M	athematical Practices	Vocabulary		
	Make sense of problems and persevere in solving them.	Absolute value Benchmark	Equivalent fractions Factor	Opposite Order
	Reason abstractly and quantitatively.	Common denominator	Fractions Greatest Common	Ordered pair Origin
	Construct viable arguments and critique the reasoning of others.	Common factor Compare	Factor	Positive number Prime number
	Model with mathematics.	Compatible numbers Coordinate plane	Least Common Multiple	Quadrant Quotient
	Use appropriate tools strategically.	Decimal Denominator	Multiple Multiplicative inverse	Rational number Reciprocal
	Attend to precision.	Dividend	Mixed numbers	Simplest dorm
	Look for and make use of structure.	Divisible Divisor	Numerator Negative number	X-Axis
	Look for and express regularity in repeated reasoning.			Y-Axis

## **Prerequisites**

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Major Focus	Supporting Work	Additional Work (Minor)
Understand the place value system. Perform operations with multi-digit whole numbers and with decimals to hundredths. Use equivalent fractions as a strategy to add and subtract fractions. Apply and extend previous understandings of multiplication and division to multiply and divide fractions. Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	Convert like measurement units within a given measurement system. Represent and interpret data.	<ul> <li>Write and interpret numerical expressions.</li> <li>Analyze patterns and relationships.</li> <li>Graph points on the coordinate plane to solve real-world and mathematical problems.</li> <li>Classify two dimensional figures into categories based on their properties.</li> </ul>







Mathematics

## **Introduction to Your Mathematics Pacing Guide**

### The following tips may be helpful as you use the Pacing Guide:

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- · Once a skill is mastered, continue to practice it.

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# Sixth Grade • First Ouarter Pacing Guide

Introduce 9-week content skills according to the Pacing Guide.

- Continue to reinforce skills and concepts throughout the year until mastery is achieved.
- Become familiar with sequencing at previous and subsequent grade levels.
- . The website, www.corestandards.org, can be used to find more information and to better

# Grade 6

# **Mathematics**

Ratios & Proportional Relationships	The Number System	Expressions & Equations	
This is not a focus area during this quarter. Continue to reinforce skills and concepts previously introduced, as necessary.		This is not a focus area during this quarter. Continue to reinforce skills and concepts previously introduced, as necessary.	Con

# **First Quarter**

## Geometry

## **Statistics & Probability**

# This is not a focus area during this quarter.

ontinue to reinforce skills and ncepts previously introduced, as necessary.

## This is not a focus area during this quarter.

Continue to reinforce skills and concepts previously introduced, as necessary.

M	athematical Practices	Vocabulary		
	Make sense of problems and persevere in solving them.	Capacity Coordinate plane	Length Liter	Pound Quart
	Reason abstractly and quantitatively.	Conversion factor Decimal	Mass Meter	Quotient Rate
	Construct viable arguments and critique the reasoning of others.	Denominator Equivalent fractions	Numerator Ordered pair	Ratio Simplify
	Model with mathematics.	Equivalent ratios Factor	Ounce Pattern	Ton Unit rate
	Use appropriate tools strategically.	Gallon	Percent	Weight
	Attend to precision.	Gram	Pint	X-coordinate Y-coordinate
	Look for and make use of structure.			
	Look for and express regularity in repeated reasoning.			





Mathematics

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**Prerequisites** 

Last year, teachers spent a large majority of the instructional time on these focus skills. This year, students should have a strong foundation in the following areas:

Major Focus	Supporting Work	Additional Work (Minor)
<ul> <li>Understand the place value system.</li> <li>Perform operations with multi-digit whole numbers and with decimals to hundredths.</li> <li>Use equivalent fractions as a strategy to add and subtract fractions.</li> <li>Apply and extend previous understandings of multiplication and division to multiply and divide fractions.</li> <li>Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.</li> </ul>	Convert like measurement units within a given measurement system. Represent and interpret data.	<ul> <li>Write and interpret numerical expressions.</li> <li>Analyze patterns and relationships.</li> <li>Graph points on the coordinate plane to solve real-world and mathematical problems.</li> <li>Classify two dimensional figures into categories based on their properties.</li> </ul>



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# Sixth Grade • Second Quarter

