KINDERGARTEN – 8TH GRADE



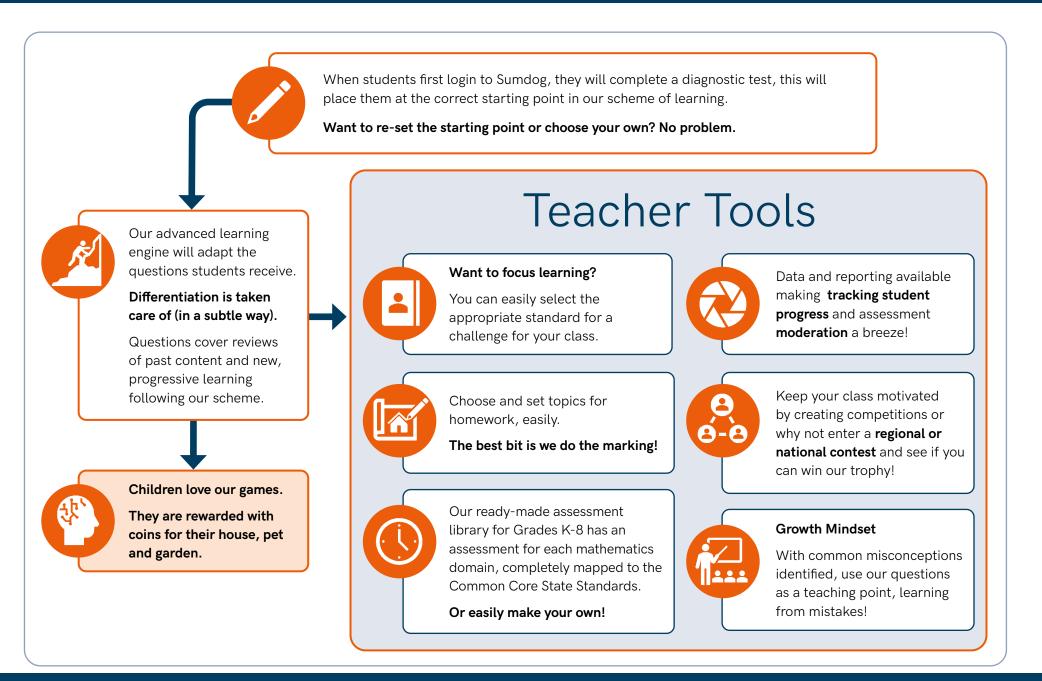
Mathematics program of study: Pennsylvania Standards for Mathematics

Sumdog Scheme of Learning Kindergarten – Grade 8

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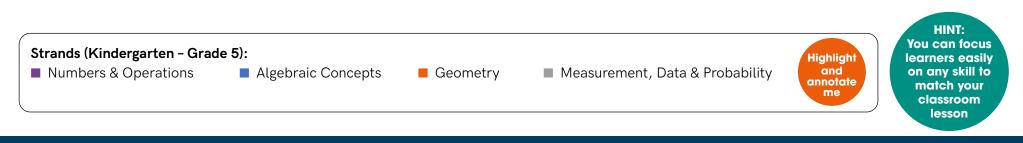
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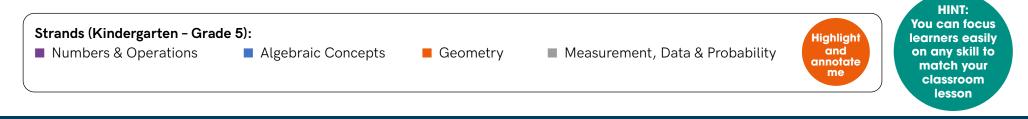


