

Exam Title: 1200330 Algebra 2
Courses Assessed by this Exam: Algebra 2 (1200330) & Algebra 2
Honors (1200340)

Key Vocabulary: system of equations, quadratic, inequalities, complex solution, inverse, independent events, margin of error, population mean, even degree, odd degree, closure, radians

Student Tasks:

- Rewrite simple rational expressions in different forms
- Create and solve inequalities in one variable given a real-world situation
- Solve simple rational equations in one variable
- Solve simple radical equations in one variable
- Transform quadratic equations using the method of completing the square into an equation of the form of $(x-p)^2 = q$
- Find the solutions to a quadratic equation
- Determine the solution(s) to a system of equations
- Rewrite expressions to equivalent forms
- Factor a quadratic to reveal zeros of the function
- Solve quadratic equations with real coefficients that have complex solutions
- Use arithmetic sequences to find the n^{th} term
- Use transformations to determine new equations
- Find the inverse function, accounting for restrictions to the domain
- Determine an equation given key features of a graph
- Use properties of exponents to interpret expressions for exponential functions
- Interpret exponential functions given a real-world situation
- Identify factors of a polynomial given the graph of a function
- Determine equivalent expressions involving complex numbers
- Add, subtract, and multiply complex numbers
- Rewrite expressions involving rational exponents as expressions involving radicals
- Determine probabilities for independent events
- Determine conditional probabilities given two-way frequency tables
- Apply the Addition Rule
- Determine the population mean and interval of a population mean given a data set and the margin of error
- Identify graphs of step functions
- Use a graph to determine characteristics of a polynomial function
- Demonstrate closure of polynomials by operations such as addition, subtraction, or multiplication
- Use the change of base formula
- Apply the Remainder Theorem
- Convert between degrees and radians