Pacing Guide

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- Become familiar with sequencing at previous and subsequent grade levels.
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Grade 6		Mathematics		Second Quarter
Ratios & Proportional Relationships	The Number System	Expressions & Equations	Geometry	Statistics & Probability
Grade of         Ratios & Proportional Relationships         6.RP.1         I CAN describe a ratio relationship by comparing two quantities using ratio language.         I CAN write a ratio notation using a colon, the word "to", and as a fraction.         I CAN write a ratio in simplest form.         I CAN analyze ratios to determine if they are equivalent.         6.RP.2         I CAN define a unit.         I CAN define a rate.         I CAN define a rate.         I CAN describe a unit rate in fraction form.         I CAN describe a unit rate using rate language.         6.RP.3         I CAN complete a table of equivalent ratios with whole number values including measurements.         I CAN create a function table and compare proportional quantities.         I CAN plot pairs of values on a coordinate plane.         I CAN solve unit rate problems.	<section-header><text><text></text></text></section-header>	Expressions & Equations         Fisis not a focus area during this quarter.         Continue to reinforce skills and concepts previously introduced, as necessary.	<section-header></section-header>	Statistics & Probability         Statistics & Probability         Inis is not a focus area during this quarter.         Continue to reinforce skills and concepts previously introduced, as necessary.
I CAN convert among fractions, decimals, and percent.				
<ul> <li>I CAN solve problems finding the whole, given the part and the percent.</li> <li>I CAN explain that a percent is a ratio of a number to</li> </ul>				
<ul> <li>I CAN explain that a percent is a ratio of a number to 100.</li> <li>I CAN convert measurement units using ratios.</li> </ul>				

Ma	athematical Practices	Vocabulary		
	Make sense of problems and persevere in solving	Addition	Equation	Product
	them.	Addition Property of	Independent	Quadrant
	Reason abstractly and quantitatively	Equality	variables	Quotient
		Algebraic	Inequality	Solution of an
	Construct viable arguments and critique the reasoning of others	Base	Inverse operations	equation
01		Caofficient	Linear equation	Subraction
	Model with mathematics.		Multiplication	Subtraction Property
	Use appropriate tools strategically.	Coordinate plane	Numbers	
_		Dependent variables	Numerical	Sum
	Attend to precision.	Difference	expression	Terms
	Look for and make use of structure.	Division	Operations	Variable
	l ook for and express regularity in	Evaluate	Ordered pair	X-coordinate
	repeated reasoning.			Y-coordinate

## **Prerequisites**

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Major Focus	Supporting Work	Additional Work (Minor)
Understand the place value system. Perform operations with multi-digit whole numbers and with decimals to hundredths. Use equivalent fractions as a strategy to add and subtract fractions. Apply and extend previous understandings of multiplication and division to multiply and divide fractions. Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	Convert like measurement units within a given measurement system. Represent and interpret data.	<ul> <li>Write and interpret numerical expressions.</li> <li>Analyze patterns and relationships.</li> <li>Graph points on the coordinate plane to solve real-world and mathematical problems.</li> <li>Classify two dimensional figures into categories based on their properties.</li> </ul>





Mathematics

## **Introduction to Your Mathematics Pacing Guide**

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# Sixth Grade • Third Quarter

Pacing Guide

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Grade 6 Mathematics				
Ratios & Proportional Relationships	The Number System	Expressions & Equations	Ge	
This is not a focus area	This is not a focus area	<ul> <li>6.EE.1</li> <li>I CAN write numerical expressions involving whole-number exponents.</li> <li>I CAN evaluate numerical expressions involving whole-number exponents.</li> <li>I CAN solve order of operations problems that contain exponents.</li> </ul>	This is not a	
during this quarter.	during this quarter.		during thi	
Continue to reinforce skills and	Continue to reinforce skills and	<ul> <li>6.EE.2</li> <li>I CAN translate written phrases into algebraic expressions.</li> <li>I CAN translate algebraic expression using math vocabulary.</li> <li>I CAN identify the parts of an expression using math vocabulary.</li> <li>I CAN identify parts of an expression using math vocabulary.</li> <li>I CAN evaluate expressions, substituting specific values for variables.</li> <li>I CAN solve an expression with exponents.</li> <li>I CAN solve an expression using the Order of Operations.</li> <li>6.EE.3</li> <li>I CAN apply the properties of operations to generate equivalent expressions.</li> <li>6.EE.4</li> <li>I CAN putify that two expressions are equivalent.</li> <li>6.EE.5</li> <li>I CAN determine whether a given number makes an equation or an inequality true using substitution.</li> <li>6.EE.6</li> <li>I CAN write variable sto represent unknown numbers.</li> <li>I CAN solve an expression using substitution in a real-world situation.</li> <li>6.EE.7</li> <li>I CAN define inverse operation.</li> <li>I CAN write real-world and mathematical equations using nonnegative rational numbers.</li> <li>I CAN write real-world and mathematical equations using nonnegative rational numbers.</li> <li>I CAN represent possible solutions to inequalities.</li> <li>I CAN represent possible solutions to inequalities.</li> <li>I CAN represent possible solutions to inequalities.</li> <li>I CAN write an inequality given a solution on a number line.</li> <li>I CAN represent possible solutions to inequalities.</li> <li>I CAN represent possible solutions to inequalities.</li> <li>I CAN represent possible solutions to inequalities.</li> <li>I CAN use variables to represent two different quantities in a real-world problem that change in relationship to one another.</li> <li>I CAN create a graph from a function table.</li> <li>I CAN write equations for a given function table.</li> </ul>	Continue to rein	
concepts previously introduced,	concepts previously introduced,		concepts previou	
as necessary.	as necessary.		as nece	

# Third Quarter

## eometry

## a focus area his quarter.

nforce skills and ously introduced, cessary.

