matrices
- meaning and properties
- multiplying two matrices
- applications

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4.3 Determinants ~~and Cramer's Rule~~
- the determinant of a 2×2 matrix using the definition
- the determinant of a square matrix using a calculator

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4.4 Identity and Inverse Matrices
- properties
- verification of inverse matrices
- existence of an inverse of a matrix
- the formula for the inverse of a 2×2 matrix
- the inverse of a matrix using a calculator

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4.5 Solving Systems Using Inverse Matrices
- the matrix equation for a system of linear equations
- solutions of systems using matrix equations and inverse matrices
- applications

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Chapter 4 Extension (Optional) Solving Systems Using Augmented Matrices
- an augmented matrix for a system of linear equations
- solutions of systems using augmented matrices and reduced row-echelon form