10 More CC.2.1.K.A.1_1	Count Within 25 CC.2.1.K.A.2_5	Subtract from 9 or 10 CC.2.2.K.A.1_14	Count with Doubles CC.2.2.K.A.1_9
5 More CC.2.1.K.A.1_2	Count Within 5 CC.2.1.K.A.2_6	Subtract Within 10 CC.2.2.K.A.1_15	2D Shapes CC.2.3.K.A.1_1
Count Down by 1 CC.2.1.K.A.1_3	Tens and Ones CC.2.1.K.A.2_7	Subtract Within 20 CC.2.2.K.A.1_16	3D Shapes CC.2.3.K.A.1_2
Count in Tens CC.2.1.K.A.1_4	Compare Numbers CC.2.1.K.A.3_1	Add to 2 CC.2.2.K.A.1_2	2D Shapes CC.2.3.K.A.2_1
Count Up or Down by 1 CC.2.1.K.A.1_5	Order Numbers CC.2.1.K.A.3_2	Add to 3 CC.2.2.K.A.1_3	Compare Length & Weight CC.2.4.K.A.1_1
Numbers in Words CC.2.1.K.A.1_6	Add to 1 CC.2.2.K.A.1_1	Add to 4 CC.2.2.K.A.1_4	Count Within 10 CC.2.4.K.A.4_1
Count Down by 1 CC.2.1.K.A.2_1	Identify Parts in Addition CC.2.2.K.A.1_10	Add to 5 or 6 CC.2.2.K.A.1_5	Tens and Ones CC.2.4.K.A.4_2
Count Up by 1 CC.2.1.K.A.2_2	Subtract from 11 or 12 CC.2.2.K.A.1_11	Add to 7, 8, or 9 CC.2.2.K.A.1_6	
Count Up or Down by 1 CC.2.1.K.A.2_3	Subtract from 2, 3, 4, 5, or 6 CC.2.2.K.A.1_12	Add Within 10 CC.2.2.K.A.1_7	
Count Within 10 CC.2.1.K.A.2_4	Subtract from 7 or 8 CC.2.2.K.A.1_13	Add Within 20 CC.2.2.K.A.1_8	





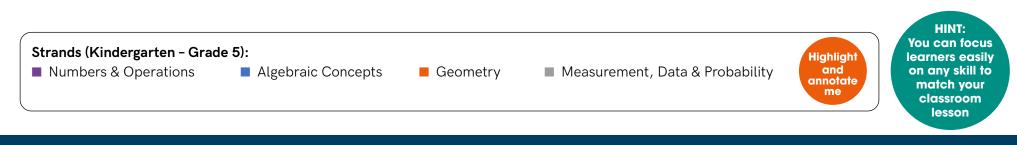
Compare & Order Numbers CC.2.1.1.B.2_1	Add Three Numbers CC.2.1.1.B.3_5		Add Three Numbers CC.2.2.1.A.1_1	Subtract Within 20 CC.2.2.1.A.1_7
Forms of Numbers CC.2.1.1.B.2_2	Add with Multiples of 10 CC.2.1.1.B.3_6		Add Within 20 CC.2.2.1.A.1_2	Add and Subtract with Unknowns
Add 1-Digit to 2-Digit Numbers	Subtract 1-Digit from		Money	Add Four Numbers
CC.2.1.1.B.3_1	. 2-Digit Numbers		CC.2.2.1.A.1_3	CC.2.2.1.A.2_2
Add 2-Digit Numbers	CC.2.1.1.B.3_7		Subtract from 16, 17, or 18	Time
CC.2.1.1.B.3_2	. Subtract 2-Digit Numbers		CC.2.2.1.A.1_4	CC.2.4.1.A.2_1
Add & Subtract with Unknowns	CC.2.1.1.B.3_8		Subtract from 13, 14, or 15	Picture Graphs
CC.2.1.1.B.3_3	. Subtract with Multiples of 10		CC.2.2.1.A.1_5	CC.2.4.1.A.4_1
Add Four Numbers CC.2.1.1.B.3_4	CC.2.1.1.B.3_9	•		Tables CC.2.4.1.A.4_2



Mathematics Program of Study: Pennsylvania Standards for Mathematics • Kindergarten - 8th Grade



