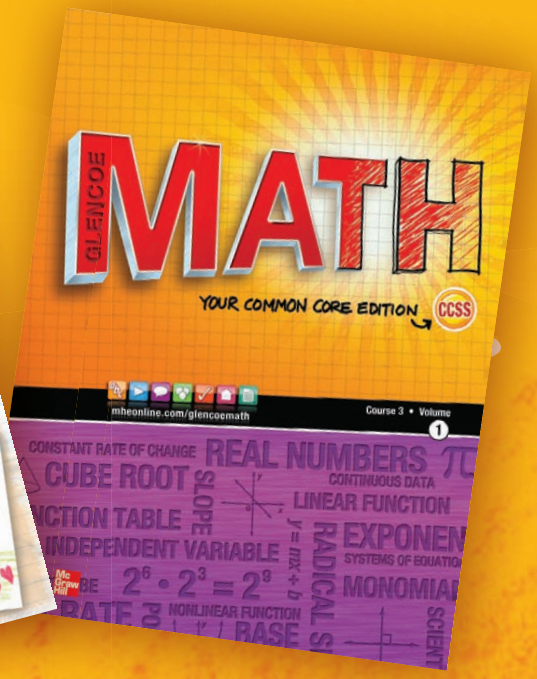
Alignment Guide

to the K–8 Common Core State Standards



Includes K–8 Scope and Sequence

Two programs…one goal: Consistency.

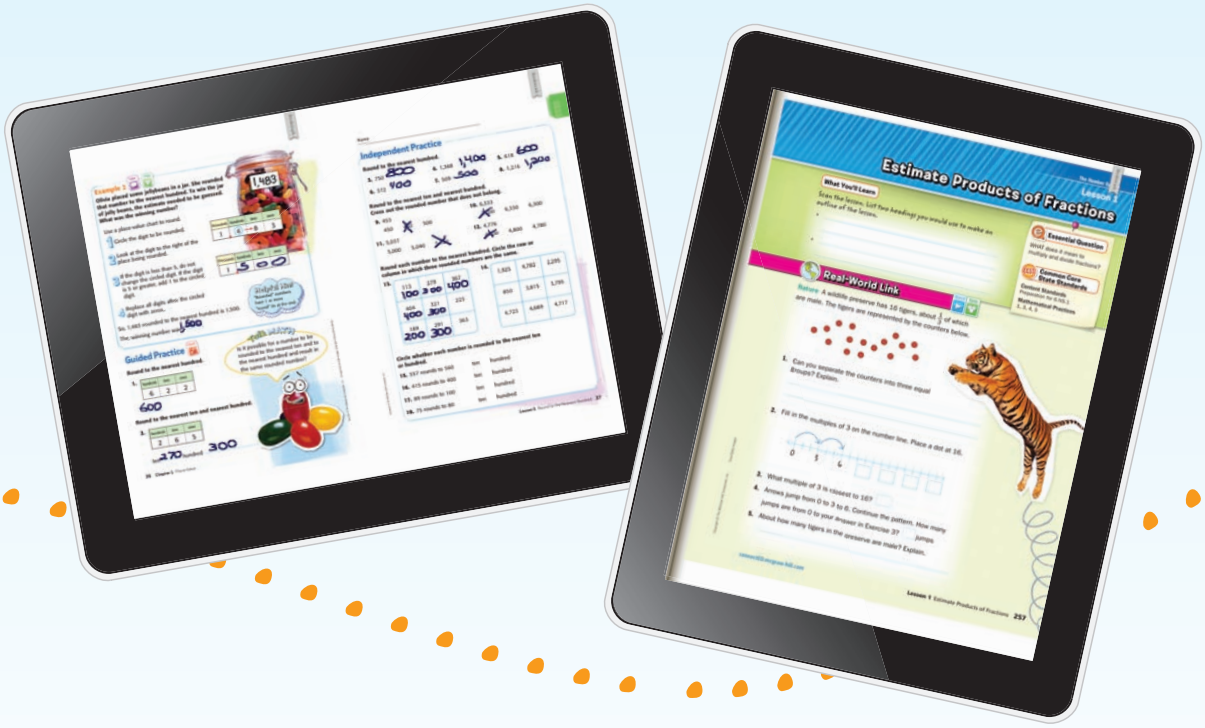
McGraw-Hill My Math and *Glencoe Math* were created in tandem by a K–8 authorship and consultant team with one goal in mind . . . consistency to ensure student and teacher success. See how students can successfully transition from elementary to middle school and beyond.

Our programs… Your transition

- Built from the ground up for the Common Core State Standards, the programs embed the Standards for Mathematical Content and Practice to ensure seamless support for a successful implementation of the new curriculum.
- The K–8 author and consultant team worked on both programs, including Dinah Zike and Jay McTighe, incorporating real-world scenarios, hands-on study organizers, and content organized around Essential Questions.

Our resources… Your plans

- Consistent print and digital support, including customizable lesson plans, online assessments, and ready-made lesson presentations, support every teacher's unique teaching style.
- Planning, teaching, and assessing couldn't be easier with point-of-use resources, simple online navigation, and embedded differentiated instructional strategies.



