

Algebra 2

Mathematical Practices

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

Unit 1 Polynomial, Rational, and Radical Relationships

- Perform arithmetic operations with complex numbers.
- Use complex numbers in polynomial identities and equations.
- Interpret the structure of expressions.
- Write expressions in equivalent forms to solve problems.
- Perform arithmetic operations on polynomials.
- Understand the relationship between zeros and factors of polynomials.
- Use polynomial identities to solve problems.
- Rewrite rational expressions.
- Understand solving equations as a process of reasoning and explain the reasoning.
- Represent and solve equations and inequalities graphically.
- Analyze functions using different representations.

Unit 2 Trigonometric Functions

- Extend the domain of trigonometric functions using the unit circle.
- Model periodic phenomena with trigonometric function.
- Prove and apply trigonometric identities.

Unit 3 Modeling with Functions

- Create equations that describe numbers or relationships.
- Interpret functions that arise in applications in terms of a context.
- Analyze functions using different representations.
- Build a function that models a relationship between two quantities.
- Build new functions from existing functions.
- Construct and compare linear, quadratic, and exponential models and solve problems.

Unit 4 Inferences and Conclusions from Data

- Summarize, represent, and interpret data on single count or measurement variable.
- Understand and evaluate random processes underlying statistical experiments.
- Make inferences and justify conclusions from sample surveys, experiments and observational studies.
- Use probability to evaluate outcomes of decisions.