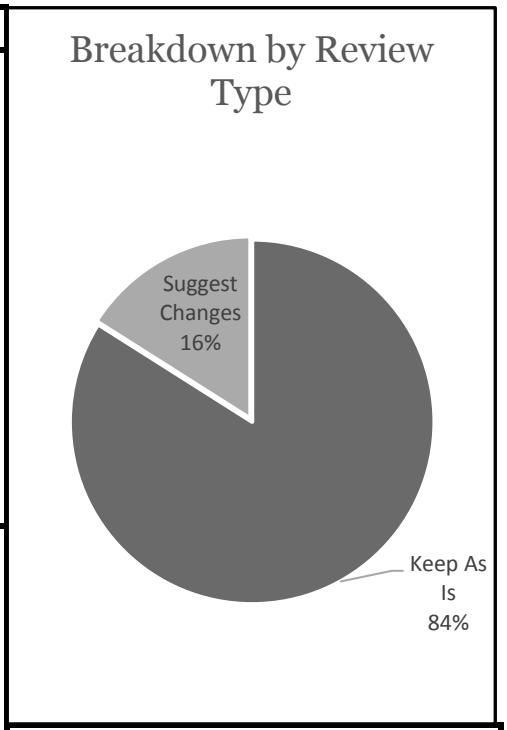
Grade 8 Math Standards Summary

Total Reviews	768		
Keep As Is	645	Educator	462
		Elected Official	0
		Institution or Higher Education Faculty	0
		K-12 Administrator	63
		Member of Organization	1
		Other	84
		Parent/Guardian	35
		Student	0
Suggest Changes	123	Educator	81
		Elected Official	0
		Institution or Higher Education Faculty	0
		K-12 Administrator	5
		Member of Organization	0
		Other	0
		Parent/Guardian	37
		Student	0



Change Suggestions	
Removed	16
Rewritten	43
Broken Up	10
Moved to a Different Level	54

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.8.EE.A.1	23	96%	1	4%	1	0	0	0
Math.Content.8.EE.A.2	21	91%	2	9%	1	1	0	0
Math.Content.8.EE.A.3	20	77%	6	23%	1	4	0	1
Math.Content.8.EE.A.4	19	73%	7	27%	1	2	1	3
Math.Content.8.EE.B.5	21	91%	2	9%	1	1	0	0
Math.Content.8.EE.B.6	19	79%	5	21%	2	2	1	0
Math.Content.8.EE.C.7a	18	78%	5	22%	1	3	1	0
Math.Content.8.EE.C.7b	19	95%	1	5%	1	0	0	0
Math.Content.8.EE.C.8a	19	90%	2	10%	2	0	0	0
Math.Content.8.EE.C.8b	18	78%	5	22%	3	2	0	0
Math.Content.8.EE.C.8c	16	73%	6	27%	4	1	0	1
Math.Content.8.F.A.1	22	96%	1	4%	1	0	0	0
Math.Content.8.F.A.2	22	96%	1	4%	1	0	0	0
Math.Content.8.F.A.3	22	96%	1	4%	1	0	0	0
Math.Content.8.F.B.4	18	78%	5	22%	1	2	2	0
Math.Content.8.F.B.5	19	79%	5	21%	1	2	1	1
Math.Content.8.G.A.1a	12	80%	3	20%	1	2	0	0
Math.Content.8.G.A.1b	12	80%	3	20%	1	2	0	0
Math.Content.8.G.A.1c	12	80%	3	20%	0	3	0	0
Math.Content.8.G.A.2	21	84%	4	16%	2	0	0	2
Math.Content.8.G.A.3	22	96%	1	4%	1	0	0	0
Math.Content.8.G.A.4	21	84%	4	16%	2	0	0	2

Math.Content.8.G.A.5	20	80%	5	20%	2	2	1	0
Math.Content.8.G.B.6	17	63%	10	37%	6	2	0	2
Math.Content.8.G.B.7	23	92%	2	8%	2	0	0	0
Math.Content.8.G.B.8	23	92%	2	8%	2	0	0	0
Math.Content.8.G.C.9	20	83%	4	17%	3	1	0	0
Math.Content.8.NS.A.1	23	77%	7	23%	1	4	1	1
Math.Content.8.NS.A.2	25	96%	1	4%	1	0	0	0
Math.Content.8.SP.A.1	21	91%	2	9%	1	1	0	0
Math.Content.8.SP.A.2	20	87%	3	13%	1	2	0	0
Math.Content.8.SP.A.3	20	83%	4	17%	2	1	0	1
Math.Content.8.SP.A.4	17	63%	10	37%	3	3	2	2