Our lessons…
Their experience

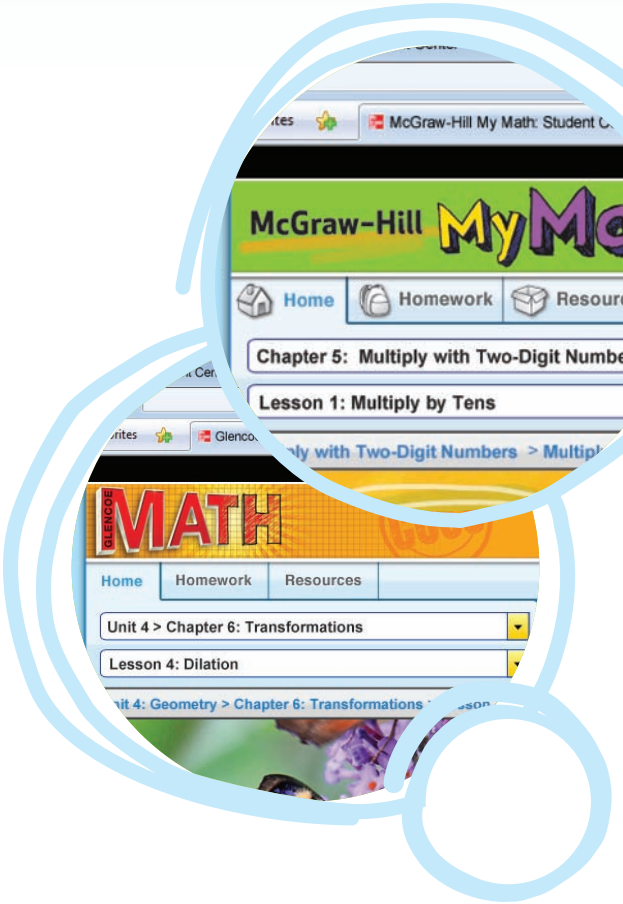
- Whether completing homework on a tablet or taking notes in the textbook, students interact with math like never before.
- ConnectED, the one-stop digital platform ensures a seamless, consistent experience from Kindergarten to Grade 8.

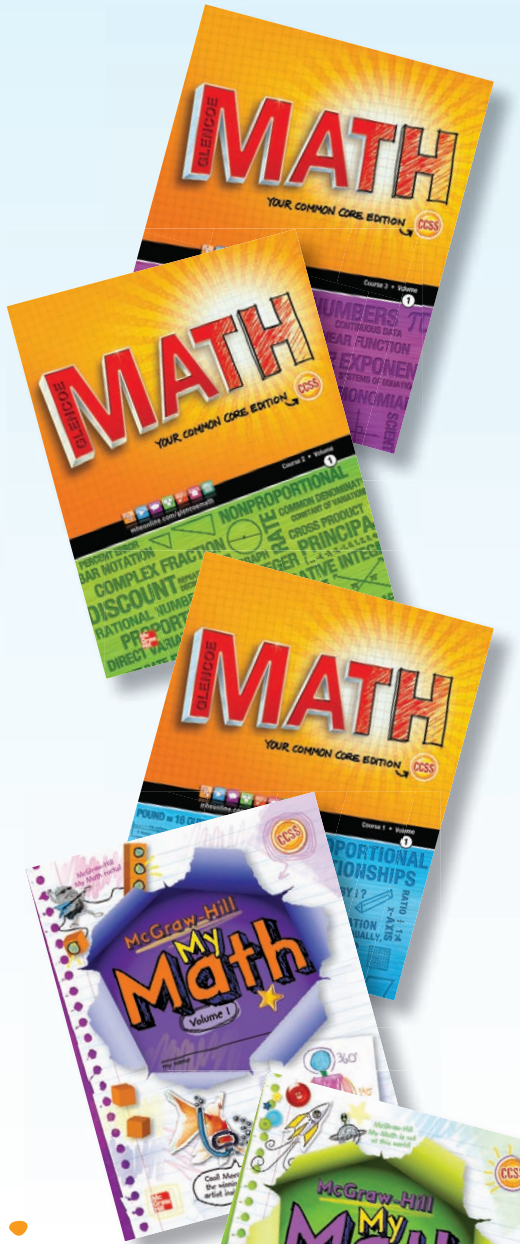
Our tools…
Their engagement

- The unique design draws students in and the rich instruction and examples lead to concept and skill mastery.
- Tools bring math to students' worlds with tools like online tutorials, virtual manipulatives, videos, animations, apps, and more.

Our support…
Their understanding

- Students understand math in their own terms with robust vocabulary and study tools, such as built-in Foldables.





McGraw-Hill My Math and Glencoe Math K–8 Scope and Sequence

How can teachers use the K–8 Scope and Sequence?

A lengthy set of standards can be overwhelming. A clear, well-presented scope and sequence can help teachers make sense of their new standards and show how they are organized.

This scope and sequence will help you identify. . .

