

**Virginia Modified Achievement Standards Test (VMAST)  
Algebra I Performance Level Descriptors**

| <b>Fail/Does Not Meet</b>  | <b>Pass/Proficient</b>  | <b>Pass/Advanced</b>   |
|--|---|--|
| <p>With supports and simplifications, a student performing at this level should be able to:</p> <ul style="list-style-type: none"> <li>• Identify verbal phrases that represent algebraic expressions, and substitute values into expressions.</li> <li>• Identify the square roots of perfect squares.</li> <li>• Identify the solutions to quadratic and multistep linear equations.</li> <li>• Identify the solutions to systems of equations graphically.</li> <li>• Perform operations on polynomials using concrete and pictorial representations.</li> <li>• Identify the slope and y-intercept of a graph or line in slope-intercept form.</li> <li>• Find slope of a line given two points on a graph.</li> </ul> | <p>With supports and simplifications, a student performing at this level should be able to:</p> <ul style="list-style-type: none"> <li>• Translate between verbal and algebraic expressions, and evaluate expressions given replacement values.</li> <li>• Simplify square roots and cube roots of whole numbers and square roots of monomial expressions.</li> <li>• Perform operations and use the laws of exponents on polynomials.</li> <li>• Factor polynomials whose solutions result in no more than two factors.</li> <li>• Find solutions and justify steps when solving quadratic and multistep linear equations, and systems of equations and inequalities.</li> </ul> | <p>With supports and simplifications, a student performing at this level should be able to:</p> <ul style="list-style-type: none"> <li>• Represent and evaluate real-world quantitative situations verbally and algebraically.</li> <li>• Simplify monomial and polynomial expressions.</li> <li>• Completely factor polynomials.</li> <li>• Interpret, model, and justify steps when finding solutions to situations represented by quadratic and multistep linear equations, and systems of equations and inequalities.</li> <li>• Demonstrate multiple representations of functions.</li> </ul> |

| Fail/Does Not Meet  | Pass/Proficient  | Pass/Advanced   |
|---|--|---|
| <ul style="list-style-type: none"> <li>• Determine whether a relation is a function.</li> <li>• Calculate statistical measures.</li> <li>• Identify a curve of best fit for a set of data.</li> <li>• Identify direct variations from a graph.</li> </ul> | <ul style="list-style-type: none"> <li>• Graph a line given the equation in slope-intercept form and vice versa.</li> <li>• Generate the slope-intercept form of a line given two points or one point and slope.</li> <li>• Determine domain, range, zeros and x- and y-intercepts of functions, whether a relation is a function, and identify multiple representations of functions.</li> <li>• Calculate and interpret basic statistical measures.</li> <li>• Find a curve of best fit for a set of data.</li> <li>• Represent direct and inverse variation relationships.</li> </ul> | <ul style="list-style-type: none"> <li>• Describe the effects of function transformations.</li> <li>• Graph a line given the equation in various forms and vice versa.</li> <li>• Generate the equation of a line in various forms given two points or one point and slope.</li> <li>• Calculate and analyze statistical measures for a set of data.</li> <li>• Model and make predictions for a set of data using the curve of best fit.</li> <li>• Analyze models of direct and inverse variation to generate conclusions.</li> </ul> |