

**ISTEP+: Algebra I
Graduation Exam
Blueprint**

There are nine Indiana Standards for Algebra I. The first eight content standards are grouped into five categories for reporting student achievement. Items that address Standard 9 (Mathematical Reasoning and Problem Solving) are always mapped to a specific content area in Standards 1 – 8.

Reporting Category	Standards Assessed and Description	Percent Range *
1 – Solving Linear Equations and Inequalities	<p>Standard 2: Linear Equations and Inequalities Standard 7: Algebraic Fractions</p> <p>Questions may include solving linear equations and inequalities; solving algebraic proportions; and solving word problems involving linear equations, inequalities, and formulas.</p>	15-25%
2 – Graphing and Interpreting Linear and Non-linear Relations	<p>Standard 3: Relations and Functions Standard 4: Graphing Linear Equations and Inequalities</p> <p>Questions may include sketching and interpreting graphs given situations; understanding the concept of function and analyzing graphs of functions; graphing linear equations and inequalities in two variables; finding and using the slope and intercepts of lines; writing equations of lines; and using linear equations to model real data.</p>	20-30%
3 – Systems of Linear Equations and Inequalities	<p>Standard 5: Pairs of Linear Equations and Inequalities</p> <p>Questions may include solving pairs of linear equations using graphs and algebra; solving pairs of linear inequalities using graphs; and solving word problems involving pairs of linear equations.</p>	15-25%
4 – Polynomials	<p>Standard 1: Operations With Real Numbers Standard 6: Polynomials</p> <p>Questions may include simplifying square roots; adding, subtracting, multiplying, dividing, and simplifying polynomials; and factoring quadratics.</p>	15-25%
5 – Solving and Graphing Quadratic Equations	<p>Standard 8: Quadratic, Cubic, and Radical Equations</p> <p>Questions may include solving and graphing quadratic equations; solving word problems involving quadratic equations; and solving radical equations.</p>	10-20%

* This range represents the approximate emphasis for each reporting category on the assessment.