

# Mathematics program of study: Florida Standards for Mathematics

Sumdog Scheme of Learning Kindergarten - Grade 8

Use our handy scheme of learning to help with your planning, tracking and monitoring

# How to use the Sumdog Scheme of Learning





When students first login to Sumdog, they will complete a diagnostic test, this will place them at the correct starting point in our scheme of learning.

Want to re-set the starting point or choose your own? No problem.



Our advanced learning engine will adapt the questions students receive.

Differentiation is taken care of (in a subtle way).

Questions cover reviews of past content and new, progressive learning following our scheme.



Children love our games.

They are rewarded with coins for their house, pet and garden.

# **Teacher Tools**



### Want to focus learning?

You can easily select the appropriate standard for a challenge for your class.



Data and reporting available making **tracking student progress** and assessment **moderation** a breeze!



Choose and set topics for homework, easily.

The best bit is we do the marking!



Keep your class motivated by creating competitions or why not enter a **regional or national contest** and see if you can win our trophy!



Our ready-made assessment library for Grades K-8 has an assessment for each mathematics domain, completely mapped to the Common Core State Standards.

Or easily make your own!



### **Growth Mindset**

With common misconceptions identified, use our questions as a teaching point, learning from mistakes!

# Kindergarten



Add within 20 MA.K.AR.1.2_1	Positions  MA.K.NSO.1.3_1	Add to 5 or 6 <b>MA.K.NSO.3.1_5</b>		Fact Families MA.K.NSO.3.2_5
Add 1 MA.K.AR.1.3_1	Compare Object Sets  MA.K.NSO.1.4_1	Add to 7, 8, or 9 MA.K.NSO.3.1_6	-	Subtract from 10 MA.K.NSO.3.2_6
Add within 10 MA.K.AR.1.3_2	10 More or 10 Less  MA.K.NSO.2.1_1	Add within 20 MA.K.NSO.3.1_7		Subtract from 11 MA.K.NSO.3.2_7
Subtract within 20 MA.K.AR.1.3_3	Count Up or Down by 1  MA.K.NSO.2.1_2	Count within 25 MA.K.NSO.3.1_8		Subtract from 12 MA.K.NSO.3.2_8
2D and 3D Shapes MA.K.GR.1.1_1	Compare and Order Numbers to	Subtract from 6 or 7 MA.K.NSO.3.1_9	-	Subtract from 2, 3, 4, or 5 <b>MA.K.NSO.3.2_9</b>
2D and 3D Shapes MA.K.GR.1.2_1	MA.K.NSO.2.3_1  Add to 1	Subtract within 10 MA.K.NSO.3.1_10		Subtract from 6 or 7 MA.K.NSO.3.2_10
Measure Length MA.K.M.1.3_1	MA.K.NSO.3.1_1  Add to 2	Add 1 MA.K.NSO.3.2_1		Subtract from 8 or 9 MA.K.NSO.3.2_11
Count within 10 MA.K.NSO.1.1_1	MA.K.NSO.3.1_2  Add to 3	Add within 10 MA.K.NSO.3.2_2	•	Subtract within 20 MA.K.NSO.3.2_12
Count within 25 MA.K.NSO.1.1_2	MA.K.NSO.3.1_3  Add to 4	Add within 20 MA.K.NSO.3.2_3	•	
Count within 5 MA.K.NSO.1.1_3	MA.K.NSO.3.1_4	Count within 25 MA.K.NSO.3.2_4	_	

### Strands (Kindergarten - Grade 5):

- Number Sense & Operations (NSO)
- Algebraic Reasoning (AR)

- Measurement (M)
- Geometric Reasoning (GR)
- Data Analysis & Probability (DP)
- Fractions (FR)





