Orange Public Schools

Office of Curriculum & Instruction 2019-2020 Mathematics Curriculum Guide



Algebra I Scopes and Sequences September 9, 2019 – June 2020

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Unit 1: Linear functions and Equations

- Input output tables / Intro to functions
- Mathematical Functions
- Independent vs. Dependent Quantities
- Domain/Range and Discrete/Continuous Graphs
- Function notation and Recognizing Function Families
- Modeling a Linear Situation (Day 1)
- Modeling a Linear Situation (Day 2)
- Analyzing a Linear Function (Day 1)
- Analyzing a Linear Function (Day 2)
- Solving Linear Equation
- Literal Equations

Unit 2: Systems of Linear Equations/Inequalities

- Standard form of a linear function
- Least Squares Regression (Line of the best fit)
- Solving Systems graphically and equal value method
- Solving Systems using linear combinations
- Identify number of solutions graphically and algebraically
- Pumpkin Rich task
- Graphing linear inequalities
- Systems of linear inequalities

Unit 3: Quadratic Functions & Polynomials

- Exploring quadratic functions
- Comparing linear and quadratic functions
- Factored form of a quadratic function
- Transformations of quadratic functions
- Vertex Form of a quadratic function
- Parabola Project
- Adding and Subtracting Polynomials
- Multiplying Polynomials
- Factoring Polynomials

Scopes and Sequences

- Solving Quadratics by Factoring
- Completing the Square
- Quadratic Formula
- Real Number

Unit 4: Exponential Functions

- Recognizing Patterns and Sequences
- Arithmetic and geometric sequences
- Determining Recursive and Explicit Expressions from Contexts
- Geometric sequence exponential functions
- Rational Exponent and graphs of exponential functions