EUREKA MATH[®]

G R E A T M I N D S

Grade 1 | New Jersey Student Learning Standards for Mathematics Correlation to *Eureka Math®*

About Eureka Math

Created by Great Minds®, a mission-driven Public Benefit Corporation, *Eureka Math*® helps teachers deliver unparalleled math instruction that provides students with a deep understanding and fluency in math. Crafted by teachers and math scholars, the curriculum carefully sequences the mathematical progressions to maximize coherence from Prekindergarten through Precalculus—a principle tested and proven to be essential in students' mastery of math.

Teachers and students using *Eureka Math* find the trademark "Aha!" moments in *Eureka Math* to be a source of joy and inspiration, lesson after lesson, year after year.

Aligned

Great Minds offers detailed analyses that demonstrate how each grade of *Eureka Math* aligns with specific state standards. Access these free alignment studies at greatminds.org/state-studies.

Data

Schools and districts nationwide are experiencing student growth and impressive test scores after using *Eureka Math*. See their stories and data at <u>greatminds.org/data</u>.

Full Suite of Resources

Great Minds offers the *Eureka Math* curriculum as PDF downloads for free, noncommercial use. Access the free PDFs at <u>greatminds.org/math/curriculum</u>.

The teacher-writers who created the curriculum have also developed essential resources, available only from Great Minds, including the following:

- · Printed material in English and Spanish
- Digital resources
- Professional development
- Classroom tools and manipulatives
- Teacher support materials
- · Parent resources

Standards for Mathematical Practice

Aligned Components of Eureka Math

MP.1

Make sense of problems and persevere in solving them.

MP.2

Reason abstractly and quantitatively.

MP.3

Construct viable arguments and critique the reasoning of others.

MP.4

Model with mathematics.

MP.5

Use appropriate tools strategically.

MP.6

Attend to precision.

MP.7

Look for and make use of structure.

MP.8

Look for and express regularity in repeated reasoning.

Lessons in every module engage students in mathematical practices. These are designated in the Module Overview and labeled in lessons.

For example:

A STORY OF UNITS

Lesson 2 1 • 2



- T: So, even though they added two different numbers together first, did they get the same total?
- T: Wow! Okay. Let's try this again. Let's use Bob's strategy of making ten from two of our addends. (Write 7 + 5 + 3 =____.) Write the equation. Draw to show the three amounts.
- S: (Draw to show the three quantities.)
- T: What two numbers make ten?
- T: Good. Show that 7 and 3 make ten in your drawing by circling like we did yesterday with the string.



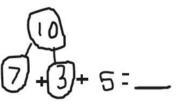
- S: (Circle the 3 and the 7, making a group of 10.)
- Here is a new number sentence that shows what numbers you added first. (Write 7 + 3 + 5 = ____.)
- T: I'll make a number bond to show how you made ten from two numbers. (Bond the 7 and 3 to make ten.)
- T: You just showed 10 and 5 more, which equals...?
- T: Good. I'll show how we solved for the unknown. I'll write the new number sentence explaining what we just did, starting with 10.
- S: $(Solve 7 + 3 + 5 = ___ while the teacher writes 10 + 5 = 15.)$
- T: Jo showed us at the beginning of the lesson that she could solve from left to right, without moving the addends around, in order to get the same answer as Bob. Work and talk with your partner to see if this is

Repeat this process using the following suggested sequence: 9 + 2 + 1, 2 + 4 + 8 (highlighting that students might begin with the 8 rather than the 2), 4 + 3 + 6, and 3 + 8 + 7. Students complete the number sentence while the teacher completes the drawing for the third example.



NOTES ON **MULTIPLE MEANS** OF ENGAGEMENT:

Addends should be chosen so that students can easily identify the partners to ten, recognizing that they can add these two addends first, regardless of where they are positioned within the number sentence. If students are not fluent with 7 and 3, they may be replaced with 9 and 1, respectively.



Operations and Algebraic Thinking

1.OA.A Represent and solve problems involving addition and subtraction.

