

Grade 4 Math Standards Summary

Total Reviews	1088		
Keep As Is	772	Educator	514
		Elected Official	0
		Institution or Higher Education Faculty	0
		K-12 Administrator	104
		Member of Organization	1
		Other	112
		Parent/Guardian	41
		Student	0
Suggest Changes	316	Educator	241
		Elected Official	0
		Institution or Higher Education Faculty	17
		K-12 Administrator	9
		Member of Organization	0
		Other	0
		Parent/Guardian	49
		Student	0

Breakdown by Review Type

The pie chart illustrates the distribution of review types. The 'Keep As Is' category, represented by a dark grey slice, accounts for 71% of the total reviews. The 'Suggest Changes' category, represented by a light grey slice, accounts for 29% of the total reviews.

Change Suggestions	
Removed	17
Rewritten	160
Broken Up	20
Moved to a Different Level	119

Number	Count of Keep	% of Keep	Count of Suggest Changes	% of Suggest Changes	Count of New Level	Count of New Description	Count of Broken	Count of Removed
Math.Content.4.G.A.1	27	84%	5	16%	1	4	0	0
Math.Content.4.G.A.2	24	77%	7	23%	2	4	1	0
Math.Content.4.G.A.3	28	85%	5	15%	3	1	1	0
Math.Content.4.MD.A.1	21	70%	9	30%	4	4	1	0
Math.Content.4.MD.A.2	17	55%	14	45%	1	12	1	0
Math.Content.4.MD.A.3	22	81%	5	19%	1	2	0	2
Math.Content.4.MD.B.4	21	70%	9	30%	7	2	0	0
Math.Content.4.MD.C.5a	20	71%	8	29%	6	1	0	1
Math.Content.4.MD.C.5b	18	69%	8	31%	5	3	0	0
Math.Content.4.MD.C.6	22	73%	8	27%	8	0	0	0
Math.Content.4.MD.C.7	17	53%	15	47%	11	3	1	0
Math.Content.4.NBT.A.1	24	73%	9	27%	2	3	1	3
Math.Content.4.NBT.A.2	23	77%	7	23%	0	6	1	0
Math.Content.4.NBT.A.3	18	56%	14	44%	1	13	0	0
Math.Content.4.NBT.B.4	23	70%	10	30%	1	7	2	0
Math.Content.4.NBT.B.5	17	49%	18	51%	0	14	4	0
Math.Content.4.NBT.B.6	17	47%	19	53%	2	15	2	0
Math.Content.4.NF.A.1	21	62%	13	38%	8	3	1	1
Math.Content.4.NF.A.2	23	62%	14	38%	8	5	0	1
Math.Content.4.NF.B.3a	30	94%	2	6%	0	2	0	0
Math.Content.4.NF.B.3b	26	81%	6	19%	2	4	0	0
Math.Content.4.NF.B.3c	22	65%	12	35%	6	4	1	1

Math.Content.4. NF.B.3d	22	65%	12	35%	1	10	1	0
Math.Content.4. NF.B.4a	25	83%	5	17%	4	1	0	0
Math.Content.4. NF.B.4b	26	81%	6	19%	5	1	0	0
Math.Content.4. NF.B.4c	20	56%	16	44%	8	8	0	0
Math.Content.4. NF.C.5	25	83%	5	17%	5	0	0	0
Math.Content.4. NF.C.6	26	84%	5	16%	3	2	0	0
Math.Content.4. NF.C.7	20	65%	11	35%	4	7	0	0
Math.Content.4. OA.A.1	27	84%	5	16%	4	0	0	1
Math.Content.4. OA.A.2	27	75%	9	25%	1	3	1	4
Math.Content.4. OA.A.3	21	62%	13	38%	1	10	1	1
Math.Content.4. OA.B.4	27	84%	5	16%	0	4	0	1
Math.Content.4. OA.C.5	25	78%	7	22%	4	2	0	1

Math.Content.4.G.A.1

Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines.

Identify real objects which are models of basic geometric figures (points, segments, perpendicular lines, parallel lines, rectangles, triangles, etc).

Aligns with GLEs

ignore my previous comment about adding a separate standard addressing these.

