



Yearly Overview

ALGEBRAIC REASONING

2020-2021

Semester 1

Term 1

- **Linear Functions**
 - Writing Linear Functions
 - Modeling Linear Functions
 - **Quadratic Functions**
 - Writing Quadratic Functions
 - Modeling Quadratic Functions
 - **Exponential Functions**
 - Writing Exponential Functions
 - Modeling Exponential Functions
 - **Transformations**
 - Transforming and Analyzing Linear Functions
 - Transforming and Analyzing Quadratic Functions
 - Transforming and Analyzing Exponential Functions
 - Comparing Sets of Functions
 - **Algebraic Methods (Part 1a)**
 - Adding and Subtracting Polynomial Functions
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Term 2

- **Algebraic Methods (Part 1b)**
 - Multiplying Polynomial Functions
 - Comparing and Contrasting Adding/Subtracting Linear Functions
- **Decomposition of Linear and Polynomial Functions (Part 1)**
 - Factoring Polynomials with Graphs and Tables
 - Decomposition of Polynomial Functions
- **Solutions of Equations**
 - Estimating Function Values
 - Solving Linear and Quadratic Equations
 - Systems of Equations

Semester Review and Exam



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Semester 2

Term 3

- **Cubic Functions**
 - Writing Cubic Functions
 - Modeling Cubic Functions
 - Transforming Cubic Functions
 - Analyzing Cubic Functions
 - **Absolute Value Functions**
 - Transforming Absolute Value Functions
 - Analyzing Absolute Value Functions
 - **Rational Functions**
 - Transforming Rational Functions
 - Analyzing Rational Functions
 - **Inverses of Functions**
 - Generating Inverses of Functions
 - Verifying Inverses of Functions
 - Square Root Functions
 - Cube Root Functions
 - Logarithmic Functions
 - Comparing and Contrasting Sets of Functions
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Term 4

- **Algebraic Methods (Part 2)**
 - Dividing Polynomial Functions with Tables and Algebraic Methods
 - Decomposition of Polynomial Functions (Dividing by Factoring)
 - Multiple Representations of Combined Functions
- **Matrices**
 - Add, Subtract, Multiply Matrices
 - Scalar Multiplication
 - Solve Systems (Two and Three Linear Equations)
- **Factoring Polynomials Algebraically**
 - GCF
 - $a=1$; $a \neq 1$
 - Special Cases
- **Estimating Solutions**
 - Rational, Exponential, Logarithmic, Square Root, and Cubic Functions
- **Data Modeling**
 - Linear
 - Quadratic
 - Exponential

Semester Review and Exam
