

ISTAR Grade 8 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. The student is able to solve simple problems when 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. The student is able to solve simple problems without graphic support and more difficult problems with 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. The student is able to solve more difficult 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>Number Sense and Computation:</p> <ul style="list-style-type: none"> • understand how numbers can lie between whole numbers on a number line. • solve real-world problems with rational numbers in one step with addition or subtraction only. 	<p>Number Sense and Computation:</p> <ul style="list-style-type: none"> • use approximations of irrational numbers to locate them on a number line. • solve real-world problems with rational numbers by using two operations (addition, subtraction, multiplication, or division). 	<p>Number Sense and Computation:</p> <ul style="list-style-type: none"> • place irrational numbers on a number line by using approximations. • solve real-world problems with rational numbers by using more than two operations (addition, subtraction, multiplication, or division).
<p>Algebra and Functions:</p> <ul style="list-style-type: none"> • solve a simple equation with a graphic organizer. • identify one function as linear and one as non-linear when given two graphs. • identify the simple graph (e.g., bar graph, pie chart) that models a verbal description of a situation. • identify the larger of 2 sets without counting. 	<p>Algebra and Functions:</p> <ul style="list-style-type: none"> • solve linear equations with one variable with graphical support. • identify linear and non-linear functions when given multiple graphs. • identify the complex graph (e.g., line graph) that models a verbal description of a situation. • select the relationship between two quantities when given a line graph. • identify the point of intersection in a system of equations shown on a graph. 	<p>Algebra and Functions:</p> <ul style="list-style-type: none"> • solve linear equations with one variable. • identify graphs that are increasing or decreasing and linear or non-linear when given multiple graphs. • create a graph that models a verbal description of a situation. • describe the relationship between two quantities when given a line graph. • identify the solution to a system of linear equations shown on a graph.
<p>Geometry and Measurement:</p> <ul style="list-style-type: none"> • identify a rotation of an object or a figure. 	<p>Geometry and Measurement:</p> <ul style="list-style-type: none"> • identify a rotation, reflection, or translation of a figure on a coordinate plane when transformations are defined. 	<p>Geometry and Measurement:</p> <ul style="list-style-type: none"> • identify a transformation of a figure on a coordinate plane as a rotation, reflection, or translation.
<p>Data Analysis, Statistics, and Probability:</p> <ul style="list-style-type: none"> • locate points on the x- and y-axes of an adapted grid (not necessarily numeric). 	<p>Data Analysis, Statistics, and Probability:</p> <ul style="list-style-type: none"> • identify a scatter plot and interpret data on the scatter plot (e.g., traffic decreases at night). 	<p>Data Analysis, Statistics, and Probability:</p> <ul style="list-style-type: none"> • graph bivariate data on a scatter plot and identify possible associations between the variables.