Grade 3 Mathematics Performance Level Descriptors

Level 1	Level 2*	Level 3*	Level 4*
Low task complexity - *Simple problems using common mathematical terms and symbols*	**Low task complexity -** *Simple problems using common mathematical terms and symbols*	**Moderate task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	**High task complexity -** *Multiple mathematical ideas presented in problems using various mathematical terms and symbolic representations of numbers, variables, and other item elements*
The student is able to: • solve addition problems • identify growing number patterns • identify an object showing a specified number of parts shaded • identify which object has the greater number of parts shaded • identify an object equally divided in two parts • identify the number of objects to be represented in a pictograph	**The student is able to:** • solve addition and subtraction word problems • identify an arrangement of objects which represents factors in a problem • solve multiplication equations in which both numbers are equal to or less than five • identify multiplication patterns • identify a set of objects as nearer to 1 or 10 • identify a representation of the area of a rectangle	**The student is able to:** • solve addition and subtraction word problems • check the correctness of an answer in the context of a scenario • solve multiplication equations in which both numbers are equal to or less than five • identify multiplication patterns • match fraction models to unitary fractions • compare fractions with different numerators and the same denominator • transfer data from an organized list to a bar graph	**The student is able to:** • solve addition and subtraction word problems • check the correctness of an answer in the context of a scenario • solve multiplication equations in which both numbers are equal to or less than five • identify multiplication patterns • match fraction models to unitary fractions • compare fractions with different numerators and the same denominator • transfer data from an organized list to a bar graph
	AND with Moderate task complexity - *Common problems presented in mathematical context using various mathematical terms and symbols*	**AND with High task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	
	• identify geometric figures which are divided into equal parts	• round numbers to nearest 10 • identify geometric figures which are divided into equal parts • count unit squares to compute the area of a rectangle	

*Levels 2, 3, and 4 include demonstration of skills described in previous performance levels.

Grade 4 Mathematics Performance Level Descriptors

Level 1	Level 2*	Level 3*	Level 4*
Low task complexity - *Simple problems using common mathematical terms and symbols*	**Low task complexity -** *Simple problems using common mathematical terms and symbols*	**Moderate task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	**High task complexity -** *Multiple mathematical ideas presented in problems using various mathematical terms and symbolic representations of numbers, variables, and other item elements*
The student is able to: • identify an array with the same number of objects in each row • identify values rounded to nearest tens place • identify equivalent representations of a fraction (e.g., shaded diagram) • compare representations of a fraction (e.g., shaded diagram) • identify a rectangle with the larger or smaller perimeter • identify a given attribute of a shape • identify the data drawn in a bar graph that represents the greatest value	**The student is able to:** • match a model to an multiplication expression using two single digit numbers • identify a model of a multiplicative comparison • show division of objects into equal groups • round numbers to nearest 10, 100 or 1000 • differentiate parts and wholes • compute the perimeter of a rectangle	**The student is able to:** • solve multiplication word problems • show division of objects into equal groups • round numbers to nearest 10, 100, or 1000 • compare two fractions with different denominators • sort a set of 2-dimensional shapes • compute the perimeter of a rectangle • transfer data to a graph	**The student is able to:** • solve multiplication word problems • show division of objects into equal groups • round numbers to nearest 10, 100 or 1000 • compare two fractions with different denominators • sort a set of 2-dimensional shapes • compute the perimeter of a rectangle • transfer data to a graph
	AND with Moderate task complexity - *Common problems presented in mathematical context using various mathematical terms and symbols*	**AND with High task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	
	• identify equivalent fractions • select a 2-dimensional shape with a given attribute	• solve a multiplicative comparison word problem using up to two-digit numbers • check the correctness of an answer in the context of a scenario • identify equivalent fractions	

*Levels 2, 3, and 4 include demonstration of skills described in previous performance lev