- the new Common Core State Standards and how they are distributed across the grades.
- new concepts and skills covered in each grade.
- the concepts students learned the previous year, as well as what students will be expected to learn in subsequent years.
- the clusters of related concepts across grade levels.
- specific prerequisite concepts and skills from which to build.

Why does a solid K–8 articulation and alignment matter?

The Common Core State Standards are a set of concepts and skills, not a curriculum. But, a carefully constructed curriculum is essential for student success. The author and consultant team for *McGraw-Hill My Math* and *Glencoe Math* articulated the proper scope and sequence of concepts and skills and built it to the Common Core State Standards. Careful consideration was given to the order of concepts to maximize student achievement. With this foundation, *McGraw-Hill My Math* and *Glencoe Math* create a cohesive K–8 pathway for success at each step along the way.

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Concept/Skill	Grade K	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Course 1	Course 2	Course 3
Counting and Cardinality									
Number Sense									
Know number names and the count sequence	K.CC.1, K.CC.2, K.CC.3								
Count to tell the number of objects	K.CC.4, K.CC.5								
Compare numbers	K.CC.6, K.CC.7								
Number and Operations in Base Ten									
Place Value									
Understand foundations of and generalize about place value	K.NBT.1	1.NBT.2, 1.NBT.3, 1.NBT.4, 1.NBT.5, 1.NBT.6	2.NBT.1, 2.NBT.2, 2.NBT.3, 2.NBT.4, 2.NBT.5, 2.NBT.6, 2.NBT.7, 2.NBT.9	3.NBT.1, 3.NBT.2, 3.NBT.3	4.NBT.1, 4.NF.6, 4.NF7	5.NBT.1, 5.NBT.3			
Extend counting sequence and read and write whole numbers		1.NBT.1	2.NBT.1, 2.NBT.2, 2.NBT.3	3.NBT.1, 3.NBT.2, 3.NBT.3	4.NBT.1, 4.NBT.2, 4.NF.6	5.NBT.1			
Compare/order numbers		1.NBT.3	2.NBT.4	3.NBT.1, 3.NBT.2, 3.NBT.3	4.NBT.2	5.NBT.3			
Round numbers				3.NBT.1	4.NBT.3	5.NBT.4			
Compose and decompose numbers				3.NBT.3	4.NBT.5	5.NBT.1			
Addition and Subtraction									
Fluently add and subtract basic facts	K.OA.1, K.OA.2, K.OA.3, K.OA.4, K.OA.5	1.NBT.4, 1.NBT.6, 1.OA.5, 1.OA6	2.NBT.5, 2.NBT.6, 2.OA.2						
Fluently add and subtract within 100			2.OA.5						
Add and subtract multiples of 10			2.NBT.4						
Fluently add and subtract multi-digit numbers				3.NBT.2	4.NBT.4				
Compose and decompose numbers	K.NBT.1, K.OA.3	1.NBT.2, 1.OA.6	2.NBT.1, 2.NBT.3, 2.NBT.7, 2.NBT.8	3.NBT.2	4.NBT.2				
Use mental arithmetic		1.NBT.5	2.NBT.8, 2.OA.2	3.OA.8	4.NBT.4				
Use estimation				3.OA.8	4.NBT.3				
Use algorithms to add and subtract		1.NBT.4, 1.NBT.6	2.NBT.5, 2.NBT.6, 2.NBT.7, 2.NBT.9	3.NBT.2	4.NBT.4				
Use and explain strategies based on the relationship between addition and subtraction		1.NBT.4, 1.NBT.6	2.NBT.5, 2.NBT.7, 2.OA.1, 2.OA.2	3.NBT.2	4.NBT.4				
Use and explain strategies based on place value and properties of operations		1.NBT.4, 1.NBT.6, 1.OA.3, 1.OA.4	2.NBT.5, 2.NBT.6, 2.NBT.7, 2.NBT.9	3.NBT.2	4.NBT.4	5.NBT.7			
Multiplication and Division									
Use odd and even numbers and arrays to gain foundations for multiplication			2.OA.3, 2.OA.4	3.OA.2, 3.OA.3					
Fluently multiply and divide basic facts				3.OA.7					