Math.Content.4.G.A.2

Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size.

Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size.

Recognize right, obtuse, and isosceles triangles as a category, and identify right, obtuse, and isosceles triangles.

Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines.

Please explain how you would break up the standard:

Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size.

Recognize right triangles as a category, and identify right triangles.

Do students need to know quadrilaterals? What grade is that introduced? Problems I have seen will give them quadrilaterals to classify based on their lines, but when are they taught the types? I have to spend time teaching quadrilaterals so this along with triangles should be a fourth grade standard.

Aligns to GLEs

Math.Content.4.G.A.3

Please explain how you would break up the standard:

Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

This should be given to 3rd and let 4th teach quadrilaterals since we spend time with it in regards to their attributes.

Aligns to GLE

Aligns to GLEs

Math.Content.4.MD.A.1

Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Make measurements of real objects. Determine what unit to use, and explain why that unit was chosen Understand the difference between numbers that result from counting (exact) and numbers that result from measuring (approximate).

[Justification: Practice Standards!]

Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.

I think all units that are open for assessment should be listed. Ex. Mi, yd, ft, in Gal, qt, pt, c, fl oz.

Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement. Express measurements in various ways, e.g., 3 feet can also be described as 36 inches or 2 feet 12 inches. Record measurement equivalents in a two-column table.

Please explain how you would break up the standard:

Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.

The standard is too cluttered.

Aligns to GLEs

Aligns with GLE

Students need a reference sheet for standardized testing.

Math.Content.4.MD.A.2

Please explain how you would break up the standard:

Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

I feel this covers so many concepts. For example, is elapsed time expected when it states intervals of time. Also, it needs to be specific if we are using both the metric and customary systems.

Solve word problems involving intervals of time, liquid measurement and money. Represent measurement quantities using diagrams such as number line diagrams.

The standard mentions problems with simple fractions or decimals - but adding and subtracting fractions does not appear in fourth grade standards.

Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, and masses of objects, , including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

[Justification:Money was deleted from this measurement standard because money is counted, not measured! Including money in the measurement domain is a serious mathematical issue. A formal distinction between "discrete" and "continuous" is not appropriate for fourth grade, but an intuitive sense of what a measurement is should be nurtured at every grade.]

Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require converting units from larger to smaller units. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.
Use the four operations to solve word problems involving intervals of time, liquid volumes, masses of objects, and money. Represent measurement quantities using diagrams such as number lines and diagrams.
Use the four operations to solve word problems involving time, and money, including problems involving simple decimals.
Math.Content.4.MD.A.3
Apply the area and perimeter formulas for rectangles in real world problems.
Use unit squares to create rectangles and calculate the area of rectangles. Relate multiplication and area using an area model/array. Apply the area and perimeter formulas for rectangles in real world and mathematical problems.
Aligns to GLE
This standard is already cover very deeply in the Third Grade.
This standard is already covered deeply in 3rd Grade.
Math.Content.4.MD.B.4
Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots.
Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots. If the Standard remains - put in 5th Grade. If it stays in fourth it should be whole numbers only.
Crucial for understanding in 5th grade.
Math.Content.4.MD.C.5a
This is not an expectation; it is information. This shouldn't have a number.
Aligns to GLEs
I feel we often spend time reviewing geometry vocabulary like line, point, ray, etc. Either this needs to come in a previous grade or we should have another standard that articulates the vocabulary for geometry and being able to identify these in an example. For example, you have two parallel lines with another line intersecting and students should be able to identify a ray.
The standard is not well written. Students can very practicality be taught how to measure an angle with a protractor. Pacing is a major concern with curriculum pacing. We are trying to get away from throwing to much at students and we should be trying to stream line the curriculum.
Math.Content.4.MD.C.5b
An angle that turns through n one-degree angles is said to have an angle measure of n degrees.
Be specific. This doesn't make sense.
Measure angles using degrees.

This is not an expectation. It is information, therefore, should not be given a number.

specific example should be given

Math.Content.4.MD.C.6

an online version of the protractor use should be provided for teachers. I have seen circle protractors use in the past and we need to know specifically what type of protractor will be expected and used.