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Aligned Components of Eureka Math

1.OA.A.1

Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

G1 M1 Topic B: Counting On from Embedded Numbers

G1 M1 Topic C: Addition Word Problems

G1 M1 Lesson 25: Solve add to with change unknown math stories with addition, and relate to subtraction. Model with materials, and write corresponding number sentences.

G1 M1 Topic H: Subtraction Word Problems

G1 M2 Lesson 1: Solve word problems with three addends, two of which make ten.

G1 M2 Lesson 3: Make ten when one addend is 9.

G1 M2 Lesson 4: Make ten when one addend is 9.

G1 M2 Lesson 7: Make ten when one addend is 8.

G1 M2 Lesson 8: Make ten when one addend is 8.

G1 M2 Lesson 11: Share and critique peer solution strategies for put together with total unknown word problems.

G1 M2 Lesson 12: Solve word problems with subtraction of 9 from 10.

G1 M2 Lesson 13: Solve word problems with subtraction of 9 from 10.

G1 M2 Lesson 21: Share and critique peer solution strategies for take from with result unknown and take apart with addend unknown word problems from the teens.

G1 M2 Lesson 22: Solve put together/take apart with addend unknown word problems, and relate counting on to the take from ten strategy.

G1 M2 Lesson 23: Solve add to with change unknown problems, relating varied addition and subtraction strategies.

G1 M2 Lesson 24: Strategize to solve take from with change unknown problems.

G1 M2 Lesson 27: Solve addition and subtraction problems decomposing and composing teen numbers as 1 ten and some ones.

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1.OA.A.1 continued	G1 M2 Lesson 28: Solve addition problems using ten as a unit, and write two-step solutions.
	G1 M2 Lesson 29: Solve subtraction problems using ten as a unit, and write two-step solutions.
	G1 M3 Lesson 9: Answer compare with difference unknown problems about lengths of two different objects measured in centimeters.
	G1 M3 Lesson 12: Ask and answer varied word problem types about a data set with three categories
	G1 M3 Lesson 13: Ask and answer varied word problem types about a data set with three categories
	G1 M4 Topic E: Varied Problem Types Within 20
	G1 M6 Topic A: Comparison Word Problems
	G1 M6 Topic F: Varied Problem Types Within 20
1.OA.A.2	G1 M2 Lesson 1: Solve word problems with three addends, two of which make ten.
Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	G1 M2 Lesson 2: Use the associative and commutative properties to make ten with three addends.

Operations and Algebraic Thinking

1.OA.B Understand and apply properties of operations and the relationship between addition and subtraction.

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Standards for Mathematics	Aligned Components of Eureka Math
1.OA.B.3 Apply properties of operations	G1 M1 Lesson 19: Represent the same story scenario with addends repositioned (the commutative property).
as strategies to add and subtract.	G1 M1 Lesson 20: Apply the commutative property to count on from a larger addend.
	G1 M1 Lesson 22: Look for and make use of repeated reasoning on the addition chart by solving and analyzing problems with common addends.
	G1 M1 Lesson 24: Practice to build fluency with facts to 10 .
	G1 M2 Topic A: Counting On or Making Ten to Solve Result Unknown and Total Unknown Problems
	G1 M2 Lesson 12: Solve word problems with subtraction of 9 from 10 .
	G1 M2 Lesson 13: Solve word problems with subtraction of 9 from 10 .
	G1 M2 Lesson 14: Model subtraction of 9 from teen numbers.
	G1 M2 Lesson 15: Model subtraction of 9 from teen numbers.
	G1 M2 Lesson 16: Relate counting on to making ten and taking from ten.
	G1 M2 Lesson 17: Model subtraction of 8 from teen numbers.
	G1 M2 Lesson 18: Model subtraction of 8 from teen numbers.
	G1 M2 Lesson 19: Compare efficiency of counting on and taking from ten.
	G1 M4 Topic D: Addition of Tens or Ones to a Two-Digit Number
1.OA.B.4	G1 M1 Topic G: Subtraction as an Unknown Addend Problem
Understand subtraction as an unknown-addend problem.	G1 M1 Lesson 29: Solve take apart with addend unknown math stories with math drawings, equations, and statements, circling the known part to find the unknown.
	G1 M1 Lesson 30: Solve add to with change unknown math stories with drawings, relating addition and subtraction.
	G1 M1 Lesson 31: Solve take from with change unknown math stories with drawings.

