**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.

<table>
<thead>
<tr>
<th>Reporting Category</th>
<th>Standards Assessed and Description</th>
<th>Percent Range *</th>
</tr>
</thead>
</table>
| 1 – Solving Linear Equations and Inequalities | **Standard 2: Linear Equations and Inequalities**  
**Standard 7: Algebraic Fractions**  
Questions may include solving linear equations and inequalities; solving algebraic proportions; and solving word problems involving linear equations, inequalities, and formulas. | 15-25% |
| 2 – Graphing and Interpreting Linear and Non-linear Relations | **Standard 3: Relations and Functions**  
**Standard 4: Graphing Linear Equations and Inequalities**  
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. | 20-30% |
| 3 – Systems of Linear Equations and Inequalities | **Standard 5: Pairs of Linear Equations and Inequalities**  
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. | 15-25% |
| 4 – Polynomials | **Standard 1: Operations With Real Numbers**  
**Standard 6: Polynomials**  
Questions may include simplifying square roots; adding, subtracting, multiplying, dividing, and simplifying polynomials; and factoring quadratics. | 15-25% |
| 5 – Solving and Graphing Quadratic Equations | **Standard 8: Quadratic, Cubic, and Radical Equations**  
Questions may include solving and graphing quadratic equations; solving word problems involving quadratic equations; and solving radical equations. | 10-20% |

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