Compare Numbers CC.2.1.2.B.1_1	Add 2- and 3-Digit Numbers	Add Four Numbers CC.2.2.2.A.2_1	Money to \$2 CC.2.4.2.A.3_2	
Order Numbers CC.2.1.2.B.1_2	Add Multiples of 10 CC.2.1.2.B.3_3	Money to 50¢ CC.2.2.2.A.2_2	Money to 50¢ CC.2.4.2.A.3_3	
Place Value and Number Formup to 10,000	ns Add Multiples of 100 CC.2.1.2.B.3_4	Arrays and Multiplication CC.2.2.2.A.3_1	Bar Graphs CC.2.4.2.A.4_1	
CC.2.1.2.B.1_3 Numbers in Words	Column Addition & Subtraction CC.2.1.2.B.3_5	Arrays & Repeated Addition CC.2.2.2.A.3_2	Dot Plots CC.2.4.2.A.4_2	
CC.2.1.2.B.2_1 Skip Count	More and Less CC.2.1.2.B.3_6	3D Shapes CC.2.3.2.A.1_1	Interpret Scale CC.2.4.2.A.4_3	
CC.2.1.2.B.2_2 Skip Count Objects	Regrouping Place Values CC.2.1.2.B.3_7	Irregular Shapes	Pictographs CC.2.4.2.A.4_4	
CC.2.1.2.B.2_3 Add 1-Digit Numbers	Related Addition & Subtraction CC.2.1.2.B.3_8	Fractions CC.2.3.2.A.2_1	Add and Subtract Mixed Metric Units 	_
CC.2.1.2.B.3_1 Subtract 2- & 3-Digit Number	Subtract 1-Digit Numbers	Estimate Length CC.2.4.2.A.1_1	CC.2.4.2.A.6_1 Add Metric Lengths	_
CC.2.1.2.B.3_10	Addition Word Problems	Time	—	
Subtract Multiples of 10 CC.2.1.2.B.3_11	CC.2.2.2.A.1_1	CC.2.4.2.A.2_1	Subtract Metric Lengths CC.2.4.2.A.6_3	
Subtract Multiples of 100 CC.2.1.2.B.3_12	Money to \$2 CC.2.2.2.A.1_2 ■	Mixed Amounts of Money CC.2.4.2.A.3_1		

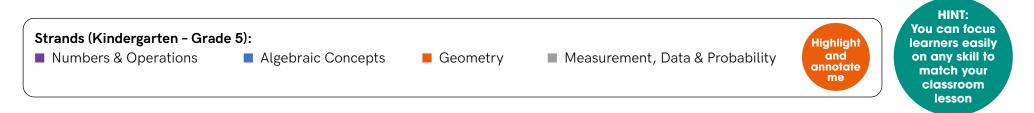




Add and Subtract with Multiples of 10, 100, and 1,000 CC.2.1.3.B.1_1	3
Column Addition and Subtractic CC.2.1.3.B.1_2	on
Multiply or Divide by Multiples CC.2.1.3.B.1_3	
Fractions CC.2.1.3.C.1_1	
Doubling CC.2.2.3.A.1_1	
Halving CC.2.2.3.A.1_2	
Multiplication Word Problems CC.2.2.3.A.1_3	
Multiply 2-Digit and 1-Digit Numbers CC.2.2.3.A.1_4	
Multiply or Divide by Multiples CC.2.2.3.A.1_5	
Related Multiplication Facts CC.2.2.3.A.1_6	

Unknown Numbers in Multiplication and Division (2s, 5s, 10s)				
CC.2.2.3.A.1_7				
Unknown Numbers in Multiplication and Division (3s, 4s, 8s) CC.2.2.3.A.1_8				
Properties of Multiplication CC.2.2.3.A.2_1				
Related Multiplication Facts				
Unknown Numbers in Multiplication and Division (3s, 4s, 8s) CC.2.2.3.A.2_3				
10s Multiplication Facts 1-4 CC.2.2.3.A.3_1				
3s Multiplication Facts CC.2.2.3.A.3_10				
4s Multiplication Facts CC.2.2.3.A.3_11				

Division Facts 4-9 CC.2.2.3.A.3_22 ■
Division Facts 40-49 CC.2.2.3.A.3_23
Division Facts 50-64 CC.2.2.3.A.3_24
Division Facts 70-100 CC.2.2.3.A.3_25
Division Tables (2, 5, 10) CC.2.2.3.A.3_26
Division Tables (3, 4, 6, 7, 8, 9) CC.2.2.3.A.3_27
Halving CC.2.2.3.A.3_28
Multiply 3-digit and 1-digit Numbers
CC.2.2.3.A.3_29 11 and 12 Division Tables
CC.2.2.3.A.3_3

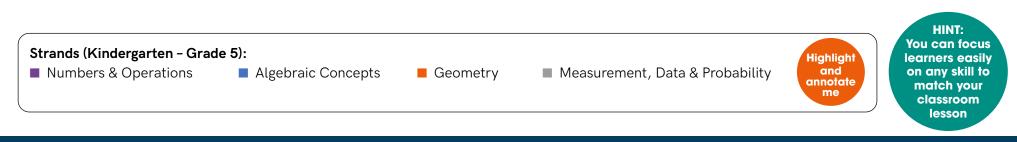




Multiply or Divide by Multiples o 10 or 100 CC.2.2.3.A.3_30	of
Related Division Facts CC.2.2.3.A.3_31	
Related Multiplication Facts	
Jnknown Numbers in Multiplication &Division CC.2.2.3.A.3_33	
Jnknown Numbers in Multiplication & Division CC.2.2.3.A.3_34	
1s Multiplication Facts 1-5 CC.2.2.3.A.3_4	
1s Multiplication Facts 6-12 CC.2.2.3.A.3_5	
2s Multiplication Facts 1-5 CC.2.2.3.A.3_6	
2s Multiplication Facts 6-12	

