Wyoming Mathematics

Grade 2

Adopted 2021

Standards for Mathematical Practice

1. **Make sense of problems and persevere in solving them.** MP.1
2. **Reason abstractly and quantitatively.** MP.2
3. **Construct viable arguments and critique the reasoning of others.** MP.3
4. **Model with mathematics.** MP.4
5. **Use appropriate tools strategically.** MP.5
6. **Attend to precision.** MP.6
7. **Look for and make use of structure.** MP.7
8. **Look for and express regularity in repeated reasoning.** MP.8

Operations And Algebraic Thinking

A. **Represent and solve problems involving addition and subtraction.** 2.OA.A

1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, by using drawings and equations with a symbol for the unknown number to represent the problem. 2.OA.A.1

Ad. Express solutions to one- and two-step word problems using multiple representations (e.g., 32 + g = 50 and g = 50 − 32). 2.OA.A.1.AD

P. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, and taking apart, and comparing with unknowns in all positions, by using drawings and equations with a symbol for the unknown number to represent the problem. 2.OA.A.1.P

Ba. Use addition within 100 to solve one- and two-step word problems involving situations of adding to and putting together, by using drawings and equations with a symbol for the unknown number to represent the problem. 2.OA.A.1.BA

BeB. The Below Basic student does not meet the Basic performance level. 2.OA.A.1.BEB

B. Add and subtract within 20. 2.OA.B

2. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know automatically all sums of two one-digit numbers based on strategies. 2.OA.B.2

Ad. Fluently add and subtract within 100 using mental strategies. 2.OA.B.2.AD

P. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know automatically all sums of two one-digit numbers based on strategies. 2.OA.B.2.P

Ba. Fluently add and subtract within 20 using mental strategies. 2.OA.B.2.BA

BeB. The Below Basic student does not meet the Basic performance level. 2.OA.B.2.BEB

C. Work with equal groups of objects to gain foundations for multiplication. 2.OA.C

3. Determine whether a group (up to 20) has an odd or even number of objects (i.e. by pairing objects or counting them by 2s). 2.OA.C.3

   A. If the number of objects is even, then write an equation to express this as the sum of two equal addends. 2.OA.C.3.A

   B. If the number of objects group is odd, then write an equation to express this as a sum of a near double (double plus 1). 2.OA.C.3.B

Ad. Determine whether a group (up to 100) has an odd or even number of objects. 2.OA.C.3.AD

   A. If the number of objects is even, then write an equation to express this as the sum of two equal addends. 2.OA.C.3.AD.A

   B. If the number of objects in a group is odd, then write an equation to express this as a sum of a near double (double plus 1). 2.OA.C.3.AD.B

P. Determine whether a group (up to 20) has an odd or even number of objects (i.e. by pairing objects or counting them by 2s). 2.OA.C.3.P

   A. If the number of objects is even, then write an equation to express this as the sum of two equal addends. 2.OA.C.3.P.A

   B. If the number of objects in a group is odd, then write an equation to express this as a sum of a near double (double plus 1). 2.OA.C.3.P.B

Ba. Determine whether a group (up to 20) has an odd or even number of objects (i.e. by pairing objects or counting them by 2s). 2.OA.C.3.BA

BeB. The Below Basic student does not meet the Basic performance level. 2.OA.C.3.BEB

4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. 2.OA.C.4

Ad. Write at least two equations to express the total as the sum of equal addends (e.g., a 5 + 5 + 5 + 5 array is the same as 10 +1 0 array). 2.OA.C.4.AD

P. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. 2.OA.C.4.P

Ba. Use addition to find the total number of objects arranged in rectangular arrays with no more than 10 objects; write an equation to express the total as a sum of equal addends. 2.OA.C.4.BA

BeB. The Below Basic student does not meet the Basic performance level. 2.OA.C.4.BEB

Number And Operations In Base Ten

D. Understand place value. 2.NBT.D

1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; and demonstrate that cases: a. 100 can be thought of as a bundle of ten tens — called a "hundred." b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). 2.NBT.D.1