Compose and decompose numbers				3.NBT.3	4.NBT.5, 4.NBT.6, 4.OA.4	5.NBT.5			
Use and explain strategies based on the relationship between multiplication and division				3.OA.4, 3.OA.6, 3.OA.7	4.NBT.5, 4.NBT.6	5.NBT.6, 5.NBT.7			
Use and explain strategies based on place value and properties of operations				3.NBT.3, 3.OA.5, 3.OA.7, 3.OA.9	4.NBT.5, 4.NBT.6	5.NBT.6, 5.NBT.7			
Use multiplication to find combinations				3.OA.3					
Interpret multiplication equations as comparisons					4.OA.1, 4.OA.2				
Interpret remainders					4.NBT.6, 4.OA.3	5.NBT.6			
Estimation					4.NBT.3, 4.NBT.6	5.NBT.5, 5.NBT.6			
Divide and fluently multiply multi-digit numbers using standard algorithm					4.NBT.5, 4.NBT.6	5.NBT.5, 5.NBT.6	6.NS.2		
Prime factorization						5.NBT.2			
Whole Numbers									
Greatest Common Factor (GCF)					4.NF.1	5.NF.2	6.NS.4		
Least Common Multiple (LCM)					4.NF.1	5.NF.2	6.NS.4		
Apply Distributive Property				3.OA.5, 3.OA.7, 3.OA.9	4.NBT.5	5.NBT.5	6.NS.4		
Powers and exponents						5.NBT.2			
Square roots of perfect squares									8.EE.2
Cube roots of perfect cubes									8.EE.2
Integers									
Positive and negative numbers							6.NS.5		
Opposite signs of numbers							6.NS.6a		
Graph integers on a number line							6.NS.6, 6.NS.6a, 6.NS.6c		
Graph integers on a coordinate plane							6.NS.6, 6.NS.6b, 6.NS.6c, 6.NS.8		
Order integers							6.NS.7, 6.NS.7a, 6.NS.7b, 6.NS.7d		
Absolute value							6.NS.7, 6.NS.7c, 6.NS.7d	7.NS.1c	
Additive inverses								7.NS.1a, 7.NS.1b	
Multiplication of integers								7.NS.2a	
Division of integers								7.NS.2b	
Properties of integer exponents									8.EE.1
Rational Numbers									
Graph rational numbers on a number line							6.NS.6, 6.NS.6a		
Order rational numbers on a number line							6.NS.7, 6.NS.7a		
Write, interpret, and explain order of rational numbers							6.NS.7b		

Concept/Skill	Grade K	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Course 1	Course 2	Course 3
Rational Numbers *continued*									
Graph rational numbers on a coordinate plane							6.NS.6, 6.NS.6c, 6.NS.8		
Solve real-world problems by graphing points in all four quadrants							6.NS.8		
Add and subtract rational numbers								7.NS.1, 7.NS.1b, 7.NS.1c, 7.NS.1d	
Represent addition and subtraction on a number line								7.NS.1, 7.NS.1b	
Interpret sums of rational numbers in real-world contexts								7.NS.1b	
Understand subtraction as adding the additive inverse								7.NS.1c	
Interpret products and quotients of rational numbers in real-world contexts								7.NS.2a, 7.NS.2b	
Distance between two rational numbers on a number line								7.NS.1c	
Multiply and divide rational numbers								7.NS.2, 7.NS.2a, 7.NS.2b, 7.NS.2c	
Concept of rational numbers								7.NS.2b	
Convert rational numbers to decimals								7.NS.2d	
Terminating and repeating decimals								7.NS.2d	8.NS.1
Solve real-world problems using operations with rational numbers								7.NS.3	
Complex fractions								7.RP.1, 7.NS.3	
Solve multistep problems involving rational numbers								7.EE.3	
Convert a decimal expansion which repeats eventually into a rational number									8.NS.1
Real Numbers									
Concept of irrational numbers									8.NS.1
Estimate square roots									8.NS.2
Know $\sqrt{2}$ is irrational									8.EE.2
Compare the size of irrational numbers									8.NS.2
Approximate location of irrational numbers on a number line									8.NS.2

Number and Operations—Fractions, Decimals, and Percents									
Fractions									
Partition shapes and understand fractions as part of a whole		1.G.3	2.G.3	3.NF.1					
Understand fractions as part of a set				3.NF.1					

Express fractions as a whole number				3.NF.3c					
Represent fractions on a number line				3.NF.2	4.NF.6	5.NF.2	6.NS.6c		
Equivalent fractions				3.NF.3a, 3.NF.3b, 3.NF.3c	4.NF.1, 4.NF.5	5.NF.1			
Unit fractions				3.NF.1, 3.G.2	4.NF.3b, 4.NF.4a, 4.NF.4b	5.NF.7			
Compare and order fractions				3.NF.3d	4.NF.2	5.NF.5a			
Find factor pairs and multiples				3.NBT.3	4.OA.4	5.NBT.2			
Prime and composite numbers					4.OA.4	5.NBT.2			
Simplest form					4.NF.1, 4.NF.2	5.NF.5b			
Represent mixed numbers and write as improper fractions					4.NF.3b	5.NF.1			
Add, subtract, and multiply fractions and mixed numbers					4.NF.3c, 4.NF.3d, 4.NF.4	5.NF.1, 5.NF.2, 5.NF.4, 5.NF.5, 5.NF.6			
Solve word problems involving addition and subtraction of fractions					4.NF.3d	5.NF.2			
Solve word problems involving multiplication of fractions					4.NF.4c	5.NF.6			
Round fractions						5.NF.2			
Estimate sums and differences of fractions						5.NF.2			
Estimate products of fractions						5.NF.4a, 5.NF.6			
Interpret multiplication with fractions as scaling						5.NF.5			
Interpret fractions as division of numerator by denominator						5.NF.3			
Divide fractions and mixed numbers						5.NF.7	6.NS.1		
Solve word problems involving division of fractions						5.NF.7c	6.NS.1		
Decimals									
Understand decimal notation					4.NF.6	5.NBT.3a			
Write fractions as decimals					4.NF.5, 4.NF.6	5.NF.5b, 5.NBT.3a			
Compare and order decimals					4.NF.6, 4.NF.7	5.NF.5b, 5.NBT.3b			
Add decimals					4.NF.5, 4.NF.6	5.NBT.7	6.NS.3		
Subtract/ Multiply/ Divide decimals to hundredths						5.NBT.7			
Estimate sums and differences of decimals by rounding						5.NBT.4			
Represent decimals on a number line					4.NF.6	5.NBT.3	6.NS.6c		
Subtract/ Multiply/ Divide multi-digit decimals							6.NS.2, 6.NS.3		
Convert rational numbers to decimals								7.NS.2d	
Terminating and repeating decimals								7.NS.2d	8.NS.1