Math.Content.8.EE.A.1
Math.Content.8.EE.A.2
Use square root and cube root symbols to represent solutions to equations of the form ^{2} = and ^{3} = , where is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that √2 is irrational. Students don't need to proof that square root of 2 is irrational
Math.Content.8.EE.A.3
Can we just say SCIENTIFIC NOTATION ?????
Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities.
Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities..
Why is this not referenced by the standard term of Scientific Notation?
There are so many standards for students to learn and this one typically shows up in science. This seems so out of place compared to the rest of the standards. It can be used to support science. I see many students in 8th grade summer school and Algebra I summer school that have such difficulties in manipulating rational numbers. Scientific notation is just one more thing for them to "memorize." I would rather see more time spent on manipulating rational numbers, graphing and solving algebraic equations. Once we see a decrease in learning gaps in our students, we may want to add scientific notation concepts to the curriculum.
Math.Content.8.EE.A.4
Please explain how you would break up the standard: a. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. b. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). (This could be included with part a.)Interpret scientific notation that has been generated by technology.
Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.
I do not think this is an important skill to waste time on at the middle school level. This is not used much in high school and does nothing to help prepare them for the 9th grade or Algebra I. It is a waste of time in my classroom.
This is a very abstract concept for 8th graders. In order for students to fully understand this, they need lots of practice. There are so many deep standards in 8th grade that there is not enough time to master this concept. Another problem is that this standard does not show up again in the curriculum once it is taught. So, students study this for a few weeks and then leave it to learn functions, transformations. It is very difficult for students to master and then there is not time to review it. This concept does not come up again in Algebra I concepts. If students need this in high school science, then place it there.
This standard can be used cross curricular in science and math.
This standard should be dealt with in a high school science course. It is a calculator skill and should be dealt with in an environment which deals with very large and small numbers (high school physics and chemistry).
Math.Content.8.EE.B.5

Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. Explain the different ways the proportional relationships are represented.
This standard allows students to use scientific calculators for accuracy.
Math.Content.8.EE.B.6
Please explain how you would break up the standard: 1. Explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane 2. Derive the equation = for a line through the origin and the equation = + for a line intercepting the vertical axis at .
Use equations, points, and written explanations to describe a slope.
Math.Content.8.EE.C.7a
Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions.
Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Provide justification to prove each case.
Please explain how you would break up the standard: Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form = , = , or = results (where and are different numbers).
I don't necessarily like it, but it is OK
Math.Content.8.EE.C.7b
Students should be efficiently working through problems with rational numbers.
Math.Content.8.EE.C.8a
Math.Content.8.EE.C.8b
Solve systems of two linear equations in two variables algebraically and by graphing the equations. Solve simple cases by inspection.
Solve systems of two linear equations in two variables using graphing, substitution of equations in slope intercept form, and SIMPLE elimination method of equations in standard form. Students will NOT be required to convert from standard form to slope intercept form and vice versa. Using the elimination method, students will ONLY have to add the equations to eliminate a variable. Elimination involving multiplication as well as addition will NOT be assessed. Solve simple cases by inspection.
Math.Content.8.EE.C.8c
Solve simple real-world and mathematical problems leading to two linear equations in two variables.
At the 8th grade level, it is hard enough to get the students to master solving the skill with just numbers; add in real world and it is to complicated for them. We need to focus more on 'how" to solve the problem, then later as their brains mature more, they can start working on the real world scenarios.
This standard allows students to use real life examples for solving problems.
Math.Content.8.F.A.1
Math.Content.8.F.A.2

Math.Content.8.F.A.3
Math.Content.8.F.B.4
Please explain how you would break up the standard: A. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (,) values, including reading these from a table or from a graph. B. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
Please explain how you would break up the standard:This standard should be broken into several, more specific standards. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (,) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
I agree with the standard - however, as a teacher, I think Louisiana teachers need to be provided with more examples that illustrate this standard.
Math.Content.8.F.B.5
Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear).
Please explain how you would break up the standard: A. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). B. Sketch a graph that exhibits the qualitative features of a function that has been described verbally.
I agree with the standard, but I believe that the LDOE needs to provide teachers with lots of examples early in the school year illustrating and clarifying what this standard looks like.
This standard wants students to sketch a graph that exhibits the qualitative features of a function that has been done verbally. Students must become more aware of what a qualitative features of a function are
Math.Content.8.G.A.1a
I am not sure of how to rewrite this, but the phrase, "Lines are taken to lines", etc. is vague to most parents, students and teachers. The concept is that a line, line segment, angle, polygon, etc, is moved by a translation, reflection, or rotation, the original shape and the new shape are congruent. Moving the object does not change it's size.
Not clear
Math.Content.8.G.A.1b
Angles are taken to angles of the same measure is a vague statement. Angles when moved by a rigid motion don't change size or shape.
Not clear
Math.Content.8.G.A.1c