Add Four 1-Digit Numbers  MA.1.AR.1.1_1	Add and Subtract with Unknowns MA.1.AR.2.3_1	Compare and Order Money MA.1.M.2.3_2	Addition and Subtraction Word Problems
Add Four Numbers  MA.1.AR.1.1_2	Picture Graphs MA.1.DP.1.2_1	Count in 1s Within 1,000  MA.1.NSO.1.1_1	MA.1.NSO.2.2_5 Subtract from 13 or 14
Add Three Numbers  MA.1.AR.1.1_3	Tally Charts MA.1.DP.1.2_2	Skip Count MA.1.NSO.1.1_2	MA.1.NSO.2.2_6  Subtract from 15, 16, 17, or 18
Related Addition and Subtraction Equations	Fractions MA.1.FR.1.1_1	Numbers in Words MA.1.NSO.1.2_1	MA.1.NSO.2.2_7  Subtract Within 20
MA.1.AR.1.1_4  Add and Subtract with Money	Shapes MA.1.GR.1.1_1	Forms of Numbers  MA.1.NSO.1.3_1	MA.1.NSO.2.2_8  Add Multiples of Ten
MA.1.AR.1.2_1  Addition and Subtraction Word	Compare Length MA.1.M.1.2_1	Related Addition and Subtraction Equations	MA.1.NSO.2.3_1  Count Up and Down By 1
Problems  MA.1.AR.1.2_2	Time MA.1.M.2.1_1	MA.1.NSO.2.1_1  Add and Subtract with Unknowns	MA.1.NSO.2.3_2  One More/One Less
Tables MA.1.AR.1.2_3	Add and Subtract with Money  MA.1.M.2.2_1	MA.1.NSO.2.2_1  Add or Take Away 10	MA.1.NSO.2.3_3  Add 1-Digit to 2-Digit Number
Add and Subtract with Unknowns  MA.1.AR.2.1_1	Coins MA.1.M.2.2_2	MA.1.NSO.2.2_2  Add Three Numbers	MA.1.NSO.2.4_1  Subtract 1-Digit from
Related Addition and Subtraction Equations	Compare and Order Money MA.1.M.2.2_3	MA.1.NSO.2.2_3  Add Within 20	2-Digit Number  MA.1.NSO.2.5_1
MA.1.AR.2.1_2  True or False Equations  MA.1.AR.2.2_1	Coins MA.1.M.2.3_1	MA.1.NSO.2.2_4	Subtract Within 20 MA.1.NSO.2.5_2

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Comparison Problems MA.2.AR.1.1_1		2D Shapes MA.2.GR.1.1_1	_	Forms of Numbers MA.2.NSO.1.2_1		3-Digit Column Addition and Subtraction
Arrays MA.2.AR.3.2_1		2D Shapes MA.2.GR.1.2_1	_	Compare & Order Numbers MA.2.NSO.1.3_1		MA.2.NSO.2.4_2  Add 1-Digit Numbers within 1,000
Solve Equations with Arrays MA.2.AR.3.2_2		Perimeter MA.2.GR.2.1_1		Estimate Numbers on a Number Line	er	MA.2.NSO.2.4_3  Add with 3-Digit Numbers
Scaled Bar Graphs MA.2.DP.1.1_1	_	Perimeter MA.2.GR.2.2_1	•	MA.2.NSO.1.3_2  More/Less	_	MA.2.NSO.2.4_4  Add with Multiples of 10
Bar Graphs MA.2.DP.1.2_1		Estimate Lengths MA.2.M.1.1_1	•	MA.2.NSO.2.2_1 2-Digit Addition	_	MA.2.NSO.2.4_5  Add with Multiples of 100
Dot Plots MA.2.DP.1.2_2		Add Lengths MA.2.M.1.3_1	_	MA.2.NSO.2.3_1 2-Digit Column Addition and	_	MA.2.NSO.2.4_6  Related Facts
Pictographs MA.2.DP.1.2_3		Subtract Lengths MA.2.M.1.3_2		Subtraction MA.2.NSO.2.3_2		MA.2.NSO.2.4_7  Subtract 1-Digit Numbers within
Scaled Bar Graphs MA.2.DP.1.2_4		Time MA.2.M.2.1_1		Subtract 2-Digit Numbers  MA.2.NSO.2.3_3		1,000 MA.2.NSO.2.4_8
Tables MA.2.DP.1.2_5	_	Money MA.2.M.2.2_1	_	Subtract Multiples of 10  MA.2.NSO.2.3_4		Subtract Multiples of 10 MA.2.NSO.2.4_9
Partition Shapes  MA.2.FR.1.1_1	_	Forms of Numbers MA.2.NSO.1.1_1	_	2-Digit Addition MA.2.NSO.2.4_1		Subtract Multiples of 100 MA.2.NSO.2.4_10
·····-··	_			-		Subtract with 3-Digit Numbers  MA.2.NSO.2.4_11