You may want to wrap in the previous two standards into this one. This is the expectation.

Math.Content.4.MD.C.7

Please explain how you would break up the standard:

Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

Make the wording reader friendly .

Recognize angle measure as additive in a 180 degree angle or straight line. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world problems, e.g., by using an equation with a variable for the unknown angle measure.

I feel specific vocabulary like complementary and supplementary angles should be introduced and used in the fourth grade.

Math.Content.4.NBT.A.1

Read and write place value in word, standard, and expanded form through 1,000,000.

Read and write place value in word, standard, and expanded from through 1,000,000.

The change that I believe is required applies to all of the standards in this domain. It is once again, clarification that was made by the PARCC blueprint. Fractions for 4th graders will be limited to denominators of 2, 3, 4, 5, 8, 10, 12, 100. This makes a huge difference in how the skills are taught and how long it takes for students to truly become comfortable with the content since they are still gaining fluency with multiples and factors.

Need this for measurement.

This is not an everyday life skill and fourth grade has so many standards to cover, none of them can be covered deeply.

This standard is already covered in third grade and there are too many standards in fourth grade,

This standard is not an everyday life skill/standard and there are too many standards in the fourth grade that none of them can be covered deeply for true understanding.

Very specific.

Math.Content.4.NBT.A.2

Please explain how you would break up the standard:

- 1) Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form, e.g., 324 is three hundred twenty-four, 3 hundreds, 2 tens, 4 ones, and $3 \times 100 + 2 \times 10 + 4 \times 1$.
- 2) Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.

Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form with numbers less than 100,000. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons with numbers less than 100,000.

Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on place-value, using $>$, $=$, and $<$ symbols to record the results of comparisons.

Read and write place value in word, standard, and expanded form through 1,000,000

Read and write whole numbers to 100,000 using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers less than 100,000 using $>$, $=$, and $<$ symbols to record the results of comparisons.

Math.Content.4.NBT.A.3

Use place value understanding to round multi-digit whole numbers (specify what place value should be mastered - i.e. Millions place) to any place.

Use place value understanding to round multi-digit whole numbers less than a million.

Use place value understanding to round multi-digit whole numbers to 1,000,000.

Use place value understanding to round multi-digit whole numbers to any place.

Be more specific with the place value range.

Use place value understanding to round multi-digit whole numbers to any place.

I feel that the term "multi-digit" should be defined. Should our students need to round through the hindered millions? etc.

Use place value understanding to round multi-digit whole numbers to the greatest place.

Use place value understanding to round multi-digit whole numbers to the hundred thousands place.

Use place value understanding to round multi-digit whole numbers to the ten thousands.

Use place value understanding to round multi-digit whole numbers to the thousands place (3rd Grade).

Use place value understanding to round multi-digit whole numbers to hundred-thousands place (4th Grade).

Use place value understanding to round multi-digit whole numbers to the thousands place -Grade 3.

Use place value understanding to round multi-digit whole numbers to the hundred thousands place - Grade 4.

Use place value understanding to round multi-digit whole numbers to the millions place - Grade 5.

Use place value understanding to round multi-digit whole numbers up to one million

Use place value understanding to round multi-digit whole numbers up to the 1,000,000

Math.Content.4.NBT.B.4

Fluently add and subtract multi-digit whole numbers (specify number of digits to ensure uniformity and consistency) using the standard algorithm.

Fluently add and subtract multi-digit whole numbers using the standard algorithm to the hundred thousands place.

Fluently add and subtract multi-digit whole numbers using the standard algorithm to the thousands place-Grade 3.

Fluently add and subtract multi-digit whole numbers using the standard algorithm to the hundred-thousands place.

Fluently add and subtract multi-digit whole numbers using the standard algorithm with whole numbers less than a million.

Fluently add and subtract multi-digit whole numbers using the standard algorithm.

"multi-digit" should be defined at the grade level

Please explain how you would break up the standard:

Fluently add and subtract multi-digit whole numbers using the standard algorithm. the standard is too broad. What is considered standard to one person may not be the standard for all.

Please explain how you would break up the standard:

Fluently add and subtract whole numbers to the thousands place using the standard algorithm - Grade 3.

