## Grade 3 Mathematics Performance Level Descriptors

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2*</th>
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</tr>
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<tbody>
<tr>
<td><strong>Low task complexity -</strong>&lt;br&gt;Simple problems using common mathematical terms and symbols</td>
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<td><strong>Moderate task complexity -</strong>&lt;br&gt;Common problems presented in mathematical context using various mathematical terms and symbols</td>
<td><strong>High task complexity -</strong>&lt;br&gt;Multiple mathematical ideas presented in problems using various mathematical terms and symbolic representations of numbers, variables, and other item elements</td>
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</tbody>
</table>

### 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

### AND with Moderate task complexity -
Common problems presented in mathematical context using various mathematical terms and symbols

- identify geometric figures which are divided into equal parts

### AND with High task complexity -
Common problems presented in mathematical context using various mathematical terms and symbols

- round numbers to nearest 10
- identify geometric figures which are divided into equal parts
- count unit squares to compute the area of a rectangle

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

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## Grade 4 Mathematics Performance Level Descriptors

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**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

**AND with Moderate task complexity -** <br>Common problems presented in mathematical context using various mathematical terms and symbols

**AND with High task complexity -** <br>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

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**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

**AND with Moderate task complexity** - Common problems presented in mathematical context using various mathematical terms and symbols

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<thead>
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<tr>
<td>• identify if the total will increase or decrease when combining sets</td>
<td>• solve multiplication and division word problems</td>
<td>• compare the values of two products based upon multipliers</td>
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<tr>
<td>• perform operations with decimals</td>
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<td>• round decimals to nearest whole number</td>
<td>• perform operations with decimals</td>
</tr>
<tr>
<td>• identify a symbolic representation of the addition of two fractions</td>
<td>• solve word problems involving fractions</td>
<td>• round decimals to nearest whole number</td>
<td>• solve word problems involving fractions</td>
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<tr>
<td>• identify place values to the hundredths place</td>
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<td>• compare the values of two products based upon multipliers</td>
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<td>• convert standard measurements</td>
<td>• locate a given point on a coordinate plane when given an ordered pair</td>
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**AND with High task complexity** - Common problems presented in mathematical context using various mathematical terms and symbols

- convert between minutes and hours
- make quantitative comparisons between data sets shown as line graphs

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

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## Grade 6 Mathematics Performance Level Descriptors

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*Simple problems using common mathematical terms and symbols* | **Low task complexity** -  
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*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  
- perform one-step operations with two decimal numbers  
- solve word problems using a percent  
- solve word problems using ratios and rates | 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  
- perform one-step operations with two decimal numbers  
- solve word problems using a percent  
- solve word problems using ratios and rates |

**AND with Moderate 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  
- solve word problems using ratios and rates

**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  
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- solve word problems using ratios and rates

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

**Level 2***
- 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

**Level 3***
- 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

**Level 4***
- 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

*Levels 2, 3, and 4 include demonstration of skills described in previous performance levels.*
# Grade 8 Mathematics Performance Level Descriptors

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**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

**AND with Moderate 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

**AND with High task complexity** - Common problems presented in mathematical context using various mathematical terms and symbols

- 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.*
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<tr>
<td>The student is able to:</td>
</tr>
<tr>
<td>• arrange a given number of objects into two sets in multiple combinations</td>
</tr>
<tr>
<td>• match an equation with a variable to a provided real world situation</td>
</tr>
<tr>
<td>• determine whether a given point is or is not part of a data set shown on a graph</td>
</tr>
<tr>
<td>• identify an extension of a linear graph</td>
</tr>
<tr>
<td>• use a table to match a unit conversion</td>
</tr>
<tr>
<td>• complete the formula for area of a figure</td>
</tr>
<tr>
<td><strong>AND with Moderate task complexity -</strong></td>
</tr>
<tr>
<td><em>Common problems presented in mathematical context using various mathematical terms and symbols</em></td>
</tr>
<tr>
<td>• identify the linear representation of a provided real world situation</td>
</tr>
<tr>
<td>• use an equation or a linear graphical representation to solve a word problem</td>
</tr>
<tr>
<td>• identify a histogram which represents a provided data set</td>
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