Concept/Skill	Grade K	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Course 1	Course 2	Course 3
Decimals *continued*									
Convert a decimal expansion which repeats eventually into a rational number									8.NS.1
Non-repeating decimals/irrational numbers									8.NS.1
Percent									
Percent as rate per 100							6.RP.3c		
Find a percent of a quantity							6.RP.3c		
Solve percent problems for the whole							6.RP.3c		
Percent proportion								7.RP.3	
Percent equation								7.RP.3	
Simple interest								7.RP.3	
Sales tax and gratuities								7.RP.3	
Markups and markdowns								7.RP.3	
Commissions and fees								7.RP.3	
Percent increase and decrease								7.RP.3	
Percent error								7.RP.3	

Ratios and Proportional Relationships									
Ratios and Rates									
Understand the concept of a ratio							6.RP.1		
Use ratio and rate language							6.RP.1, 6.RP.2		
Understand the concept of a unit rate							6.RP.2		
Solve real-world problems using ratios and rates							6.RP.3	7.RP.3	
Tables of equivalent ratios							6.RP.3a	7.RP.2a	
Graph ratio tables							6.RP.3a		
Unit pricing							6.RP.3b		
Constant speed							6.RP.3b		
Use ratios to convert measurements							6.RP.3d	7.RP.3	
Unit rates involving fractions (complex fractions)								7.RP.1	
Ratio and probability								7.SP.8a	
Interpret unit rate as the slope									8.EE.5
Rate of change of a linear function									8.F.4
Proportional Relationships									
Recognize and represent proportional relationships								7.RP.2	

Identify proportional relationships using tables or graphs								7.RP.2a	
Constant of proportionality (unit rate)								7.RP.2b, 7.RP.2d	
Represent proportional relationships by equations								7.RP.2c	
Explain what a point on the graph of a proportional relationship means								7.RP.2d	
Solve proportions								7.RP.3	
Use proportional relationships to solve multistep ratio problems								7.RP.3	
Graph proportional relationships								7.RP.2a	8.EE.5
Compare two different proportional relationships									8.EE.5
Scale drawings								7.G.1	

Algebra and Functions									
Algebraic Representation									
Compose and decompose numbers	K.OA.1, K.OA.2, K.OA.3, K.OA.4, K.OA.5	1.OA.6	2.OA.1	3.OA.5, 3.OA.7					
Identify/Generate/Explain patterns	K.CC.4	1.NBT.5	2.NBT.2	3.OA.9, 3.NBT.3	4.NBT.1, 4.NBT.4, 4.OA.5	5.OA.3, 5.NBT.1, 5.NBT.2			
Solve addition and subtraction word problems	K. OA.2, K.NBT.1	1.OA.1, 1.OA.2	2.OA.1	3.OA.8	4.OA.3				
Assess the reasonableness of answers by rounding and estimating				3.OA.8	4.OA.3, 4.NBT.3, 4.NBT.6	5.NBT.5, 5.NBT.6			
Determine the unknown/variable		1.OA.1, 1.OA.2, 1.OA.4, 1.OA.8	2.OA.1	3.OA.3, 3.OA.4, 3.OA.6, 3.OA.8	4.OA.2, 4.OA.3	5.NBT.6			
Write and solve number sentences/equations	K.OA.1, K.OA.3, K.OA.4	1.OA.1, 1.OA.2, 1.OA.7, 1.OA.8	2.OA.1, 2.OA.3, 2.OA.4, 2.NBT.5, 2.NBT.7	3.OA.3, 3.OA.4, 3.OA.5, 3.OA.8	4.OA.1, 4.OA.2, 4.OA.3, 4.NBT.5, 4.NBT.6	5.NBT.6			
Determine if addition or subtraction equations are true or false.		1.OA.7							
Solve word problems that call for addition of three numbers		1.OA.2							
Order of operations				3.OA.8	4.OA.3	5.OA.1	6.EE.2c		
Write and solve multiplication and division word problems				3.OA.3, 3.OA.8	4.OA.2, 4.OA.3	5.NBT.5			
Write and evaluate numerical expressions				3.OA.5	4.OA.3	5.OA.1, 5.OA.2	6.EE.1		
Write and evaluate expressions involving variables				3.OA.5	4.OA.3	5.OA.1, 5.OA.2	6.EE.2, 6.EE.2a, 6.EE.2c, 6.EE.6		
Identify and generate nonnumeric patterns					4.OA.5				
Apply properties of operations		1.OA.3, 1.NBT.2	2.OA.1, 2 .OA.2	3.NBT.3, 3.OA.5, 3.OA.7, 3.OA.9	4.OA.5, 4.NBT.5	5.NBT.5	6.EE.3	7.EE.1, 7.EE.2	