Fluently add and subtract whole numbers to the hundred-thousands place using the standard algorithm - Grade 4

Math.Content.4.NBT.B.5

How would one illustrate 1275×7 using area models or arrays? Seems ill-advised at this grade level and size of numbers

Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations.

Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations.

(Take out the drawings. Do not make arrays or models mandatory. Some students just can't do them.)

Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

I believe the methods like arrays and area models are good to connect understanding to previous concepts like place value. However, I feel like the ultimate goal is to have children be able to multiply fluently using the traditional algorithm. Therefore, concepts like area models should not be assessed. Students should be able to choose whatever method they want to solve a multiplication problem.

Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Remove two digit by two digit multiplication.

Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers.

Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers. Explain the calculations verbally, using visual models when helpful.

Multiply a whole number of up to two digits by a one-digit whole number. Grade 3

Multiply a whole number of up to four digits by a one-digit whole number. Grade 4

Multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation rectangular arrays, and/or area models.

Please explain how you would break up the standard:

- 1) Multiply a whole number of up to four digits by a one-digit whole number.
- 2) Multiply two, two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Please explain how you would break up the standard:

- A. Multiply a whole number of up to four digits by a one-digit whole number.
- B. Multiply two two-digit numbers, using strategies based on place value. Illustrate and explain the calculation by using rectangular arrays, and/or area models.

Please explain how you would break up the standard:

Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

The standard is too restricting if a student is able to illustrate in any way the student should be given the option to address their learning style.

Please explain how you would break up the standard:

- Multiply a whole number of up to two digits by a one-digit whole number - Grade 3.
- Multiply a whole number of up to four digits by a one-digit whole number - Grade 4.
- Multiply two two-digit numbers, using strategies based on place value. Illustrate and explain the calculation by using rectangular arrays, and/or area models.

Math.Content.4.NBT.B.6

Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors

Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division.

Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. When the division process results in a remainder, students should not be expected to write an equation.

See Justification in Math.Content.4.OA.A.3

Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Again, I feel strategies like area models are good for understanding, but ultimately we want our kids to know how to divide accurately and fluently. Therefore, specific strategies should not be assessed...students can choose how to solve a division problem.

Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors.

Find whole-number quotients and remainders with up to three-digit dividends and one-digit divisors, using strategies based on place value, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using rectangular arrays, and/or area models.

Find whole-number quotients and remainders with up to three-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Find whole-number quotients with up to three-digit dividends and one-digit divisors, using strategies based on place value, and the relationship between multiplication and division. Illustrate and explain the calculation by using rectangular arrays, and/or area models.

Find whole-number quotients with up to three-digit dividends and one-digit divisors, using strategies based on place value, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using rectangular arrays, and/or area models.

Please explain how you would break up the standard:

Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

This standard has the same problem as 4.NBT.B.6, the standard is too restricting on how it is assessed based on the students learning style.

Please explain how you would break up the standard:

Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, standard algorithm, rectangular arrays, and/or area models.

This standard rely's on mind-numbing "strategies," "relationships," and "properties," while Singapore simply expects: "division of a 4-digit number by a 1-digit number." □

The old MASS standards only went to 3 digits but the description was clear...

"Demonstrate in the classroom an understanding of and the ability to use the conventional algorithm for division of up to four-digit whole number with a single-digit divisor (with or without remainders). "

and

"Divide up to a three-digit whole number with a single-digit divisor (with or without remainders) accurately and efficiently. Interpret any remainders. "

Math.Content.4.NF.A.1

Explain using visual fraction models, why fractions can be equivalent and recognize and generate equivalent fractions.

Explain why a fraction $\frac{a}{b}$ is equivalent to a fraction $(\frac{a \times n}{b \times n})$ by using visual fraction models.

Please explain how you would break up the standard:

Explain why a fraction $\frac{a}{b}$ is equivalent to a fraction $(\frac{a \times n}{b \times n})$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size.

Use "principles based upon the size of the parts in relation to each other" to recognize and generate equivalent fractions.

This standard needs to move back to fifth grade. Fourth grade has so many standards to cover, none can be covered deeply.