2s Multiplication Facts 1-5 CC.2.2.3.A.3_8
2s Multiplication Facts 6-10 CC.2.2.3.A.3_9
Add and Subtract with Multiples CC.2.2.3.A.4_1
Multi-Step Addition & Subtraction Problems CC.2.2.3.A.4_2
Patterns in a Table CC.2.2.3.A.4_3
Shapes CC.2.3.3.A.1_1
Area of Rectangles CC.2.3.3.A.2_1
Fractions CC.2.3.3.A.2_2
Turns CC.2.3.3.A.2_3
Volume CC.2.4.3.A.1_1

24hr Times CC.2.4.3.A.2_1		Tables CC.2.4.3.A.4_5
Add and Subtract Durations CC.2.4.3.A.2_2		Tally Charts CC.2.4.3.A.4_6
Unlisted Times & Scheduled Times		Timetables CC.2.4.3.A.4_7
CC.2.4.3.A.2_3 Elapsed Time	-	Area Expressions CC.2.4.3.A.5_1
CC.2.4.3.A.2_4 Future and Past Times CC.2.4.3.A.2_5	÷	Area Models CC.2.4.3.A.5_2
Time Sequences		Area of Rectangles CC.2.4.3.A.5_3
24hr Timetables	_	Perimeter of Polygons CC.2.4.3.A.6_1
CC.2.4.3.A.4_1 Frequency Tables	÷	Perimeter of Rectangles CC.2.4.3.A.6_2
CC.2.4.3.A.4_2		Perimeter of Rectilinear Shapes
Line Graphs CC.2.4.3.A.4_3		CC.2.4.3.A.6_3
Line Plots CC.2.4.3.A.4_4		

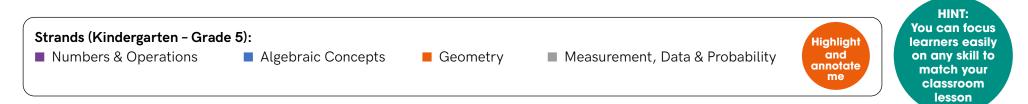




Compare, Order, and Round Numbers	_
CC.2.1.4.B.1_1	
Place Value CC.2.1.4.B.1_2	
Addition CC.2.1.4.B.2_1	
Column Subtraction CC.2.1.4.B.2_2	
Divide 2- or 3-Digit by 1-Digit Numbers CC.2.1.4.B.2_3	
Division with Powers of Ten CC.2.1.4.B.2_4	
Subtraction CC.2.1.4.B.2_5	
Compare and Order Fractions CC.2.1.4.C.1_1	
Equivalent Fractions CC.2.1.4.C.1_2	
Fraction Tenths and Hundredths CC.2.1.4.C.1_3	

Fraction Words CC.2.1.4.C.1_4
Add and Subtract Fractions with Like Denominators CC.2.1.4.C.2_1
Unit Fraction Multiplication CC.2.1.4.C.2_2
Decimal Tenths and Hundredths CC.2.1.4.C.3_1
Addition CC.2.2.4.A.1_1
Multiply 4-Digit by 1-Digit Numbers CC.2.2.4.A.1_10
Multiply by 2-Digit Numbers CC.2.2.4.A.1_11
Remainders CC.2.2.4.A.1_12
Subtraction CC.2.2.4.A.1_13
Column Subtraction CC.2.2.4.A.1_2

