

ISTAR Grade 10 Mathematics Performance Level Descriptors (PLDs)

Developing Proficiency	Meeting Proficiency	Exceeding Proficiency
<p>A student performing at a Developing Proficiency level demonstrates emerging skills in introductory mathematics concepts and vocabulary. He/she is able to solve simple problems given provided graphic support. He/she is able to:</p>	<p>A student performing at a Meeting Proficiency level demonstrates proficient skills in basic mathematics concepts and vocabulary. He/she is able to solve some problems without graphic support. He/she has all the knowledge and skills shown under Developing Proficiency and is also able to:</p>	<p>A student performing at an Exceeding Proficiency level demonstrates exemplary skills in applying basic mathematics concepts and vocabulary. He/she is able to solve some problems without graphic support. He/she has all the knowledge and skills shown under Developing Proficiency and Meeting Proficiency and it also able to:</p>
<p>Real Numbers and Expressions:</p> <ul style="list-style-type: none"> • identify a pattern using a sum or product of rational numbers. • understand a rational number raised to an exponent is repeated multiplication with graphic support. • identify a square root when given choices of equations. • recognize that squares and square roots are inverse operations. 	<p>Real Numbers and Expressions:</p> <ul style="list-style-type: none"> • recognize and complete patterns of addition, subtraction, or multiplication of rational numbers (2, 3, 5, 10s). • use properties of integer exponents to produce equivalent expressions. • solve for a square root. 	<p>Real Numbers and Expressions:</p> <ul style="list-style-type: none"> • use the patterns of rational numbers to solve for the sum or product. • solve equations using square root properties.
<p>Data Analysis and Statistics:</p> <ul style="list-style-type: none"> • answer a question about the population when given a data table representing a sample. 	<p>Data Analysis and Statistics:</p> <ul style="list-style-type: none"> • answer questions about categorical data in a two-way table. 	<p>Data Analysis and Statistics:</p> <ul style="list-style-type: none"> • understand data patterns in a two-way table.
<p>Functions:</p> <ul style="list-style-type: none"> • understand that a function has only one output for every input. 	<p>Functions:</p> <ul style="list-style-type: none"> • distinguish functions from non-functions in graphs and data tables. 	<p>Functions:</p> <ul style="list-style-type: none"> • identify a missing data value in a function. • understand a function's domain and range.
<p>Linear Equations, Inequalities, and Functions:</p> <ul style="list-style-type: none"> • count and arrange a given number of objects into two sets in multiple combinations. • use a graphic organizer to solve an equation. 	<p>Linear Equations, Inequalities, and Functions:</p> <ul style="list-style-type: none"> • solve one-step equations with one variable using equations or graphs. • solve linear equations in one variable with graphic support. 	<p>Linear Equations, Inequalities, and Functions:</p> <ul style="list-style-type: none"> • solve one- or two-step equations using mathematical properties with one or two variables using equations or graphs. • solve linear equations with one variable.
<p>Systems of Equations and Inequalities:</p> <ul style="list-style-type: none"> • identify the point of intersection on a graph of a system of equations given visual support. 	<p>Systems of Equations and Inequalities:</p> <ul style="list-style-type: none"> • identify the solution to a system of linear equations when given a graph. 	<p>Systems of Equations and Inequalities:</p> <ul style="list-style-type: none"> • identify the solution to a system of equations when given a graph.
<p>Quadratic and Exponential Equations and Functions:</p> <ul style="list-style-type: none"> • identify the graph of a quadratic function. • determine if a given point lies on a graph of a quadratic function. • identify one zero of a quadratic function. 	<p>Quadratic and Exponential Equations and Functions:</p> <ul style="list-style-type: none"> • identify graphs of quadratic and exponential functions. • determine if a given point lies on a graph of an exponential or quadratic function. • identify the zeros of a quadratic function. 	<p>Quadratic and Exponential Equations and Functions:</p> <ul style="list-style-type: none"> • graph quadratic and exponential functions.