Math.Content.4.NF.A.2

Compare two fractions with different numerators and different denominators, e.g., by creating common denominators, or by comparing to a benchmark fraction such as $\frac{1}{2}$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.

Compare two fractions with different numerators and different denominators.

Working with different denominators is inconsistent with the rest of fourth grades standards in which only like denominators are used. (See 4.NF.#3 parts c and d.)

Math.Content.4.NF.B.3a

Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

Clarify that we are adding and subtracting fractions with like denominators

Understand addition and subtraction of fractions with like denominators.

Math.Content.4.NF.B.3b

Add and subtract fractions with common denominators to determine whether the answer is reasonable.

decomposing fractions into unit fractions is the foundational connection to the visual fraction models to represent the size and proportion of each part

Math.Content.4.NF.B.3c

Add and subtract mixed numbers with like denominators by adding whole number parts and adding the fraction parts. When the sum of fraction parts is greater than one, replace it with a mixed number. Then add whole number parts and combine with fraction part For example, $2\frac{3}{5} + 5\frac{3}{5} = 7\frac{6}{5}$ ($\frac{6}{5}$ is the same as $1\frac{1}{5}$). So the sum is $8\frac{1}{5}$.

Add and subtract mixed numbers with like denominators.

Please explain how you would break up the standard:

Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.

guidance as to subtraction of mixed numbers that will require regrouping of the whole number

give limitations as to the size of the mixed numbers to focus on for levels of proficiency

The 3rd grade math standards are weak, causing 4th grade students to have very little fraction knowledge, so we have to back peddle to even teach the fraction concepts they are responsible for learning. 4th grade students are just now learning about equivalent fractions, mixed numbers, and adding and subtracting fraction, with the time restraints of the curriculum and testing student are struggling to developmentally master all of the skills required to perform this skill. If this skill remains in the curriculum it should be adding and subtracting mixed numbers without regrouping.

Math.Content.4.NF.B.3d

Please explain how you would break up the standard:

Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.

*give specific range of size of fractions

Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, by using visual fraction models.

Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models .

Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models.

Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.

All of these standards under 4.F.B.3 are extremely important for students to learn to be successful in 5th grade mathematics. They are a necessity to learn before more complex fractional mathematics in 5th grade.

Math.Content.4.NF.B.4a

Understand a fraction $\frac{n}{k}$ as a multiple of $\frac{1}{k}$. For example, 5 times $\frac{1}{4}$ is $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$. This can be written as 5 fourths, or $\frac{5}{4}$. So we know that "5 times $\frac{1}{4}$ " is the same number as "5 fourths", and we can write the equation $5 \times \frac{1}{4} = \frac{5}{4}$.

Understand that for any fraction $\frac{a}{b}$, $n \times \frac{a}{b} = \frac{(n \times a)}{b}$. For example, $3 \times \frac{2}{5}$ can be written as $\frac{2}{5} + \frac{2}{5} + \frac{2}{5}$, or as $(\frac{1}{5} + \frac{1}{5}) + (\frac{1}{5} + \frac{1}{5}) + (\frac{1}{5} + \frac{1}{5})$. So $3 \times \frac{2}{5} = \frac{6}{5}$. (Note: Reading this last equation aloud is very important.)

Crucial for understanding in 5th grade.

Math.Content.4.NF.B.4b

Multiply a fraction by a whole number.

Crucial for 5th grade mathematics understanding.

Math.Content.4.NF.B.4c

Solve word problems involving multiplication of a fraction by a whole number using visual fraction models.

Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models.

Solve word problems involving multiplication of a fraction by a whole number.

Solve word problems involving multiplication of a fraction by a whole number. For example, If each person at a party will eat $\frac{3}{8}$ of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?

Math.Content.4.NF.C.5

Solidifies understanding of equivalent fractions with denominators other than 10, 100, 1000, etc.

Math.Content.4.NF.C.6

Conversion between regular fractions and decimals is forgotten.

Translate fractions with denominators 10 or 100 to decimals by recognizing their common name. For example, $\frac{3}{10}$ and $\frac{3}{10}$ are both properly read aloud as "three tenths"; also $\frac{16}{100}$ and $\frac{16}{100}$ are both properly read as "sixteen hundredths".