Parallel lines are taken to parallel lines is vague and most people who are not mathematicians do not know what this means. Instead say, parallel lines, when moved by rigid motions, maintain size and shape.
Parallel lines are taken to parallel lines. This needs to be more detailed not specific enough
Parallel lines are taken to parallel lines. Not clear
Math.Content.8.G.A.2
Do not see relevance to any future math concepts
Please continue to allow students the use of graph paper, patty paper and protractors on the assessment for this standard.
Why are we using this experimental approach to proving congruence? It has failed every time it has been tried.
Math.Content.8.G.A.3
Please continue to allow the use of graph paper, patty paper, and protractors when this standard is assessed by LDOE
Math.Content.8.G.A.4
Do not see relevance to any future math concepts
Experimental approach to proving congruence that has failed in the few places it has been tried
Please continue to allow the use of patty paper, graph paper, and protractors for the formal assessment of the standard.
Math.Content.8.G.A.5
Please explain how you would break up the standard: Use informal arguments to establish facts about the 1. angle sum and exterior angle of triangles, about 2. the angles created when parallel lines are cut by a transversal,(students should know supplementary, vertical, AEA, AIA, adjacent, and corresponding angles) 3. and the angle-angle criterion for similarity of triangles. (Similar triangles have congrent angles)
This is the first time sum of angles in a triangle shows up in our standards. Typically this is addressed in high achieving countries in grade 5 and 6.
Math.Content.8.G.B.6
Explain a proof of the Pythagorean Theorem and its converse. Use the Pyhtagorean to determine if given side lengths form a right triangle.
It is unfortunate that this standard calls for “explain[ing] the proof” rather than simply for “proving” the Pythagorean Theorem.
Are formal proofs required in Geometry?
As an educator, I have found that, students have a very difficult time grasping the proof of the Pythagorean Theorem. Many students at the 8th grade level are developmentally still transitioning from concrete operational thinking to abstract thinking. As a teacher, I will still have activities which explore the proof of the Pythagorean Theorem, but I do NOT think is should be an active standard and it should NOT be assessed.
Math.Content.8.G.B.7
I agree with the standard, however, I think the LDOE should provide LOTS of instructional materials for Pythagorean Theorem in three dimensions. There are very few instructional materials out there for teaching and explaining this concept.

Students can use the theorem but don't need to prove it.
This is an appropriate skill for this grade and makes a real-world and application connection to the use of radicals in the number sense strand.
Math.Content.8.G.B.8
This is a great extension and application of the Pythagorean Theorem
Math.Content.8.G.C.9
Apply the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems. (I do not think they should be expected to "know" these formulas.)
It extends measurement and geometry strands from previous grades.
Math.Content.8.NS.A.1
Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number. Student will not be required to convert repeating decimals to fractions.
Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually.
Please explain how you would break up the standard:student don't need to convert repeating decimal to rational fractions Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.
The “convert a decimal expansion which repeats eventually into a rational number” here is one of only two places that conversion between common and decimal fractions is even mentioned in passing. All other fraction conversion (percent to decimal or common, and vice versa) are never explicitly mentioned.
Brief and to the point.
Even as a math teacher, I can not give a rational explanation as to why this is necessary. And it surely shouldn't be tested.
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.
I believe that students should identify that every number has decimal expansion and that there is a difference between rational and irrational numbers.
The he standard is straight forward and at grade level. My students had no problem understanding this standard.

Math.Content.8.NS.A.2
I agree with this standard because it not only gives the learner numeracy understanding but it teaches the learner how to approximate and locate on the number line.
Students should be able to determine the approximate value of a number when it is written in a non-standard form.
This standard is straight forward and at grade level. My students had no problems understanding this standard.
understandable
Math.Content.8.SP.A.1
Interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
It extends the content in equations and functions strands and makes a clear real-world connection to those abstract skills.
Math.Content.8.SP.A.2
Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line. (YOU HAVE TO ATLEAST MENTION A "LINE OF BEST FIT" OR "TREND LINE" IN THIS STANDARD!!)
Know that straight lines, know as trend lines or lines of best fit, are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
I agree with the standard as long as students are INFORMALLY assessing a line of best fit and not asked to come up with a linear regression equation.
It extends the content in equations and functions strands and makes a clear real-world connection to those abstract skills.
Math.Content.8.SP.A.3
Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. Not sure that majority of Grade 8 students can "get" this concept
It extends the content in equations and functions strands and makes a clear real-world connection to those abstract skills.
This is to complicated of a skill and there is no reason why an 8th grade student should even be concerned with this at this age.
This model is ok as long and much scaffolding is allowed (real simple assessment question). Having to come up with an exact linear regression equation is difficult, even for high school students and adults. (Ok, please let me know which BESE board member is given a bivariate graph can come up with the most accurate linear regression equation that models the data?)
Math.Content.8.SP.A.4

Please explain how you would break up the standard: Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.
Please explain how you would break up the standard: Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.
Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. My question to you: Will students have to know the difference between relative frequency and conditional relative frequency?
It extends the content in equations and functions strands and makes a clear real-world connection to those abstract skills.
This is not a statistics class. To much at this grade level.
This is ridiculous to think that an 8th grade student would be able to master this objective. It's useless.