   A. 100 can be thought of as a bundle of ten tens — called a "hundred." 2.NBT.D.1.A

   B. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). 2.NBT.D.1.B

   C. Three-digit numbers can be decomposed in multiple ways (e.g., 524 can be decomposed as 5 hundreds, 2 tens and 4 ones or 4 hundreds, 12 tens, and 4 ones, etc.) 2.NBT.D.1.C

Ad. Understand that the four digits of a four-digit number represent amounts of thousands, hundreds, tens, and ones; and demonstrate that: 2.NBT.D.1.AD

   A. 1000 can be thought of as a bundle of ten hundreds -- called a "thousand." 2.NBT.D.1.AD.A

   B. Multiples of one hundred larger than 1000 can be referred to both as a count of hundreds or by place value with thousands and hundreds (e.g., 4200 is forty-two hundred and four thousand, two hundred). 2.NBT.D.1.AD.B

   C. Four-digit numbers can be decomposed in multiple ways (e.g., 2524 can be decomposed as 2 thousands, 5 hundreds, 2 tens and 4 ones or 25 hundreds, 2 tens, and 4 ones, etc.) 2.NBT.D.1.AD.C

P. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; and demonstrate that: 2.NBT.D.1.P

   A. 100 can be thought of as a bundle of ten tens — called a "hundred." 2.NBT.D.1.P.A

   B. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). 2.NBT.D.1.P.B

   C. Three-digit numbers can be decomposed in multiple ways (e.g., 524 can be decomposed as 5 hundreds, 2 tens and 4 ones or 4 hundreds, 12 tens, and 4 ones, etc.) 2.NBT.D.1.P.C

Ba. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; and demonstrate that: 2.NBT.D.1.BA

   A. 100 can be thought of as a bundle of ten tens — called a "hundred." 2.NBT.D.1.BA.A

   B. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). 2.NBT.D.1.BA.B

C. Three-digit numbers can be decomposed into place value (e.g., 524 can be decomposed as 5 hundreds, 2 tens, and 4 ones, etc.) 2.NBT.D.1.BA.C

2. Skip-count by 10s and 100s within 1000 starting at any given number. 2.NBT.D.2

Ad. Skip-count by multiple units of 10s and 100s within 1000 starting at any given number. 2.NBT.D.2.AD

P. Skip-count by 10s and 100s within 1000 starting at any given number. 2.NBT.D.2.P

Ba. Skip-count by 10s and 100s within 1000 starting at any multiple of 10 or multiple of 100. 2.NBT.D.2.BA

3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. 2.NBT.D.3

Ad. The advanced student is able to read and write numbers to 10000 using base-ten numerals, number names, and expanded form. OR
Represent a three digit number in multiple ways using base 10 numerals or expanded form (e.g., 674 could be: 600 + 70 + 4 or 500 + 170 + 4 or 600 + 60 + 14). 2.NBT.D.3.AD

P. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. 2.NBT.D.3.P

Ba. Read and write numbers to 1000 using base-ten numerals and number names and write numbers to 100 using expanded form. 2.NBT.D.3.BA

4. Compare pairs of three-digit numbers based on meanings of the hundreds, tens, and ones digits, using the words "is greater than," "is equal to," "is less than," and with the symbols >, =, and < to record the results of comparisons. 2.NBT.D.4

Ad. Write comparisons recording the results using both the greater than and the less than words and symbols (e.g., 127 > 121, and 121 < 127). 2.NBT.D.4.AD

P. Compare pairs of three-digit numbers based on meanings of the hundreds, tens, and ones digits, using the words "is greater than," "is equal to," "is less than" and with the symbols >, =, and < to record the results of comparisons. 2.NBT.D.4.P

Ba. Compare pairs of three-digit numbers from a pictorial representation based on meanings of the hundreds, tens, and ones digits, using the words "is greater than," "is equal to," "is less than" and with the symbols >, =, and < to record the results of comparisons. 2.NBT.D.4.BA