Aligns to GLEs

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Students need to know that numbers can be written in different ways and those ways do not deter from their values.

Math.Content.4.NF.C.7

Compare two decimals to hundredths . Record results using $>$, $=$, or $<$ symbols.

Compare two decimals to hundredths by reasoning about their size.

Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions by using a visual model.

No fluency with operations with decimals is developed or expected, in contrast with Singapore, which expects at this point students to add/subtract decimals (to 2 decimal places) and multiply and divide decimals by integers. Perhaps because no concepts of money are present in prior years to develop foundational fluency with decimal representation.

Math.Content.4.OA.A.1

I am a strong supporter of Common Core State Standards, as I believe that these standards will help Louisiana children to become better prepared for the rigors of college, and/or to become better qualified for rewarding, well-paying careers. I recognize that Common Core State Standards were developed by the states---not by the federal government---and that they are not a prescribed curriculum, but rather are a set of standards that will empower Louisiana children to be elevated to the same levels of academic achievement as their counterparts in states that maintain high expectations for their students. Please do not pander to cynical, manipulative people with political agendas who claim that Common Core State Standards are something other than a set of academically ambitious standards that were developed by the states! Since it is in the interest of our great nation to provide ambitious academic standards for our students, true patriots who love America should be strong, vocal supporters of Common Core State Standards.

Memorizing basic multiplication and division facts is easy and requires little mental energy. In real adult lives, however, we are rarely presented with things like 5×7 in written form. It's far more likely that we hear or read language stating that something is so many "times as many."

This standard is already covered in third grade and it is not necessary to repeat it again in third grade.

Very specific.

Math.Content.4.OA.A.2

An example problem would have been appreciated. The less convolution the better. Be sure you are not merely rebranding Common Core.

Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

Be more specific with what algorithms you would like taught and what types of models students will be held accountable for

Multiply or divide to solve word problems involving multiplicative comparison.

Delete this strategy because it is not a skill

It requires the student to understand the problem through visuals and how multiplication relates to addition. However, I do not agree that specific drawings be required, such as area model, tape diagrams, etc... because some students can't grasp those drawings and can solve it more accurately with pictures or other drawings that make sense to them.

It's a strategy, not a skill.

Real life is word problems! Kids need to be fluent with operations and their algorithms, but more importantly, when they are faced with a real-life situation involving numbers, no algorithm or calculator will help them if they don't know what to do with the numbers!

This is a strategy and not a skill.

This is a strategy not a skill.

This standard needs an example illustrated.

Math.Content.4.OA.A.3

Please explain how you would break up the standard:

Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted.

Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Solve multistep word problems (with no more than three steps) posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Solve multistep word problems limited to 3 steps posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a variable for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

(Eliminate interpreting remainders)

Use the four operations to solve multi-step word problems posed with whole numbers and having whole-number answers. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. Note: If a division problem results in a remainder, students will not be required to write an equation to represent the problem.

[Justification: Writing an equation to represent a division problem with a remainder would have two unknown quantities. This process would not facilitate solving the problem.]

Again, in real life math comes to us in word problems. Using a variable prepares students for algebra, and assessing reasonableness helps get the right answer. Beyond that, these skills are important exercises in critical thinking that support the development of intelligence so needed in today's competitive world economy.

Age inappropriate.

Aligns with GLE

Math.Content.4.OA.B.4

Find all factor pairs for a whole number in the range 1-50. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-50 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-50 is prime or composite.

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Missing development of prime factorization, its uniqueness, and its uses. Consequently, the framework never develops systematic understanding for finding common denominators or factorization. This is a problem that needs to be resolved.

Precise and straight forward skill that is grade appropriate.

Math.Content.4.OA.C.5

Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.

I think it to needs to have an example of what is meant by the second sentence.

Recognize, describe, and generate a variety of patterns in sets of numbers, figures, letters, etc.

[Justification: Students need to work with many different kinds of patterns, not just those generated by an arithmetic rule.

Age inappropriate.

Aligns to GLE

Aligns to GLEs

Aligns with GLEs