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Area Models to Multiply 2- or 3-Digit by 1-Digit	Time Sequences MA.3.AR.3.3_2	Fraction Sequences MA.3.FR.2.1_2	Add Measures  MA.3.M.1.2_1
MA.3.AR.1.1_1	24hr Time tables, Part 2	Equivalent Fractions	Subtract Measures
Multiplying Three Numbers MA.3.AR.1.1_2	MA.3.DP.1.2_1	MA.3.FR.2.2_1	MA.3.M.1.2_2  Volume
Identify Values in a Table	Line Graphs MA.3.DP.1.2_2	Lines <b>MA.3.GR.1.1_1</b>	■ MA.3.M.1.2_3
MA.3.AR.1.2_1  Multiplication and Division Word	Line Plots MA.3.DP.1.2_3	Classify Quadrilaterals MA.3.GR.1.2_1	Weight  MA.3.M.1.2_4
Problems MA.3.AR.1.2_2	Time tables, Part 2 MA.3.DP.1.2_4	Lines of Symmetry MA.3.GR.1.3_1	24hr Clocks  MA.3.M.2.1_1
Multi-Step Addition or Subtraction Problems  MA.3.AR.1.2_3	Forms of Fractions MA.3.FR.1.1_1	One Line of Symmetry MA.3.GR.1.3_2	24hr Timetables, Part 1  MA.3.M.2.2_1
Identify Correct Equation  MA.3.AR.2.1_1	Turns MA.3.FR.1.1_2	Area of Rectangles MA.3.GR.2.1_1	Elapsed Times  MA.3.M.2.2_2
Identify Correct Equation  MA.3.AR.2.2_1	Unit Fractions MA.3.FR.1.1_3	Area of Rectangles MA.3.GR.2.2_1	Time Sequences  MA.3.M.2.2_3
Identify Unknown in Division  MA.3.AR.2.3_1	Unit Fractions MA.3.FR.1.2_1	Area of Rectangles MA.3.GR.2.3_1	Timetables, Part 1  MA.3.M.2.2_4
Identify Unknown in Multiplication MA.3.AR.2.3_2	Forms of Fractions MA.3.FR.1.3_1	Perimeter of Quadrilaterals MA.3.GR.2.3_2	Number Forms MA.3.NSO.1.1_1
Numerical Patterns MA.3.AR.3.3_1	Compare and Order Fractions MA.3.FR.2.1_1	Area of Rectangles MA.3.GR.2.4_1	•

