



# Illinois State Board of Education

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**James T. Meeks**  
Chairman

**Tony Smith, Ph.D.**  
State Superintendent of Education

Dear Families,

The reports that you are receiving reflect your child's individual performance on the Partnership for Assessment of Readiness for College and Careers (PARCC) test. The PARCC assessment serves as an "educational GPS system" that is designed to measure students' current performance in relation to the Illinois Learning Standards, to which the assessment is aligned. It points the way to what students need to learn in order to be ready for the next grade level and, by the end of high school, for future success in college and careers.

The Illinois Learning Standards set high expectations that are focused on critical thinking and real world application. We expect that the more detailed information provided by the PARCC score reports and supporting materials will lead to strong engagement between parents, teachers, and students in support of student learning. We encourage you to talk to your child's teacher about these results and about what you are doing at home to support your child's success.

We must celebrate the good work our teachers and schools are doing to teach the new content critical for the future success of our students. We fully expect students will continue to make progress along the continuum of mastery as they gain additional knowledge related to the standards and become more familiar with the technology.

It is understood that no test can ever fully capture the skills and abilities of a great teacher or the extraordinary benefits and positive impact of a great school. Tests are one measure to help track our progress. Along with other indicators, tests help give us a sense of where and how we are succeeding and where and how we must improve. The PARCC assessment is designed to give schools and teachers more information to support improvement and differentiation in instruction.

Sincerely,

A handwritten signature in black ink, appearing to read "Tony Smith".

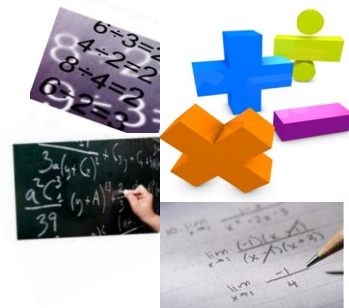
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## VISIT THE FOLLOWING WEBSITES FOR MORE INFORMATION:

**ISBE PARCC PLACE** at <https://www.isbe.net/Pages/PARCC-Place.aspx>  
**PARCC Online** at <http://parcc-assessment.org/resources/parent-resources>  
**UNDERSTAND THE SCORE** at [www.understandthescore.org/](http://www.understandthescore.org/)  
**CLASSROOMS IN ACTION** at [www.ilclassroomsinaction.org](http://www.ilclassroomsinaction.org)

## Performance Level Summary for Algebra I

Performance level descriptors (PLDs) indicate what a typical student at each level should be able to demonstrate based on his/her command of grade-level standards. In mathematics, the performance levels at each grade level are written for each of four assessment sub-claims, which are represented on the individual student score report.



### Level 2

#### Sub-claims A and B – Major, additional, and supporting content

- Writes equivalent numerical and polynomial expressions and systems of linear equations in simple real-world problems. Solves algebraically and graphs the solution set of linear equations and inequalities. Given the graph, identifies solutions to a system of polynomial equations.
- Evaluates with and uses function notation. Writes a linear function given a context. Graphs linear functions, determines key features and compares.
- Identifies the effects of a single transformation on linear and quadratic functions, limited to  $f(x) + k$ .
- Identifies rational and irrational numbers
- Describes the characteristics of given representations of categorical and quantitative data.

#### Sub-claim C – Reasoning

- Communicates a response, which may be incomplete, illogical, based on faulty assumptions, or include major calculation errors in written justifications.

#### Sub-claim D – Modeling

- Applies mathematics using given assumptions, tools and functions, analyzing relationships, and writing an incomplete algebraic expression or equation.

### Level 3

#### Sub-claims A and B – Major, additional, and supporting content

- Writes equivalent numerical and polynomial expressions and systems of linear equations in multi-step real-world problems. Solves algebraically and graphs the solution set of linear equations and inequalities and quadratic equations in one variable. Finds approximate solutions to a system of polynomial equations.
- Graphs linear and quadratic functions, determines key features, compares, translates between representations, and identifies the effects of a single transformation, limited to  $f(x) + k$  and  $kf(x)$ .
- Summarizes the data and characteristics of given representations of categorical and quantitative data.

#### Sub-claim C – Reasoning

- Communicates a logical response, which may be incomplete and include minor calculation errors in written justifications. Evaluates the validity of other's approaches and conclusions.

#### Sub-claim D – Modeling

- Applies mathematics illustrating and analyzing relationships between important quantities, writing an incomplete algebraic expression, equation, or function, modifying the model, and interpreting mathematical results in a simplified context.

### Level 4

#### Sub-claims A and B – Major, additional, and supporting content

- Calculates sums and products of rational and irrational numbers.
- Interprets parts of exponential and quadratic expressions in context and determines equivalent forms of quadratic expressions, including by factoring. Solves algebraically and graphs the solution set of systems of linear inequalities.

- Graphs cubic functions and determines key features. Compares linear, exponential (with domain in the integers) and quadratic functions. Identifies the effects of a single transformation of the form  $f(x)+k$ ,  $kf(x)$ ,  $f(kx)$  and  $f(x+k)$ , and finds the value of  $k$  given a transformed graph for linear and quadratic functions.
- Determines appropriate representations of categorical and quantitative data.

**Sub-claim C – Reasoning**

- Communicates a precise, logical response in written justifications. Makes mathematical connections and evaluates, interprets and critiques the validity of other’s responses and reasoning.

**Sub-claim D – Modeling**

- Applies mathematics by making assumptions, mapping and analyzing relationships between important quantities, selecting appropriate tools to create models, writing a clear and correct algebraic expression, equation, or function, improving the model, and interpreting results in context.

**Level 5**

**Sub-claims A and B – Major, additional, and supporting content**

- Categorizes and makes generalizations about sums and products of rational and irrational numbers.
- Analyzes equivalent numerical and polynomial expressions, and systems of linear equations and inequalities in multi-step real-world problems. Interprets parts of complicated exponential and quadratic expressions in context and determines equivalent forms of exponential expressions
- Interprets function notation. Writes and analyzes linear or quadratic functions and interprets key features to solve problems given a context. Graphs square root, cube root and piece-wise defined functions, determines key features. Identifies and graphs the effects of multiple transformations of linear and quadratic functions and writes the transformation algebraically given a graph.
- Describes and interprets trends in categorical and quantitative data.

**Sub-claim C – Reasoning**

- Evaluates, interprets and critiques the validity of other’s responses, correcting, as necessary. Generalizes a conclusion or provides a counter example.

**Sub-claim D – Modeling**

- In real-world problems, analyzes and justifies constraints, relationships and models.

For more information and a full version of the PLDs, visit <http://parcc-assessment.org/assessments/test-design/mathematics/math-performance-level-descriptors>.