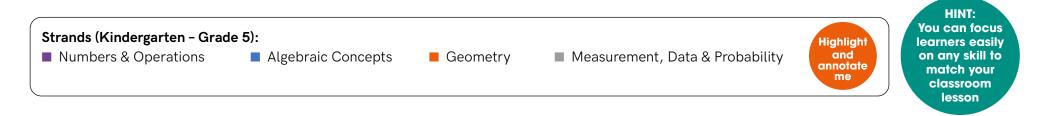
Divide 2- or 3-Digit by 1-Digit Numbers	Sequences CC.2.2.4.A.2_3	
CC.2.2.4.A.1_3	Count by 1,000s CC.2.2.4.A.4_1	
CC.2.2.4.A.1_4	Sequences	
Division with Powers of Ten CC.2.2.4.A.1_5	CC.2.2.4.A.4_2	
Dot Plots	CC.2.3.4.A.1_1	
CC.2.2.4.A.1_6	Angles CC.2.3.4.A.2_1	
CC.2.2.4.A.1_7	Line of Symmetry	
Multi-Step Addition or Subtraction	CC.2.3.4.A.3_1 Lines of Symmetry CC.2.3.4.A.3_2	
Problems CC.2.2.4.A.1_8		
Multi-Step Multiplication or Division Problems CC.2.2.4.A.1_9	Compare and Estimate Length, Mass, Volume CC.2.4.4.A.1_1	
Factors CC.2.2.4.A.2_1	Convert Customary Measures CC.2.4.4.A.1_2	
Multiplying 3 Numbers CC.2.2.4.A.2_2	Convert Metric Measures CC.2.4.4.A.1_3	



Grade 4 (continued)



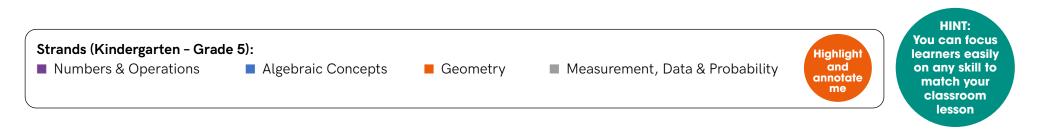
Convert Metric Measures with	Convert Units of Time	2 Times table (fluent)	5 Times table (fluent)	
Mixed Units	CC.2.4.4.A.1_5	 3 Times table (fluent)	10 Times table (fluent)	
CC.2.4.4.A.1_4	Angles CC.2.4.4.A.6_1	 4 Times table (fluent)		





Subtract Decimals CC.2.1.5.B.2-3
Add and Subtract Fractions CC.2.1.5.C.1_1
Add and Subtract Fractions with Related Denominators CC.2.1.5.C.1_2
Divide with Fractions and Whole Numbers
CC.2.1.5.C.2_1 Divide with Unit Fractions
CC.2.1.5.C.2_2 Find a Fraction of a Number
CC.2.1.5.C.2_3
CC.2.1.5.C.2_4 Expressions and Equations CC.2.2.5.A.1_1

Multi-Step Multiplication and Division Problems	Volume CC.2.4.5.A.5_2	
CC.2.2.5.A.1_2	Volume Word Problems CC.2.4.5.A.5_3	
CC.2.3.5.A.1_1	6 Times table (fluent)	
First Quadrant Coordinate Grid CC.2.3.5.A.1_2	7 Times table (fluent)	
	8 Times table (fluent)	
Plotting Polygons CC.2.3.5.A.1_3	9 Times table (fluent)	
Triangles	11 Times table (fluent)	
CC.2.3.5.A.2_1	12 Times table (fluent	
Measurement CC.2.4.5.A.1_1		
Data Displays CC.2.4.5.A.2_1		
Measurement CC.2.4.5.A.5_1		





Numerical expressions involving whole-numbers 6.EE.A.1	Write an inequality of the form to represent a constraint or condition 6.EE.B.8	Part 2 – Represent three- dimensional figures using nets made up of rectangles and triangles	Recognize opposite signs of numbers as indicating locations on the number line 6.NS.C.6.a	
6.EE.A.2.b Write, read, and evaluate expressions	intity parts of an expression iE.A.2.b ite, read, and evaluate pressions iE.A.2.c ply the properties of operations		Understand signs of numbers in quadrants of the coordinate plane 6.NS.C.6.b Understand a rational number as a point on the number line. 6.NS.C.6.c	
6.EE.A.2.cApply the properties of operations6.EE.A.3				
Identify when two expressions are equivalent 6.EE.A.4 Understand solving an equation or inequality 6.EE.B.5 Use variables to represent numbers 6.EE.B.6	Find the volume of a right rectangular prism with fractional edge lengths 6.G.A.2 Draw polygons in the coordinate plane given coordinates for the vertices 6.G.A.3 Part 1 – Represent three-	algorithm. 6.NS.B.2 ■	Interpret statements of inequality about the relative position of two numbers on	
		Fluently add, subtract, multiply, and divide multi-digit decimals 6.NS.B.3	6.NS.C.7.a Understand ordering and absolute value of rational numbers. 6.NS.C.7.c Understand the concept of a ratio 6.RP.A.1	
		Find the greatest common factor of two whole numbers less than or equal to 100		
		6.NS.B.4 ■		
Solve problems by writing equations 6.EE.B.7	dimensional figures using nets made up of rectangles and triangles 6.G.A.4	Understand that positive and negative number are used together to describe quantities 6.NS.C.5	Understand the concept of a unit rate 6.RP.A.2	