Concept/Skill	Grade K	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Course 1	Course 2	Course 3
Algebraic Representation *continued*									
Parts of an expression							6.EE.2b		
Identify equivalent expressions							6.EE.4		
Properties of integer exponents									8.EE.1
Use scientific notation to estimate quantities									8.EE.3
Perform operations using scientific notation									8.EE.4
Choose units of appropriate size for very large or very small quantities									8.EE.4
Scientific notation and technology									8.EE.4
Equations and Inequalities									
Identify values that make an equation or inequality true							6.EE.5		
Use variables and expressions to solve real-world problems							6.EE.6	7.EE.4	
Write and solve equations of the form $x + p = q$ and $px = q$							6.EE.7		
Inequalities of the form $x > c$ or $x < c$							6.EE.8		
Graph inequalities on a number line							6.EE.8	7.EE.4b	
Solve equations of the form $px + q = r$ and $p(x + q) = r$								7.EE.4, 7.EE.4a	
Compare an algebraic solution to an arithmetic solution								7.EE.4a	
Solve multistep problems involving rational numbers								7.EE.3	
Solve inequalities of the form $px + q < r$ or $px + q < r$								7.EE.4, 7.EE.4b	
Solve linear equations with one, infinitely many, or no solutions									8.EE.7, 8.EE.7a
Solve linear equations with rational coefficients								7.EE.4a	8.EE.7, 8.EE.7b
Solve equations of the form $x^2 = p$ and $x^3 = p$									8.EE.2
Equations in Two Variables									
Dependent and independent variables							6.EE.9		
Write equations using two variables							6.EE.9		
Form ordered pairs						5.OA.3, 5.G.1, 5.G.2			
Tables of ordered pairs						5.OA.3, 5.G.1, 5.G.2	6.EE.9		
Graphs of ordered pairs						5.OA.3, 5.G.1, 5.G.2	6.EE.9		
Analyze patterns and relationships						5.OA.3			
Represent proportional relationships by equations								7.RP.2c	
Use similar triangles to explain slope of a line									8.EE.6

Derive the equations $y = mx$ and $y = mx + b$									8.EE.6
Solve systems of linear equations by graphing									8.EE.8, 8.EE.8a
Solve systems of linear equations algebraically									8.EE.8, 8.EE.8b
Solve problems leading to two linear equations in two variables									8.EE.8, 8.EE.8c

Functions									
Relations and functions									8.F.1
Understand functions									8.F.1
Graph of a function									8.F.1
Compare properties of functions									8.F.2
Identify nonlinear functions									8.F.3
Linear functions in $y = mx + b$ form									8.F.3
Construct a function									8.F.4
Rate of change and initial value of a function									8.F.4
Qualitative graphs									8.F.5

Measurement									
Measurement									
Describe and compare measurable attributes of objects	K.MD.1, K.MD.2								
Linear Measurement									
Measure and order by comparing indirectly and by iterating using non-standard units of length		1MD.1, 1MD.2							
Measure length using appropriate tools			2.MD.1						
Use customary units of length to estimate, measure, and compare			2.MD.2, 2.MD.3, 2.MD.4						
Use addition and subtraction to solve word problems of length			2.MD.5, 2.MD.6						
Measure to half and quarter of an inch				3.MD.2	4.MD.2	5.MD.2			
Measure to eighth of an inch					4.MD.2	5.MD.2			
Estimate using customary and metric units of length					4.MD.1, 4.MD.2				
Measure metric units of length						5.MD.1			
Know measurement equivalencies within a measurement system					4.MD.1				
Convert customary and metric units of length					4.MD.1, 4.MD.2	5.MD.1			