Grade 5 Mathematics Performance Level Descriptors

Level 1	Level 2*	Level 3*	Level 4*
Low task complexity - *Simple problems using common mathematical terms and symbols*	**Low task complexity -** *Simple problems using common mathematical terms and symbols*	**Moderate task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	**High task complexity -** *Multiple mathematical ideas presented in problems using various mathematical terms and symbolic representations of numbers, variables, and other item elements*
The student is able to: • solve one-step subtraction word problems • divide sets (no greater than 6) into two equal parts • identify values in the tenths place • identify a number in the ones, tens or hundreds place • identify a given axis of a coordinate plan • match the conversion of 3 feet to 1 yard to a model • calculate elapsed time (i.e., hours) • identify whether the values increase or decrease in a line graph	**The student is able to:** • identify if the total will increase or decrease when combining sets • perform operations with decimals • identify a symbolic representation of the addition of two fractions • identify place values to the hundredths place • convert standard measurements	**The student is able to:** • solve multiplication and division word problems • perform operations with decimals • solve word problems involving fractions • identify place values to the hundredths place • locate a given point on a coordinate plane when given an ordered pair • convert standard measurements • convert between minutes and hours • make quantitative comparisons between data sets shown as line graphs	**The student is able to:** • solve multiplication and division word problems • perform operations with decimals • solve word problems involving fractions • identify place values to the hundredths place • locate a given point on a coordinate plane when given an ordered pair • convert standard measurements • convert between minutes and hours • make quantitative comparisons between data sets shown as line graphs
	AND with Moderate task complexity - *Common problems presented in mathematical context using various mathematical terms and symbols*	**AND with High task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	
	• compare the values of two products based upon multipliers • round decimals to nearest whole number	• compare the values of two products based upon multipliers • round decimals to nearest whole number	

*Levels 2, 3, and 4 include demonstration of skills described in previous performance levels.

Grade 6 Mathematics Performance Level Descriptors

Level 1	Level 2*	Level 3*	Level 4*
Low task complexity - *Simple problems using common mathematical terms and symbols*	**Low task complexity -** *Simple problems using common mathematical terms and symbols*	**Moderate task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	**High task complexity -** *Multiple mathematical ideas presented in problems using various mathematical terms and symbolic representations of numbers, variables, and other item elements*
The student is able to: • identify a model of a given percent • match a given unit rate to a model • identify a representation of two equal sets • identify a number less than zero on a number line • identify the meaning of an unknown in a modeled equation • count the number of grids or tiles inside a rectangle to find the area of a rectangle • identify the object that appears most frequently in a set of data (mode) • identify a representation of a set of data arranged into even groups (mean)	**The student is able to:** • match a given ratio to a model • recognize a representation of the sum of two halves • solve real world measurement problems involving unit rates • identify a representation of a value less than zero • identify the median or the equation needed to determine the mean of a set of data	**The student is able to:** • perform operations using up to three-digit numbers • solve real world measurement problems involving unit rates • identify positive and negative values on a number line • determine the meaning of a value from a set of positive and negative integers • solve word problems with expressions including variables • compute the area of a parallelogram • identify the median or the equation needed to determine the mean of a set of data	**The student is able to:** • solve real world measurement problems involving unit rates • identify positive and negative values on a number line • solve word problems with expressions including variables • compute the area of a parallelogram • identify the median or the equation needed to determine the mean of a set of data
	AND with Moderate task complexity - *Common problems presented in mathematical context using various mathematical terms and symbols*	**AND with High task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	
	• perform one-step operations with two decimal numbers • solve word problems using a percent	• perform one-step operations with two decimal numbers • solve word problems using a percent • solve word problems using ratios and rates	

*Levels 2, 3, and 4 include demonstration of skills described in previous performance levels.

Grade 7 Mathematics Performance Level Descriptors

Level 1	Level 2*	Level 3*	Level 4*
Low task complexity - *Simple problems using common mathematical terms and symbols*	**Low task complexity -** *Simple problems using common mathematical terms and symbols*	**Moderate task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	**High task complexity -** *Multiple mathematical ideas presented in problems using various mathematical terms and symbolic representations of numbers, variables, and other item elements*
The student is able to: • identify a representation which represents a negative number and its multiplication or division by a positive number • identify representations of area and circumference of a circle • identify representations of surface area • make qualitative comparisons when interpreting a data set presented on a bar graph or in a table	**The student is able to:** • match a given ratio to a model • identify the meaning of an unknown in a modeled equation • describe a directly proportional relationship (i.e., increases or decreases) • find the surface area of three-dimensional right prism	**The student is able to:** • solve division problems with positive/negative whole numbers • solve word problems involving ratios • use a proportional relationship to solve a percentage problem • identify proportional relationships between quantities represented in a table • identify unit rate (constant of proportionality) in tables and graphs of proportional relationships • compute the area of a circle • find the surface area of a three-dimensional right prism	**The student is able to:** • solve division problems with positive/negative whole numbers • solve word problems involving ratios • identify proportional relationships between quantities represented in a table • compute the area of a circle • find the surface area of a three-dimensional right prism
	AND with Moderate task complexity - *Common problems presented in mathematical context using various mathematical terms and symbols*	**AND with High task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	
	• solve multiplication problems with positive/negative whole numbers • interpret graphs to qualitatively contrast data sets	• solve multiplication problems with positive/negative whole numbers • evaluate variable expressions that represent word problems • interpret graphs to qualitatively contrast data sets	

*Levels 2, 3, and 4 include demonstration of skills described in previous performance levels.