## Statistics & Probability

# This is not a focus area during this quarter.

Continue to reinforce skills and concepts previously introduced, as necessary.

Mathematical Practices	Vocabulary		
Make sense of problems and persevere in solving them.	Acute triangle Area	Line graph Lower quartile	Range Rectangle
<ul> <li>Reason abstractly and quantitatively.</li> </ul>	Base Bar graph	Measure Measure	Right triangle
<ul> <li>Construct viable arguments and critique the reasoning of others.</li> </ul>	Composite figure	variability Median	Square Statistical
Model with mathematics.	Cube Dot plot (Scatter plot)	Node Net	question Surface area
Use appropriate tools strategically.	Edge Frequency	Outlier Parallologram	Trapezoid
□ Attend to precision.	Height Histogram	Polygon	Volume
Look for and make use of structure.	Lateral face	Quadrilateral	Pyramid
<ul> <li>Look for and express regularity in repeated reasoning.</li> </ul>			

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Lansing School District ©



Mathematics



# Sixth Grade • Fourth Quarter

Pacing Guide

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Grade 6		Mathematics		Fourth Quarter
Ratios & Proportional Relationships	The Number System	Expressions & Equations	Geometry	Statistics & Probability
<text></text>	<text></text>	<text></text>	<ul> <li>6.G.1</li> <li>I CAN apply formulas for triangles and parallelograms to find areas of other polygons.</li> <li>I CAN apply the strategies of composing and/or decomposing to find the area of triangles, special quadrilaterals and polygons to solve mathematical and real-world problems.</li> <li>6.G.2</li> <li>I CAN find the volume of a rectangular prism using unit cubes.</li> <li>I CAN find the volume of a rectangular prism using the formula V=I·w·h.</li> <li>6.G.3</li> <li>I CAN construct polygons in the coordinate plane given the coordinates for the vertices in real-world/mathematical problems.</li> <li>I CAN construct polygons in the coordinate plane given the coordinates to find the length of a side joining points with the same first or second coordinate in real-world/mathematical problems.</li> <li>6.G.4</li> <li>I CAN construct a net of three-dimensional figures made up of rectangles and triangles.</li> <li>I CAN apply knowledge of calculating the area of rectangles and triangles to a net and combine the areas to find the surface area of a 3D figure.</li> <li>I CAN solve real world and mathematical problems involving surface area using nets.</li> </ul>	<ul> <li>6.SP.1</li> <li>I CAN distinguish between a statistical and non-statistical question.</li> <li>I CAN recognize that data can have variability.</li> <li>6.SP.2</li> <li>I CAN describe data distribution by its center (median/mean).</li> <li>I CAN describe data distribution by its spread (range).</li> <li>I CAN describe data distribution by its data clusters, peaks, gaps, symmetry, and overall shape (line plot).</li> <li>6.SP.3</li> <li>I CAN calculate the range, median, mean, and mode of a set of data.</li> <li>I CAN describe the variability by examining graphs of data for spread and overall shape.</li> <li>6.SP.4</li> <li>I CAN identify the components of dot plots, histograms, and box-and-whisker plots.</li> <li>I CAN display numerical data on a number line.</li> <li>I CAN display numerical data on a scatter plot.</li> <li>I CAN display numerical data on a box-and-whisker plot.</li> <li>I CAN display numerical data on a box-and-whisker plot.</li> <li>I CAN display numerical data in a histogram.</li> <li>I CAN display numerical data on a box-and-whisker plot.</li> <li>I CAN display numerical data in a histogram.</li> <li>I CAN display numerical data in a histogram.</li> <li>I CAN display numerical data in a bistogram.</li> <li>I CAN display numerical data in a histogram.</li> <li>I CAN display numerical data in a histogram.</li> <li>I CAN display numerical data in a histogram.</li> <li>I CAN display numerical data in a bistogram.</li> <li>I CAN display numerical data in a histogram.</li> <li>I CAN discribe the collected data, including how it was measured and its units of measurement.</li> <li>I CAN describe the striking deviations (outliers) in a data set.</li> <li>I CAN choose the appropriate measures of central tendency to represent the data.</li> <li>I CAN choose the appropriate measures of central tendency and variability then justify why these measures are appropriate in terms of the context.</li> </ul>