E. Use place value understanding and properties of operations to add and subtract. 2.NBT.E

5. Add and subtract within 100 using strategies based on place value, properties of addition, and/or the relationship between addition and subtraction. 2.NBT.E.5

Ad. Add and subtract within 100 using multiple strategies based on place value, properties of addition, and the relationship between addition and subtraction. 2.NBT.E.5.AD

P. Add and subtract within 100 using strategies based on place value, properties of addition, and/or the relationship between addition and subtraction. 2.NBT.E.5.P

Ba. Add and subtract within 100 in problems that do not require regrouping using strategies based on place value, properties of addition, and/or the relationship between addition and subtraction. 2.NBT.E.5.BA

6. Add up to four two-digit numbers using strategies based on place value and/or properties of addition. 2.NBT.E.6

Ad. Add up at least four two-digit numbers using multiple strategies based on place value and properties of addition. 2.NBT.E.6.AD

P. Add up to four two-digit numbers using strategies based on place value and/or properties of addition. 2.NBT.E.6.P

Ba. Add up to four one-digit numbers with sums greater than 20 using strategies based on place value and/or properties of addition. 2.NBT.E.6.BA

7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of addition, and/or the relationship between addition and subtraction: 2.NBT.E.7

A. Relate the strategy to a written method and explain the reasoning used. 2.NBT.E.7.A

B. Understand that in adding or subtracting three-digit numbers, add or subtract hundreds and hundreds, tens and tens, ones and ones. 2.NBT.E.7.B

C. Understand that sometimes it is necessary to compose or decompose tens or hundreds. 2.NBT.E.7.C

Ad. Add and subtract within 1000 using multiple strategies based on place value, properties of addition, and the relationship between addition and subtraction. Relate the strategies used to written methods and explain the reasoning. 2.NBT.E.7.AD

P. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of addition, and/or the relationship between addition and subtraction: 2.NBT.E.7.P

A. Relate the strategy to a written method and explain the reasoning used. 2.NBT.E.7.P.A

B. Understand that in adding or subtracting three-digit numbers, add or subtract hundreds and hundreds, tens and tens, ones and ones. 2.NBT.E.7.P.B

C. Understand that sometimes it is necessary to compose or decompose tens or hundreds. 2.NBT.E.7.P.C

Ba. Add and subtract within 1000 in problems that do not require regrouping, using concrete models or drawings and strategies based on place value, properties of addition, and/or the relationship between addition and subtraction. 2.NBT.E.7.BA

A. Mentally, add 10 or 100 to a given number 100-900. 2.NBT.E.8.A

B. Mentally, subtract 10 or 100 from a given number 100-900. 2.NBT.E.8.B

A. Mentally add multiple units of 10s or 100s to a given number 100-900, and 2.NBT.E.8.AD.A

B. Mentally subtract multiple units of 10s or 100s from a given number 100-900. 2.NBT.E.8.AD.B

A. Mentally add 10 or 100 to a given number 100-900, and 2.NBT.E.8.P.A

B. Mentally subtract 10 or 100 from a given number 100-900. 2.NBT.E.8.P.B

A. Mentally add 10 or 100 to a given multiple of 10 or multiple of 100 in the range 100-900, and 2.NBT.E.8.BA.A

B. Mentally subtract 10 or 100 from a given multiple of 10 or multiple of 100 in the range 100-900. 2.NBT.E.8.BA.B

9. Explain why addition and subtraction strategies work, using place value and the properties of addition. (Explanations may be supported by drawings, objects, or written form.) 2.NBT.E.9

Ad. Evaluate different addition and subtraction strategies for a given situation, determine the most efficient strategy, and justify reasoning. 2.NBT.E.9.AD

P. Explain why addition and subtraction strategies work, using place value and the properties of addition. (Explanations may be supported by drawings, objects, or written form.) 2.NBT.E.9.P