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1.OA.B.4 continued	G1 M1 Lesson 32: Solve put together/take apart with addend unknown math stories.
	G1 M2 Lesson 16: Relate counting on to making ten and taking from ten.
	G1 M2 Lesson 19: Compare efficiency of counting on and taking from ten.
	G1 M2 Lesson 21: Share and critique peer solution strategies for take from with result unknown and take apart with addend unknown word problems from the teens.
	G1 M2 Lesson 22: Solve put together/take apart with addend unknown word problems, and relate counting on to the take from ten strategy.
	G1 M2 Lesson 23: Solve add to with change unknown problems, relating varied addition and subtraction strategies.

Operations and Algebraic Thinking

1.OA.C Add and subtract within 20.

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G1 M2 Lesson 24: Strategize to solve take from with change unknown problems.

1.OA.C.5	G1 M1 Lesson 3: See and describe numbers of objects using $1\ \mathrm{more}\ \mathrm{within}\ 5\mathrm{-group}\ \mathrm{configurations}.$
Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	G1 M1 Topic B: Counting On from Embedded Numbers
	G1 M1 Topic D: Strategies for Counting On
	G1 M1 Topic G: Subtraction as an Unknown Addend Problem
	G1 M1 Lesson 33: Model 0 less and 1 less pictorially and as subtraction number sentences.

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1.OA.C.6

Add and subtract within 20, demonstrating accuracy and efficiency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8+6=8+2+4=10+4=14); decomposing a number leading to a ten (e.g., 13-4=13-3-1=10-1=9); using the relationship between addition and subtraction (e.g., knowing that 8+4=12, one knows 12-8=4); and creating equivalent but easier or known sums (e.g., adding 6+7 by creating the known equivalent 6+6+1=12+1=13).

G1 M1 Topic A: Embedded Numbers and Decompositions

G1 M1 Topic B: Counting On from Embedded Numbers

G1 M1 Topic C: Addition Word Problems

G1 M1 Topic D: Strategies for Counting On

G1 M1 Topic F: Development of Addition Fluency Within 10

G1 M1 Topic G: Subtraction as an Unknown Addend Problem

G1 M1 Topic I: Decomposition Strategies for Subtraction

G1 M1 Topic J: Development of Subtraction Fluency Within 10

G1 M2 Lesson 2: Use the associative and commutative properties to make ten with three addends.

G1 M2 Lesson 3: Make ten when one addend is 9.

G1 M2 Lesson 4: Make ten when one addend is 9.

G1 M2 Lesson 5: Compare efficiency of counting on and making ten when one addend is 9.

G1 M2 Lesson 6: Use the commutative property to make ten.

G1 M2 Lesson 7: Make ten when one addend is 8.

G1 M2 Lesson 8: Make ten when one addend is 8.

G1 M2 Lesson 9: Compare efficiency of counting on and making ten when one addend is 8.

G1 M2 Lesson 10: Solve problems with addends of 7, 8, and 9.

G1 M2 Lesson 11: Share and critique peer solution strategies for put together with total unknown word problems.

G1 M2 Topic B: Counting On or Taking from Ten to Solve Result Unknown and Total Unknown Problems

G1 M2 Lesson 25: Strategize and apply understanding of the equal sign to solve equivalent expressions.

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1.OA.C.6 continued	G1 M2 Lesson 27: Solve addition and subtraction problems decomposing and composing teen numbers as 1 ten and some ones.
	G1 M2 Lesson 28: Solve addition problems using ten as a unit, and write two-step solutions.
	G1 M2 Lesson 29: Solve subtraction problems using ten as a unit, and write two-step solutions.
	G1 M6 Topic G: Culminating Experiences

Operations and Algebraic Thinking

1.OA.D Work with addition and subtraction equations.

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Aligned Components of Eureka Math

1.OA.D.7

Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.