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Numbers in Words MA.3.NSO.1.1_2	Subtract 1s within 1,000 MA.3.NSO.2.1_6	x11 Part 2 <b>MA.3.NSO.2.2_8</b>	Divide 50-69 ■ MA.3.NSO.2.4_6
Number Forms MA.3.NSO.1.2_1	Subtract Multiples of 10 MA.3.NSO.2.1_7	x12 Part 1 MA.3.NSO.2.2_9	Divide 70-100  MA.3.NSO.2.4_7
Compare and Order Numbers  MA.3.NSO.1.3_1	Subtract Multiples of 100 MA.3.NSO.2.1_8	x12 Part 2 MA.3.NSO.2.2_10	Division Tables 2, 5, 10, 11, 12  MA.3.NSO.2.4_8
Round Numbers MA.3.NSO.1.4_1	Subtract Up to 6-Digit Numbers MA.3.NSO.2.1_9	Halving and Doubling MA.3.NSO.2.3_1	Division Tables 3, 4, 8, 6, 9, 7  MA.3.NSO.2.4_9
Add 10s, 100s, and 1,000s within 10,000	Division Tables 2, 5, 10, 11, 12  MA.3.NSO.2.2_1	Multiply 1-Digit Numbers by Multiples of Powers of 10	Identify Correct Equation MA.3.NSO.2.4_10
MA.3.NSO.2.1_1  Add Up to 6-Digit Numbers	Division Tables 3, 4, 8, 6, 9, 7  MA.3.NSO.2.2_2	MA.3.NSO.2.3_2 Divide 1-9	Identify Related Equations  MA.3.NSO.2.4_11
MA.3.NSO.2.1_2	Halving and Doubling MA.3.NSO.2.2_3	MA.3.NSO.2.4_1 Divide 10-19	Related Facts 2, 5, 10  MA.3.NSO.2.4_12
MA.3.NSO.2.1_3	Identify Related Equations  MA.3.NSO.2.2_4	MA.3.NSO.2.4_2 Divide 20-29	Times Tables MA.3.NSO.2.4_13
Multi-Step Addition or Subtraction Problems  MA.3.NSO.2.1_4	Related Facts 2, 5, 10  MA.3.NSO.2.2_5	MA.3.NSO.2.4_3 Divide 30-39	x10 Part 1  MA.3.NSO.2.4_14
Subtract 10s, 100s, and 1,000s within 10,000	Times Tables MA.3.NSO.2.2_6	MA.3.NSO.2.4_4 Divide 40-49	x10 Part 2 MA.3.NSO.2.4_15
MA.3.NSO.2.1_5	x11 Part 1 MA.3.NSO.2.2_7	MA.3.NSO.2.4_5	•

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x2 Part 1 MA.3.NSO.2.4_16		x4 MA.3.NSO.2.4_1		x6 <b>MA.3.NSO.2.4_22</b>		x9 MA.3.NSO.2.4_25	
x2 Part 2 MA.3.NSO.2.4_17		x5 Part 1 MA.3.NSO.2.4_20		x7 MA.3.NSO.2.4_23			
x3 MA.3.NSO.2.4_18	•	x5 Part 2 MA.3.NSO.2.4_21	•	x8 MA.3.NSO.2.4_24	•		

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Divide 2- and 3-Digit Numbers  MA.4.AR.1.1_1	Equivalent Tenths, Hundredths, and Thousandths	Fraction Word Problems MA.4.FR.2.2_3	Multiply with Multi-Digit Numbers  MA.4.GR.2.1_2	
Division Word Problems MA.4.AR.1.1_2	MA.4.FR.1.1_1 Equivalent Tenths, Hundredths,	Pictorial Fractions MA.4.FR.2.2_4	Perimeter of Composite Shapes  MA.4.GR.2.1_3	
Fraction Word Problems MA.4.AR.1.2_1	and Thousandths  MA.4.FR.1.2_1	Plot, Compare, and Order Fractions	Perimeter of Rectangles  MA.4.GR.2.1_4	
Unit Fraction Multiplication MA.4.AR.1.3_1	Equivalent Fractions  MA.4.FR.1.3_1	MA.4.FR.2.2_5 Unit Fraction Multiplication	Compare Measures MA.4.M.1.2_1	
True Equations MA.4.AR.2.1_1	Equivalent Tenths, Hundredths, and Thousandths  MA.4.FR.1.3_2	MA.4.FR.2.2_6  Fraction of a Number	Convert Customary Mixed Unit Measures	
Arrays MA.4.AR.2.2_1	Pictorial Fractions  MA.4.FR.1.4_1	MA.4.FR.2.4_1 Unit Fraction Multiplication MA.4.FR.2.4_2	MA.4.M.1.2_2  Convert Decimal Measures  MA.4.M.1.2_3	
Dot Plots MA.4.AR.2.2_2	Plot, Compare, and Order - Fractions	Classify Angles MA.4.GR.1.1_1	Convert Metric Mixed Unit Measures	
MA.4.AR.3.1_1	MA.4.FR.1.4_2  Add and Subtract Fractions	Measure Angles MA.4.GR.1.2_1	MA.4.M.1.2_4  Convert Whole-Number Measures	
Multiplying Three Numbers MA.4.AR.3.1_2	Greater Than 1  MA.4.FR.2.2_1 ■	Calculate Angle Measures	MA.4.M.1.2_5	
Numerical Patterns  MA.4.AR.3.2_1  Add and Subtract Fractions with  Like Denominators  MA.4.FR.2.2_2		MA.4.GR.1.3_1  Area of Rectangles  MA.4.GR.2.1_1	Measurement Tables MA.4.M.1.2_6	