Ba. Explain why addition strategies work, using place value and the properties of addition. (Explanations may be supported by drawings, objects, or written form.) 2.NBT.E.9.BA

Measurement And Data

F. Measure and estimate lengths in standard units. 2.MD.F

1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. 2.MD.F.1

Ad. Use the most appropriate measurement tool and provide justification for the selection. 2.MD.F.1.AD

P. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. 2.MD.F.1.P

Ba. Measure the length of an object with a given tool. 2.MD.F.1.BA

2. Measure the same object or distance using a standard unit of one length and then a standard unit of a different length. Explain how the two measurements relate to the size of the unit chosen. 2.MD.F.2

Ad. Measure an object or distance using a standard unit of length and describe other measurements that could be used to measure the length in another unit of the same system. Explain the relationship of the units. Students are not required to know direct unit conversions. 2.MD.F.2.AD

P. Measure the same object or distance using a standard unit of one length and then a standard unit of a different length. Explain how the two measurements relate to the size of the unit chosen. 2.MD.F.2.P

Ba. Measure an object or distance using a standard unit. 2.MD.F.2.BA

3. Estimate lengths using units of inches, feet, centimeters, and meters. 2.MD.F.3

Ad. Give an estimation and provide justification for the unit selection, when given a real-world scenario. 2.MD.F.3.AD

P. Estimate lengths using units of inches, feet, centimeters, and meters. 2.MD.F.3.P

Ba. Estimate lengths using units of inches, feet, centimeters, and meters when given a scaled pictorial comparison of one unit and a given object (e.g., the student is asked to estimate the length of a car in meters, when given a pictorial representation of a meter stick in relation to the car) 2.MD.F.3.BA

4. Measure in standard length units to determine how much longer one object is than another. 2.MD.F.4

Ad. Measure three or more lengths and order or compare the measurements. 2.MD.F.4.AD

P. Measure in standard length units to determine how much longer one object is than another. 2.MD.F.4.P

Ba. Identify longer or shorter given two lengths. 2.MD.F.4.BA

G. Relate addition and subtraction to length. 2.MD.G

5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units. 2.MD.G.5

Ad. Express multiple representations of solutions to addition and subtraction word problems involving lengths (e.g., 32 + g = 50 and g = 50 − 32). 2.MD.G.5.AD

P. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units. 2.MD.G.5.P

Ba. Use addition within 100 to solve word problems involving lengths that are given in the same units. 2.MD.G.5.BA

6. Use a number line diagram with equally spaced points to: 2.MD.G.6

A. Represent whole-number sums and differences within 100 on a number line diagram. 2.MD.G.6.A

B. Locate the multiple of 10 before and after a given number within 100. 2.MD.G.6.B

Ad. Use multiple strategies to solve whole-number sums and differences within 100 on a number line diagram. 2.MD.G.6.AD

P. Use a number line diagram with equally spaced points to: 2.MD.G.6.P

A. Represent whole-number sums and differences within 100 on a number line diagram. 2.MD.G.6.P.A

B. Locate the multiple of 10 before and after a given number within 100. 2.MD.G.6.P.B

Ba. Use a number line diagram with equally spaced points to locate the multiple of 10 before and after a given number within 100. 2.MD.G.6.BA

H. Work with time and money. 2.MD.H

7. Tell and write time from analog and digital clocks in five minute increments using a.m. and p.m. 2.MD.H.7

Ad. Determine the amount of time until the next hour. 2.MD.H.7.AD

P. Tell and write time from analog and digital clocks in five minute increments using a.m. and p.m. 2.MD.H.7.P

Ba. Match corresponding times in five minute increments on analog and digital clocks. 2.MD.H.7.BA

8. Solve word problems up to $10 involving dollar bills, quarters, dimes, nickels, and pennies, using $ (dollars) and ¢ (cents) symbols appropriately. 2.MD.H.8