Concept/Skill	Grade K	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Course 1	Course 2	Course 3
Perimeter and Area									
Measure perimeter				3.MD.8	4.MD.3				
Apply the formula for perimeter					4.MD.3				
Use concepts of area to measure area				3.MD.5, 3.MD.6, 3.MD.7, 3.MD.8	4.MD.3				
Apply the formula for area				3.MD. 7	4.MD.3				
Relate area and perimeter				3.MD.5, 3.MD.7, 3.MD.8	4.MD.3				
Find area of composite figures by decomposing				3.MD.5, 3.MD.7d					
Relate area to multiplication and addition				3.MD. 7					
Solve problems involving same perimeter but different area and vice versa				3.MD.7, 3.MD.8					
Volume									
Estimate metric units of capacity				3.MD.2	4.MD.1				
Measure metric units of capacity				3.MD.2					
Solve word problems involving liquid volumes				3.MD.2					
Convert metric units of capacity					4.MD.1, 4.MD.2	5.MD.1			
Estimate customary units of capacity					4.MD.1, 4.MD.2	5.MD.1			
Measure customary units of capacity						5.MD.1			
Convert customary units of capacity					4.MD.1, 4.MD.2	5.MD.1			
Measure in unit cubes by counting						5.MD.3, 5.MD.4			
Relate volume to multiplication and addition						5.MD. 5			
Weight and Mass									
Estimate metric units of mass				3.MD.2	4.MD.1	5.MD.1			
Measure metric units of mass				3.MD.2		5.MD.1			
Solve word problems involving mass				3.MD.2					
Estimate customary units of weight					4.MD.1, 4.MD.2	5.MD.1			
Measure customary units of weight						5.MD.1			
Convert customary units of weight					4.MD.1, 4.MD.2	5.MD.1			
Convert metric units of mass					4.MD.1, 4.MD.2	5.MD.1			
Time									
Tell and write time to the hour and half hour		1.MD.3	2.MD.7						
Tell and write time to the quarter hour and 5-minute intervals			2.MD.7						
A.M./P.M.			2.MD.7						
Tell and write time to the minute				3.MD.1					

Measure and estimate time intervals				3.MD.1					
Solve word problems involving time in minutes				3.MD.1					
Convert units of time					4.MD.1, 4.MD.2	5.MD.1			
Solve measurement word problems using the four operations					4.MD.2, 4.MD.3	5.MD.1			
Money									
Recognize and count using coins		1.NBT.1	2.MD.8						
Sort and compare using coins and bills			2.MD.8						
Solve word problems involving money			2.MD.8						

Statistics and Probablity									
Data Sets and Populations									
Classify objects by size, shape, and count	K.MD.3								
Organize, represent, and interpret data		1.MD.4	2.MD.9, 2.MD.10	3.MD.3, 3.MD.4	4.MD.4	5.MD.2			
Generate data in whole units of linear measurement			2.MD.9						
Generate data in fractions of an inch				3.MD.4	4.MD.4	5.MD.2			
Recognize statistical questions							6.SP.1		
Distribution of a set of data							6.SP.2		
Statistics and population samples								7.SP.1	
Random sampling of populations								7.SP.1	
Draw inferences from random samples								7.SP.2	
Multiple samples of data								7.SP.2	
Visual overlap of data distributions								7.SP.3	
Comparative inferences between two populations								7.SP.4	
Measures of Center and Variability									
Measures of center							6.SP.3	7.SP.3, 7.SP.4	
Median							6.SP.5c		
Mean							6.SP.5c		
Measures of variation							6.SP.3	7.SP.3, 7.SP.4	
Range							6.SP.2, 6.SP.3		
Outliers							6.SP.5c		
Interquartile range							6.SP.5c		
Mean absolute deviation							6.SP.5c		
Shape of the data distribution							6.SP.5d		
Summarize and describe numerical data sets							6.SP.5, 6.SP.5a, 6.SP.5b, 6.SP.5c		

Concept/Skill	Grade K	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Course 1	Course 2	Course 3
Represent Data, Statistical Displays									
Draw picture graphs and bar graphs			2.MD.10						
Draw scaled picture graphs and scaled bar graphs				3.MD 3					
Solve problems involving bar graph analysis			2.MD.10	3.MD.3					
Make line plots using generated linear measurement data			2.MD.9	3.MD.4	4.MD.4	5.MD.2			
Solve addition and subtraction of fractions problems involving line plot analysis					4.MD.4	5.MD.2			
Solve multiplication and division of fractions problems involving line plot analysis						5.MD.2			
Dot plots							6.SP.4	7.SP.3, 7.SP.4	
Histograms							6.SP.4		
Box plots							6.SP.4	7.SP.4	
Scatter plots									8.SP.1
Clustering and outliers									8.SP.1
Positive and negative association									8.SP.1
Linear and nonlinear association									8.SP.1
Line of best fit									8.SP.2
Use the equation of a linear model to solve problems									8.SP.3
Two-way tables									8.SP.4
Probability									
Probability and chance events								7.SP.5	
Likely and unlikely events								7.SP.5	
Relative frequency								7.SP.6	
Develop a probability model								7.SP.7, 7.SP.7a, 7.SP.7b	
Compare theoretical and experimental probability								7.SP.7	
Compound events								7.SP.8, 7.SP.8a	
Sample spaces								7.SP.8, 7.SP.8b	
Number of outcomes								7.SP.8a	
Permutations								7.SP.8a	
Simulations								7.SP.6, 7.SP.7, 7.SP.8, 7.SP.8c	
Fair and unfair games								7.SP.7b	