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Time MA.4.M.1.2_7	Read Decimals MA.4.NSO.1.5_3	Multiply with Multi-Digit Numbers  MA.4.NSO.2.3_1	Mentally Divide 2- & 3-Digit Numbers
Money Word Problems MA.4.M.2.2_1	Division Tables and Equations  MA.4.NSO.2.1_1	Divide 2- and 3-Digit Numbers  MA.4.NSO.2.4_1	MA.4.NSO.2.5_3  Multiply with Multi-Digit Numbers
Place Value MA.4.NSO.1.1_1	Multiply with 3 MA.4.NSO.2.1_2	Divide 4-Digit Numbers  MA.4.NSO.2.4_2	MA.4.NSO.2.5_4  Add Decimals
Forms of Numbers	Multiply with 4	Divide by 2-Digit or 3-Digit	MA.4.NSO.2.7_1
MA.4.NSO.1.2_1	MA.4.NSO.2.1_3	Numbers MA.4.NSO.2.4_3	Subtract Decimals MA.4.NSO.2.7_2
Compare and Order Numbers  MA.4.NSO.1.3_1	Multiply with 6, 9, and 7  MA.4.NSO.2.1_4  ■	Divide Multi-Digit Numbers	2 Times table (fluent)
Round Numbers	Multiply with 8	MA.4.NSO.2.4_4	3 Times table (fluent)
MA.4.NSO.1.4_1	MA.4.NSO.2.1_5 ■	Divide by 2-Digit or 3-Digit	4 Times table (fluent)
Compare Decimals MA.4.NSO.1.5_1	Multiplying Three Numbers MA.4.NSO.2.1_6	Numbers MA.4.NSO.2.5_1	5 Times table (fluent)
Order Decimals MA.4.NSO.1.5_2	Multiply with Multi-Digit Numbers MA.4.NSO.2.2_1	Estimate Products and Quotients MA.4.NSO.2.5_2	10 Times table (fluent)

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Fraction Word Problems MA.5.AR.1.2_1	Multiply Fractions  MA.5.FR.2.2_1	Volume Word Problems  MA.5.GR.3.3_3	Multiply or Divide by a Power of  10
Write Expressions MA.5.AR.2.1_1	Multiply Fractions  MA.5.FR.2.3_1	Coordinate Plane  MA.5.GR.4.1_1	MA.5.NSO.2.1_3  Tables
Evaluate Expressions MA.5.AR.2.2_1	Divide Fractions  MA.5.FR.2.4_1	First Quadrant of Coordinate Plane	MA.5.NSO.2.1_4  Multiply or Divide by a Power of
Comparison Problems MA.5.AR.2.4_1	Triangles  MA.5.GR.1.1_1	MA.5.GR.4.2_1  Durations	10 MA.5.NSO.2.2_1
Sequences MA.5.AR.3.1_1	3D Solids MA.5.GR.1.2_1	MA.5.M.1.1_1  Numbers in Words	Multiply Decimal Numbers MA.5.NSO.2.4_1
Frequency Tables MA.5.DP.1.2_1	Volume from Picture MA.5.GR.3.1_1	MA.5.NSO.1.2_1  Place Value	Multiply or Divide by a Power of 10  MA.5.NSO.2.4_2
Measures of Center MA.5.DP.1.2_2	Volume from Formula  MA.5.GR.3.2_1	MA.5.NSO.1.3_1  Round Numbers	Multiply Decimal Numbers  MA.5.NSO.2.5_1
Stem-and-Leaf Plots MA.5.DP.1.2_3 ■	Volume from Picture  MA.5.GR.3.2_2	MA.5.NSO.1.5_1  Multiply 2-Digit by 2-Digit	6 Times table (fluent)
Add and Subtract Fractions  MA.5.FR.2.1_1	Volume Word Problems  MA.5.GR.3.2_3	Numbers  MA.5.NSO.2.1_1	7 Times table (fluent)  8 Times table (fluent)
Add and Subtract Fractions with Related Denominators	Volume from Formula  MA.5.GR.3.3_1	Multiply 4-Digit by 1-Digit Numbers	9 Times table (fluent)
MA.5.FR.2.1_2	Volume from Picture MA.5.GR.3.3_2	— MA.5.NSO.2.1_2 ■	11 Times table (fluent)  12 Times table (fluent)