G1 M1 Lesson 17: Understand the meaning of the equal sign by pairing equivalent expressions and constructing true number sentences.

G1 M1 Lesson 18: Understand the meaning of the equal sign by pairing equivalent expressions and constructing true number sentences.

G1 M2 Lesson 25: Strategize and apply understanding of the equal sign to solve equivalent expressions.

Aligned Components of Eureka Math

1.OA.D.8

Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. G1 M1 Lesson 11: Solve add to with change unknown math stories as a context for counting on by drawing, writing equations, and making statements of the solution.

G1 M1 Lesson 12: Solve add to with change unknown math stories using 5-group cards.

G1 M1 Lesson 13: Tell put together with result unknown, add to with result unknown, and add to with change unknown stories from equations.

G1 M1 Lesson 16: Count on to find the unknown part in missing addend equations such as $6 + \underline{\hspace{0.5cm}} = 9$. Answer, "How many more to make 6, 7, 8, 9, and 10?"

G1 M1 Lesson 30: Solve add to with change unknown math stories with drawings, relating addition and subtraction.

G1 M1 Lesson 31: Solve take from with change unknown math stories with drawings.

G1 M1 Lesson 32: Solve put together/take apart with addend unknown math stories.

G1 M4 Topic E: Varied Problem Types Within 20

Number and Operations in Base Ten

1.NBT.A Extend the counting sequence.

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Aligned Components of Eureka Math

1.NBT.A.1

Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

G1 M4 Lesson 1: Compare the efficiency of counting by ones and counting by tens.

G1 M6 Lesson 7: Count and write numbers to 120. Use Hide Zero cards to relate numbers 0 to 20 to 120.

G1 M6 Lesson 8: Count to 120 in unit form using only tens and ones. Represent numbers to 120 as tens and ones on the place value chart.

 ${\sf G1\,M6}$ Lesson 9: Represent up to 120 objects with a written numeral.

Number and Operations in Base Ten

1.NBT.B Understand place value.

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Aligned Components of Eureka Math

1.NBT.B.2	G1 M2 Topic D: Varied Problems with Decompositions of Teen Numbers as 1 Ten and Some Ones
Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:	G1 M4 Topic A: Tens and Ones
	G1 M4 Lesson 23: Interpret two-digit numbers as tens and ones, including cases with more than 9 ones.
	G1 M6 Lesson 3: Use the place value chart to record and name tens and ones within a two-digit number up to 100 .
	G1 M6 Lesson 4: Write and interpret two-digit numbers to 100 as addition sentences that combine tens and ones.
	G1 M6 Lesson 24: Use dimes and pennies as representations of numbers to 120.
1.NBT.B.2.a	G1 M2 Topic D: Varied Problems with Decompositions of Teen Numbers as 1 Ten and Some Ones
10 can be thought of as a bundle of ten ones—called a "ten."	G1 M6 Lesson 3: Use the place value chart to record and name tens and ones within a two-digit number up to 100 .
	G1 M6 Lesson 4: Write and interpret two-digit numbers to 100 as addition sentences that combine tens and ones.
1.NBT.B.2.b	G1 M2 Topic D: Varied Problems with Decompositions of Teen Numbers as 1 Ten and Some Ones
The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.	

Aligned Components of Eureka Math

1.NBT.B.2.c The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	G1 M6 Lesson 3: Use the place value chart to record and name tens and ones within a two-digit number up to 100. G1 M6 Lesson 4: Write and interpret two-digit numbers to 100 as addition sentences that combine tens and ones. G1 M6 Lesson 24: Use dimes and pennies as representations of numbers to 120.
1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	G1 M4 Topic B: Comparison of Pairs of Two-Digit Numbers G1 M6 Lesson 6: Use the symbols >, =, and < to compare quantities and numerals to 100.

Number and Operations in Base Ten

1.NBT.C Use place value understanding and properties of operations to add and subtract.

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1.NBT.C.4

Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models (e.g., base ten blocks) or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

G1 M4 Lesson 12: Add tens to a two-digit number.