Geometry									
Two- and Three-Dimensional Shapes and Figures									
Describe shapes in the environment	K.G.1								
Position of shapes	K.G.1								
Compose two-dimensional shapes	K.G.6	1.G.2							
Decompose two-dimensional shapes		1.G.2	2.G.2, 2.G.3						
Analyze and compare two-dimensional shapes	K.G.4	1.G.1	2.G.1	3.G.1					
Model, build, and draw two-dimensional shapes	K.G.5	1.G.1	2.G.1	3.G.1					
Identify, name, and describe two-dimensional shapes	K.G.1, K.G.2, K.G.3, K.G.4	1.G.1	2.G.1	3.G.1					
Partition two-dimensional shapes into equal shares/ areas		1.G.3	2.G.2, 2.G.3	3.G.1, 3.G2					
Identify equal shares of two-dimensional shapes		1.G.3	2.G.3	3.G.1					
Identify, name, and describe three-dimensional shapes	K.G.1, K.G.2, K.G.3, K.G.4	1.G.1	2.G.1						
Analyze and compare three-dimensional shapes	K.G.4	1.G.1	2.G.1						
Classify two-dimensional figures by their properties						5.G.4			
Describe properties of three-dimensional figures						5.MD.3			
Describe and classify polygons by their attributes				3.G.1					
Identify, describe, and classify triangles and quadrilaterals by their attributes				3.G.1	4.G.1, 4.G.2	5.G.3, 5.G.4			
Measure sides and angles of triangles and quadrilaterals						5.G.3, 5.G.4			
Draw and identify points, lines, line segments, rays, and angles in two-dimensional figures					4.G.1				
Identify lines of symmetry/ symmetric figures					4.G.3				
Draw polygons on the coordinate plane							6.G.3		
Use coordinates to find the length of sides of polygons							6.G.3		
Construct triangles from three measures of angles or sides								7.G.2	
Plane sections of three-dimensional figures								7.G.3	
Circles and circumference								7.G.4	
Angle Measure and Relationships									
Explore angles of two-dimensional shapes				3.G.1	4.G.1, 4.MD.5				
Classify angles by their attributes					4.G.1, 4.MD.5				
Measure and draw angles					4.G.1, 4.MD.5, 4MD. 6				
Recognize angle measures as additive					4.MD.7				

Concept/Skill	Grade K	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Course 1	Course 2	Course 3
Angle Measure and Relationships *continued*									
Solve addition and subtraction problems to determine measures of unknown angles					4.G.1, 4.MD.7				
Supplementary angles								7.G.5	
Complementary angles								7.G.5	
Vertical angles								7.G.5	
Adjacent angles								7.G.5	
Sum of angles in a triangle									8.G.5
Exterior angle of a triangle									8.G.5
Parallel lines cut by a transversal									8.G.5
Angle-angle criterion for similar triangles									8.G.5
Area and Surface Area									
Area of triangles							6.G.1		
Area of parallelograms							6.G.1		
Area of trapezoids							6.G.1		
Area of composite figures							6.G.1	7.G.6	
Area of a circle								7.G.4	
Informal derivation of area of circle from circumference								7.G.4	
Represent three-dimensional figures using nets							6.G.4		
Use nets to find surface area							6.G.4		
Surface area of rectangular prisms							6.G.4	7.G.6	
Surface area of triangular prisms							6.G.4	7.G.6	
Surface area of pyramids							6.G.4	7.G.6	
Surface area of composite figures								7.G.6	
Surface area of cylinders								7.G.4	
Volume									
Understand concepts of volume						5.MD.3			
Measure volume by counting cubes						5.MD.4			
Relate volume to addition and multiplication						5.MD.5b, 5.MD.5c			
Apply the formula for volume						5.MD.5b			
Build composite figures and find the volume						5.MD.5c			
Volume of right rectangular prisms						5.MD.5a	6.G.2	7.G.6	
Volume of triangular prisms								7.G.6	
Volume of pyramids								7.G.6	
Volume of composite figures								7.G.6	

Volume of cones									8.G.9
Volume of cylinders									8.G.9
Volume of spheres									8.G.9
Changes in dimensions									8.G.9
Scale Drawings									
Compute lengths and areas of figures from scale drawings								7.G.1	
Reproduce scale drawings with a different scale								7.G.1	
Transformations, Congruence, and Similarity									
Properties of rotations									8.G.1
Properties of reflections									8.G.1
Properties of translations									8.G.1
Line segments, angles, and parallel lines in transformations									8.G.1a, 8.G.1b, 8.G.1c
Congruent figures based on transformations									8.G.2
Effect of transformations using coordinates									8.G.3
Similar figures based on transformations									8.G.4
Pythagorean Theorem									
Proof of the Pythagorean Theorem									8.G.6
Converse of the Pythagorean Theorem									8.G.6
Apply the Pythagorean Theorem to solve real-world and mathematical problems									8.G.7
Distance between two points in the coordinate plane									8.G.8

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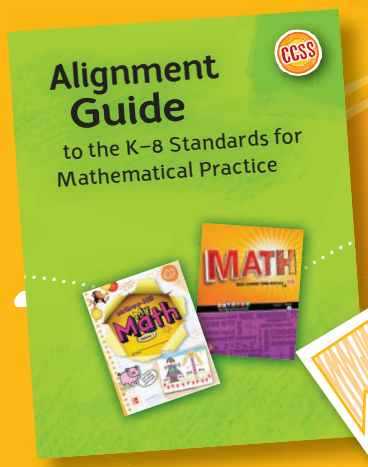

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