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Numerical expressions involving whole-numbers

6.EE.A.1

Identify parts of an expression

6.EE.A.2.b

Write, read, and evaluate expressions

6.EE.A.2.c

Apply the properties of operations

6.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

Solve problems by writing equations

6.EE.B.7

Write an inequality of the form to represent a constraint or condition

6.EE.B.8

Use variables to represent two quantities in a real-world problem

6.EE.C.9

Find the area of right triangles, other triangles

6.G.A.1

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 threedimensional figures using nets made up of rectangles and triangles

6.G.A.4

Part 2 - Represent threedimensional figures using nets made up of rectangles and triangles

6.G.A.4

Interpret and compute quotients of fractions

6.NS.A.1

Fluently divide multi-digit numbers using the standard algorithm.

6.NS.B.2

Fluently add, subtract, multiply, and divide multi-digit decimals

6.NS.B.3

Find the greatest common factor of two whole numbers less than or equal to 100

6.NS.B.4

Understand that positive and negative number are used together to describe quantities **6.NS.C.5** 

Recognize opposite signs of numbers as indicating locations on the number line

6.NS.C.6.a

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

Interpret statements of inequality about the relative position of two numbers on

6.NS.C.7.a

Understand ordering and absolute value of rational numbers.

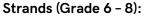
6.NS.C.7.c

Understand the concept of a ratio

6.RP.A.1

Understand the concept of a unit rate

6.RP.A.2



- Expressions & Equations (EE)
- The Number System (NS)
- Ratios & Proportional Relationships (RP)
- Geometry (G)

- Statistics & Probability (SP)
- Functions (F)



### Grade 6 (continued)



Make tables of equivalent ratios

### 6.RP.A.3.a

Solve unit rate problems including those involving unit pricing and constant speed.

### 6.RP.A.3.b

Part 2 – Use ratio and rate reasoning to solve real-world and mathematical problems

6.RP.A.3.c

Part 2 – Use ratio and rate reasoning to solve real-world and mathematical problems

### 6.RP.A.3.c

Use ratio and rate reasoning to solve real-world and mathematical problems

### 6.RP.A.3.d

Recognize a statistical question

### 6.SP.A.1

Recognize that a measure of centre for a numerical data set **6.SP.A.3** 

Display numerical data in plots on a number line

### 6.SP.B.4

Part 1 - Reporting the number of observations.

### 6.SP.B.5.A

Part 2 - Reporting the number of observations.

### 6.SP.B.5.A

Describing the nature of the attribute under investigation **6.SP.B.5.B** 

Part 1 – Summarize numerical data sets in relation to their context

### 6.SP.B.5.c

Part 2 – Summarize numerical data sets in relation to their context

### 6.SP.B.5.c

Part 3 – Summarize numerical data sets in relation to their context

6.SP.B.5.c

### Strands (Grade 6 - 8):

- Expressions & Equations (EE)
- The Number System (NS)
- Ratios & Proportional Relationships (RP)
- Geometry (G)

- Statistics & Probability (SP)
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Apply properties of operations

### 7.EE.A.1

Solve mathematical problems posed with positive and negative rational numbers

### 7.EE.B.3

Solve word problems leading to equations of the form px + q = r and p(x + q) = r

### 7.EE.B.4.a

Solve word problems leading to inequalities of the form px + q > r or px + q < r

### 7.EE.B.4.b

Describe the two-dimensional figures that result from slicing three-dimensional figures

### 7.G.A.3

Know the formulas for the area and circumference of a circle **7.G.B.4** 

Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step **7.G.B.5** 

Part 1 – Solve real-world and mathematical problems of twoand three-dimensional objects

### 7.G.B.6

Part 2 – Solve real-world and mathematical problems of twoand three-dimensional objects

### 7.G.B.6

Part 3 – Solve real-world and mathematical problems of twoand three-dimensional objects

### 7.G.B.6

Part 4 – Solve real-world and mathematical problems of twoand three-dimensional objects **7.G.B.6**  Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers

### 7.NS.A.1

Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative.