Strands (Grade 6 - 8):

Expressions & Equations (EE)

■ The Number System (NS)

- Ratios & Proportional Relationships (RP)Geometry (G)
- Statistics & Probability (SP)
- Functions (F)

HINT: You can focus learners easily on any skill to match your classroom lesson

Highlight and annotate me



Make tables of equivalent ratios 6.RP.A.3.a	Part 2 – Use ratio and rate reasoning to solve real-world and	Display numerical data in plots on a number line	Part 1 – Summarize numerical data sets in relation to their	
Solve unit rate problems including those involving unit pricing and	mathematical problems 6.RP.A.3.c	6.SP.B.4 Part 1 – Reporting the number of	context 6.SP.B.5.c	
constant speed. 6.RP.A.3.b	Use ratio and rate reasoning to solve real-world and	observations.	Part 2 – Summarize numerical data sets in relation to their	
Part 2 – Use ratio and rate reasoning to solve real-world and	mathematical problems 6.RP.A.3.d	Part 2 – Reporting the number of observations.	context 6.SP.B.5.c	
mathematical problems	Recognize a statistical question	6.SP.B.5.A	Part 3 – Summarize numerical	
6.RP.A.3.c	6.SP.A.1	Describing the nature of the	data sets in relation to their	
	Recognize that a measure of centre for a numerical data set 6.SP.A.3	attribute under investigation 6.SP.B.5.B	context 6.SP.B.5.c	-





Apply properties of operations 7.EE.A.1	Use facts about supplementary, complementary, vertical, and	Apply and extend previous understandings of addition ar subtraction to add and subtra- rational numbers 7.NS.A.1 Understand p + q as the numl located a distance q from p the positive or negative direct depending on whether q is positive or negative. 7.NS.A.1.b	
Solve mathematical problems posed with positive and negative	adjacent angles in a multi-step 7.G.B.5		
rational numbers 7.EE.B.3	Part 1 – Solve real-world and mathematical problems of two-		
Solve word problems leading to equations of the form px + q = r	and three-dimensional objects 7.G.B.6		
and p(x + q) = r 7.EE.B.4.a	Part 2 – Solve real-world and mathematical problems of two-		
Solve word problems leading to inequalities of the form px + q > r	and three-dimensional objects 7.G.B.6	Understand subtraction of ra	
or px + q < r 7.EE.B.4.b	Part 3 – Solve real-world and mathematical problems of two-	numbers as adding the additi inverse, p - q = p + (-q). 7.NS.A.1.c	
Describe the two-dimensional figures that result from slicing	and three-dimensional objects 7.G.B.6	Apply and extend previous understandings of addition a subtraction to add and subtr	
three-dimensional figures 7.G.A.3	Part 4 – Solve real-world and mathematical problems of two-		
Know the formulas for the area and circumference of a circle 7.G.B.4	and three-dimensional objects 7.G.B.6	rational numbers 7.NS.A.1.d	

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nd act Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

7.NS.A.2.c

Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

7.NS.A.2.d

Part 1 - Solve real-world and mathematical problems involving the four operations with rational numbers.

7.NS.A.3

Part 2 - Solve real-world and mathematical problems involving the four operations with rational numbers.