Grade 8 Mathematics Performance Level Descriptors

Level 1	Level 2*	Level 3*	Level 4*
Low task complexity - *Simple problems using common mathematical terms and symbols*	**Low task complexity -** *Simple problems using common mathematical terms and symbols*	**Moderate task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	**High task complexity -** *Multiple mathematical ideas presented in problems using various mathematical terms and symbolic representations of numbers, variables, and other item elements*
The student is able to: • locate a given decimal number on a number line • identify the relatively larger data set when given two data sets presented in a graph • identify congruent rectangles • identify similar rectangles • identify an attribute of a cylinder • identify a rectangle with the larger or smaller area as compared to another rectangle • identify an ordered pair and its point on a graph	**The student is able to:** • identify the solution to an equation which contains a variable • identify the y-intercept of a linear graph • match a given relationship between two variables to a model • identify a data display that represents a given situation • interpret data presented in graphs to identify associations between variables	**The student is able to:** • locate approximate placement of an irrational number on a number line • solve a linear equation which contains a variable • identify the relationship shown on a linear graph • calculate slope of a positive linear graph • compute the change in area of a figure when its dimensions are changed • solve for the volume of a cylinder • plot provided data on a graph	**The student is able to:** • locate approximate placement of an irrational number on a number line • solve a linear equation which contains a variable • identify the relationship shown on a linear graph • compute the change in area of a figure when its dimensions are changed • plot provided data on a graph
	AND with Moderate task complexity - *Common problems presented in mathematical context using various mathematical terms and symbols*	**AND with High task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	
	• identify congruent figures • use properties of similarity to identify similar figures • interpret data tables to identify the relationship between variables	• interpret data presented in graphs to identify associations between variables • interpret data tables to identify the relationship between variables • use properties of similarity to identify similar figures • identify congruent figures	

*Levels 2, 3, and 4 include demonstration of skills described in previous performance levels.

Grade 11 Mathematics Performance Level Descriptors

Level 1	Level 2*	Level 3*	Level 4*
Low task complexity - *Simple problems using common mathematical terms and symbols*	**Low task complexity -** *Simple problems using common mathematical terms and symbols*	**Moderate task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	**High task complexity -** *Multiple mathematical ideas presented in problems using various mathematical terms and symbolic representations of numbers, variables, and other item elements*
The student is able to: • arrange a given number of objects into two sets in multiple combinations • match an equation with a variable to a provided real world situation • determine whether a given point is or is not part of a data set shown on a graph • identify an extension of a linear graph • use a table to match a unit conversion • complete the formula for area of a figure	**The student is able to:** • identify the model that represents a square number • identify variable expressions which represent word problems • identify the hypotenuse of a right triangle • identify the greatest or least value in a set of data shown on a number line • identify the missing label on a histogram • calculate the mean and median of a set of data	**The student is able to:** • compute the value of an expression that includes an exponent • identify variable expressions which represent word problems • solve real world measurement problems that require unit conversions • find the missing attribute of a three-dimensional figure • determine two similar right triangles when a scale factor is given • make predictions from data tables and graphs to solve problems • plot data on a histogram • calculate the mean and median of a set of data	**The student is able to:** • identify variable expressions which represent word problems • solve real world measurement problems that require unit conversions • determine two similar right triangles when a scale factor is given • make predictions from data tables and graphs to solve problems • plot data on a histogram • calculate the mean and median of a set of data
	AND with Moderate task complexity - *Common problems presented in mathematical context using various mathematical terms and symbols*	**AND with High task complexity -** *Common problems presented in mathematical context using various mathematical terms and symbols*	
	• identify the linear representation of a provided real world situation • use an equation or a linear graphical representation to solve a word problem	• identify the linear representation of a provided real world situation • use an equation or a linear graphical representation to solve a word problem • identify a histogram which represents a provided data set	