### 7.NS.A.1.b

Understand subtraction of rational numbers as adding the additive inverse, p - q = p + (-q).

### 7.NS.A.1.c

Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers

### 7.NS.A.1.d

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

### Strands (Grade 6 - 8):

- Expressions & Equations (EE)
- The Number System (NS)
- Ratios & Proportional Relationships (RP)
- Geometry (G)

- Statistics & Probability (SP)
- Functions (F)



### Grade 7 (continued)



Part 3 – Solve real-world and mathematical problems involving the four operations with rational numbers.

### 7.NS.A.3

Part 4 – Solve real-world and mathematical problems involving the four operations with rational numbers.

### 7.NS.A.3

Recognize and represent proportional relationships between quantities.

7.RP.A.2.a

Recognize and represent proportional relationships between quantities.

### 7.RP.A.2.b

Recognize and represent proportional relationships between quantities.

### 7.RP.A.2.c

Part 1 – Use proportional relationships to solve multistep ratio and percent problems.

### 7.RP.A.3

Part 2 – Use proportional relationships to solve multistep ratio and percent problems.

7.RP.A.3

Understand that statistics can be used to gain information about a population by examining a sample of the population

### 7.SP.A.1

Use data from a random sample to draw inferences about a population with an unknown characteristic of interest.

### 7.SP.A.2

Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring.

7.SP.C.5

Develop a probability model and use it to find probabilities of events.

### 7.SP.C.7.a

Understand that the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.

### 7.SP.C.8.A

Find probabilities of compound events using lists, tables, tree diagrams, and simulation.

7.SP.C.8.

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Part 1 - Know and apply the properties of integer exponents to generate equivalent numerical expressions.

### 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 1 - Perform operations with numbers expressed in scientific notation

### 8.EE.A.4.1

Part 2 – Perform operations with numbers expressed in scientific notation

### 8.EE.A.4.1

Graph proportional relationships, interpreting the unit rate as the slope of the graph.

### 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.

### 8.EE.C.8.b

Understand that a function is a rule that assigns to each input exactly one output.

### 8.F.A.1

Compare properties of two functions each represented in a different way

### 8.F.A.2

Interpret the equation y = mx + b as defining a linear function

### 8.F.A.3

Construct a function to model a linear relationship between two quantities.

### 8.F.B.4

Describe qualitatively the functional relationship between two quantities by analyzing a graph

### 8.F.B.5

Verify experimentally the properties of rotations, reflections, and translations **8.G.A.1** 

# Verify experimentally the properties of rotations, reflections, and translations

### 8.G.A.1.a

Verify experimentally the properties of rotations, reflections, and translations

### 8.G.A.1.b

Understand that a twodimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations

### 8.G.A.2

Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.

### 8.G.A.3

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### **Grade 8 (continued)**



Use informal arguments to establish facts about the angle sum and exterior angle of triangles

8.G.A.5

Apply the Pythagorean Theorem to Determine unknown side lengths in right triangles in two and three dimensions.

8.G.B.7

Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

8.G.B.8

Know the formulas for the volumes of cones, cylinders, and spheres

8.G.C.9

Know that numbers that are not rational are called irrational.

8.NS.A.1

Use rational approximations of irrational Numbers to compare the size of irrational numbers

8.NS.A.2

Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities.

8.SP.A.1

Know that straight lines are widely used to model relationships between two quantitative variables.

8.SP.A.2

Strands (Grade 6 - 8):

- Expressions & Equations (EE)
- The Number System (NS)
- Ratios & Proportional Relationships (RP)
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- Statistics & Probability (SP)
- Functions (F)



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Grades K-5	Grade 1	4 Assessments
	Grade 2	4 Assessments
	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

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