

NEXT-GENERATION ADVANCED ALGEBRA AND FUNCTIONS SKILLS INSIGHT™

Score range: 236 and below

Students scoring in this band can typically demonstrate the following skills and knowledge:

- Given a linear function that represents a context, calculate or find the output given the input
- Apply rules of exponents to simplify expressions
- Solve quadratic equations in $x^2 + bx + c = 0$ form by factoring
- Interpret the meaning of a value in an exponential function based on the context

Score range: 237–249

Students scoring in this band can typically demonstrate the following additional skills or knowledge:

- Solve linear equation systems in $ax + by = cx + dy$ form with integer coefficients
- Make connections between tables and algebraic equations representing a nonlinear relationship
- Rewrite complex polynomial (including quadratic) expressions by factoring
- Solve simple rational and radical equations

Score range: 250–262

Students scoring in this band can typically demonstrate the following additional skills or knowledge:

- Make connections between graphs and algebraic equations representing quadratic relationships
- Rewrite rational expressions
- Use properties of triangles to solve problems
- Utilize simple trigonometric ratios

Score range: 263–275

Students scoring in this band can typically demonstrate the following additional skills or knowledge:

- Add and subtract rational expressions
- Solve complex rational equations
- Solve exponential equations in one variable
- Relate the solutions of a system of a linear and nonlinear equation in two variables to the graphs of the system

Score range: 276 and above

Students scoring in this band can typically demonstrate the following additional skills or knowledge:

- Make connections between graphical, tabular, and algebraic representations of relationships involving the absolute value function
- Solve quadratic equations in one variable using any method, including completing the square
- Use concepts about trigonometric functions (sine, cosine, tangent) to solve problems, including within the unit circle
- Evaluate logarithmic equations