7.NS.A.3





Part 3 – Solve real-world and mathematical problems involving the four operations with rational numbers.	Recognize and represent proportional relationships between quantities. 7.RP.A.2.b		Understand that statistics can be used to gain information about a population by examining a sample of the population	Develop a probability model and use it to find probabilities of events. 7.SP.C.7.a
7.NS.A.3	Recognize and represent		7.SP.A.1	Understand that the probability of
Part 4 – Solve real-world and mathematical problems involving the four operations with rational	proportional relationships between quantities. 7.RP.A.2.c		Use data from a random sample to draw inferences about a population with an unknown	a compound event is the fraction of outcomes in the sample space for which the compound event
numbers. 7.NS.A.3	Part 1 – Use proportional relationships to solve multistep		characteristic of interest. 7.SP.A.2	occurs. 7.SP.C.8.A
Recognize and represent proportional relationships between quantities. 7.RP.A.2.a	ratio and percent problems. 7.RP.A.3		Understand that the probability of a chance event is a number	Find probabilities of compound events using lists, tables, tree
	Part 2 – Use proportional relationships to solve multistep ratio and percent problems. 7.RP.A.3		between 0 and 1 that expresses the likelihood of the event occurring. 7.SP.C.5	diagrams, and simulation. 7.SP.C.8.





Part 1 – Know and apply the properties of integer exponents to generate equivalent numerical expressions.	Part 1 – Perform operations with numbers expressed in scientific notation 8.EE.A.4.1	Understand that a function is a rule that assigns to each input exactly one output. 8.F.A.1	Verify experimentally the properties of rotations, reflections, and translations 8.G.A.1.a	
 8.EE.A.1 Part 2 - Know and apply the properties of integer exponents to generate equivalent numerical expressions. 8.EE.A.1 Use square root & cube root symbols to represent solutions to equations of the form x2 = p & x3 = p, where p is a positive rational number. 8.EE.A.2 Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities 8.EE.A.3 	Part 2 – Perform operations with numbers expressed in scientific notation 8.EE.A.4.1	Compare properties of two functions each represented in a different way 8.F.A.2	Verify experimentally the properties of rotations, reflections, and translations 8.G.A.1.b	
	Graph proportional relationships, interpreting the unit rate as the slope of the graph.Interpret the equation y = as defining a linear function 8.F.A.3		Understand that a two- dimensional figure is congruent to another if the second can	
	8.EE.B.5 Use similar triangles to explain why the slope M is the same between any two distinct points on a non-vertical line in the coordinate plane 8.EE.B.6 Analyze and solve pairs of simultaneous linear equations.	Construct a function to model a linear relationship between two quantities. 8.F.B.4	be obtained from the first by a sequence of rotations, reflections, and translations 8.G.A.2	
		Describe qualitatively the functional relationship between two quantities by analyzing a graph 8.F.B.5	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates. 8.G.A.3	
	8.EE.C.8.b	Verify experimentally the properties of rotations, reflections, and translations 8.G.A.1		

Strands (Grade 6 - 8):

Expressions & Equations (EE)

■ The Number System (NS)

- Ratios & Proportional Relationships (RP) Geometry (G)
- Statistics & Probability (SP)
- Functions (F)

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Use informal arguments to establish facts about the angle sum and exterior angle of	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	Know that numbers that are not rational are called irrational. 8.NS.A.1	Construct and interpret scatter plots for bivariate measurement data to investigate patterns
triangles	8.G.B.8	Use rational approximations of	of association between two
8.G.A.5	Know the formulas for the	irrational numbers to compare the	quantities. 8.SP.A.1
Apply the Pythagorean Theorem	volumes of cones, cylinders, and	size of irrational numbers	
to determine unknown side lengths in right triangles in two	spheres 8.G.C.9	8.NS.A.2 ■	Know that straight lines are widely used to model relationships
and three dimensions.	0.0.0.7		between two quantitative
8.G.B.7			variables.
			8.SP.A.2





Using our assessment library, you can select a pre-made assessment that is matched to the Mathematics Standards from the Common Core State Standards.

We have an assessment for each unit and have mapped them to our progression framework. Our detailed report can easily be exported and printed to save for your tracking and monitoring evidence.

	Kindergarten	5 Assessments	
	Grade 1	4 Assessments	
Gradaa K. E	Grade 2	4 Assessments	
Grades K-5	Grade 3	5 Assessments	
	Grade 4	6 Assessments	
	Grade 5	6 Assessments	
	Grade 6	8 Assessments	
Grades 6-8	Grade 7	6 Assessments	
	Grade 8	7 Assessments	

REMEMBER: You can also create your own custom assessments on Sumdog. Selecting the standards you want to assess.

Teacher Planning Template

SEMESTER 1

Class/Student Name:

Teacher Notes		
Challenges		
Focus Skills		
Sumdog Assessments		
Sumdog Homework		

SEMESTER 2



Grade:

SEMESTER 4

SEMESTER 3



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