G1 M4 Topic D: Addition of Tens or Ones to a Two-Digit Number

G1 M4 Lesson 24: Add a pair of two-digit numbers when the ones digits have a sum less than or equal to 10.

G1 M4 Lesson 25: Add a pair of two-digit numbers when the ones digits have a sum less than or equal to 10.

G1 M4 Lesson 26: Add a pair of two-digit numbers when the ones digits have a sum greater than 10.

G1 M4 Lesson 27: Add a pair of two-digit numbers when the ones digits have a sum greater than 10.

G1 M4 Lesson 28: Add a pair of two-digit numbers with varied sums in the ones.

G1 M4 Lesson 29: Add a pair of two-digit numbers with varied sums in the ones.

 ${
m G1\,M6\,Topic\,C:}$ Addition to 100 Using Place Value Understanding

 ${\sf G1\,M6\,Topic\,D: Varied\,Place\,Value\,Strategies\,for\,Addition\,to\,100}$

1.NBT.C.5

Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

G1 M4 Lesson 5: Identify 10 more, 10 less, 1 more, and 1 less than a two-digit number.

G1 M4 Lesson 6: Use dimes and pennies as representations of tens and ones.

 ${\it G1\,M6\,Lesson\,5:\,Identify\,10\,more,\,10\,less,\,1\,more,\,and\,1\,less\,than\,a\,two-digit\,number\,within\,100.}$

Aligned Components of Eureka Math

1.NBT.C.6

Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

G1 M4 Lesson 11: Add and subtract tens from a multiple of 10.

G1 M6 Lesson 10: Add and subtract multiples of 10 from multiples of 10 to 100, including dimes.

Measurement.

1.M.A Measure lengths indirectly and by iterating length units.

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Aligned Components of Eureka Math

1.M.A.1

Order three objects by length; compare the lengths of two objects indirectly by using a third object. G1 M3 Topic A: Indirect Comparison in Length Measurement

G1 M3 Lesson 6: Order, measure, and compare the length of objects before and after measuring with centimeter cubes, solving compare with difference unknown word problems.

Aligned Components of Eureka Math

1.M.A.2

Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.

G1 M3 Lesson 4: Express the length of an object using centimeter cubes as length units to measure with no gaps or overlaps.

G1 M3 Lesson 5: Rename and measure with centimeter cubes, using their standard unit name of centimeters.

G1 M3 Topic C: Non-Standard and Standard Length Units

Measurement.

1.M.B Tell and write time.

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1.M.B.3

Tell and write time in hours and half-hours using analog and digital clocks.

G1 M5 Topic D: Application of Halves to Tell Time

Measurement

1.M.C Work with money.

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1.M.C.4	G1 M6 Topic E: Coins and Their Values
Know the comparative values of coins and all dollar bills (e.g., a dime is of greater value than a nickel). Use appropriate notation (e.g., 69¢, \$10).	
1.M.C.5	G2 M7 Topic B: Problem Solving with Coins and Bills
Use dollars in the solutions of problems up to \$20. Find equivalent monetary values (e.g., a nickel is equivalent in value to five pennies). Show monetary values in multiple ways.	

Data Literacy

1.DL.A.1

1.DL.A Represent and interpret data.

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Organize, represent, and interpret data
with up to three categories; ask and
answer questions about the total number
of data points, how many in each
category, and how many more or less are
in one category than in another.

G1 M3 Topic D: Data Interpretation

Geometry

1.G.A Reason with shapes and their attributes.

New Jersey Student Learning Standards for Mathematics

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1.G.A.1

Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.

G1 M5 Topic A: Attributes of Shapes

1.G.A.2

Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.

G1 M5 Topic B: Part-Whole Relationships Within Composite Shapes

1.G.A.3

Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.

G1 M5 Topic C: Halves and Quarters of Rectangles and Circles

G1 M5 Lesson 11: Recognize halves within a circular clock face and tell time to the half-hour.

G1 M5 Lesson 12: Recognize halves within a circular clock face and tell time to the half-hour.

G1 M5 Lesson 13: Recognize halves within a circular clock face and tell time to the half-hour.