Ad. Count up from an amount (using the least amount of bills and coins) to determine the change from a 10 dollar bill. 2.MD.H.8.AD

P. Solve word problems up to $10 involving dollar bills, quarters, dimes, nickels, and pennies, using $ (dollars) and ¢ (cents) symbols appropriately. 2.MD.H.8.P

Ba. Solve word problems up to $10 involving dollar bills and dimes using $ (dollars) and ¢ (cents) symbols appropriately. 2.MD.H.8.BA

I. Represent and interpret data. `2.MD.I`

9. Generate measurement data based on whole units and show data by making a line plot. `2.MD.I.9`

Ad. Answer addition and subtraction questions that compare measurements using information presented in a line plot. `2.MD.I.9.AD`

P. Generate measurement data based on whole units and show data by making a line plot. `2.MD.I.9.P`

Ba. Place given measurement data on a line plot. `2.MD.I.9.BA`

A. Use data to draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. `2.MD.I.10.A`

B. Use data to solve simple put-together, take-apart, and compare problems using information presented in a bar graph. `2.MD.I.10.B`

Ad. Solve put-together, take-apart, and compare problems using information presented in multiple bar and/or picture graphs. `2.MD.I.10.AD`

A. Use data to draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. `2.MD.I.10.P.A`

B. Use data to solve simple put-together, take-apart, and compare problems using information presented in a bar graph. `2.MD.I.10.P.B`

A. Use data to draw a picture graph or a bar graph (with single-unit scale) to represent a data set with up to four categories. `2.MD.I.10.BA.A`

B. Use data to solve simple put-together problems using information presented in a bar graph. `2.MD.I.10.BA.B`

Geometry

J. Reason with shapes and their attributes. 2.G.J

1. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. (Sizes are compared directly or visually, not compared by measuring.) 2.G.J.1

Ad. Compare and contrast sets of defining attributes from given shapes and use the comparison to change one shape into the other shape. 2.G.J.1.AD

P. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. (Sizes are compared directly or visually, not compared by measuring.) 2.G.J.1.P

Ba. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. 2.G.J.1.BA

2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. 2.G.J.2

Ad. Manipulate a given amount of same-size squares (up to 25) into all of the different possible combinations of rectangles and represent the rectangle combinations with repeated addition equations or expressions. 2.G.J.2.AD

P. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. 2.G.J.2.P

Ba. Partition a rectangle into rows or columns of same-size squares and count to find the total number of them. 2.G.J.2.BA

3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape. 2.G.J.3

   A. Describing the shares using the words halves, thirds, half of, a third of, etc. 2.G.J.3.A

   B. Describing the whole as two halves, three thirds, four fourths. 2.G.J.3.B

   C. Recognizing that equal shares of identical wholes need not have the same shape. 2.G.J.3.C

Ad. Partition symmetrical shapes into two, three, or four equal shares and describe shares using correct fractional words or partition multiple circles and rectangles into two, three, and four equal shares and: 2.G.J.3.AD

   A. Describing the shares using the words halves, thirds, half of, a third of, etc. 2.G.J.3.AD.A

   B. Describing the whole as two halves, three thirds, four fourths. 2.G.J.3.AD.B

   C. Recognizing that equal shares of identical wholes need not have the same shape. 2.G.J.3.AD.C

P. Partition circles and rectangles into two, three, or four equal shares by: 2.G.J.3.P

   A. Describing the shares using the words halves, thirds, half of, a third of, etc. 2.G.J.3.P.A

B. Describing the whole as two halves, three thirds, four fourths. 2.G.J.3.P.B

C. Recognizing that equal shares of identical wholes need not have the same shape. 2.G.J.3.P.C

Ba. Partition rectangles into two, three, or four equal shares by: 2.G.J.3.BA

A. Describing the shares using the words halves, thirds, half of, a third of, etc. 2.G.J.3.BA.A

B. Describing the whole as two halves, three thirds, four fourths. 2.G.J.3.BA.B