*First Grade * Common Core Mathematics*

Domain Target	Cluster Target	Grade & Domain	*Standard*	*Learning Target*	A Specific Example	Assessment		
Operations & Algebra *	Operations & Algebra *	Operations & Algebra *	Operations & Algebra *	Operations & Algebra *	Operations & Algebra *	mastery	emerging	novice
I can solve addition and subtraction problems in different ways and explain how the two operations are related.	**I can solve real world problems using addition and subtraction.**	1.OA-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.**[2]**	I can solve word problems using addition and subtraction. I can solve problems using objects, drawings, and even equations.	Sam saw seven birds in a tree. Two of the birds flew away. Write an equation to find how many birds are left in the tree.	The student can solve real world problems involving addition and subtraction using a variety of strategies.	The student has some difficulty solving real world problems involving addition and subtraction and rarely uses more than one strategy.	The student needs support and scaffolding strategies to solve real world problems involving addition and subtraction.
		1.OA-2	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.	I can solve word problems that require me to add three numbers using objects, drawings, and equations.	Pam has 3 balls, John has 2 balls and Sue 5 balls. If they put them altogether, how many will there be?	The student can solve problems involving the addition of three numbers using a variety of strategies.	The student has some difficulty solving problems involving the addition of three numbers and rarely uses more than one strategy.	The student needs support and scaffolding strategies to solve problems involving the addition of three numbers.
	I can use and explain all the different ways to add numbers together. **I can explain how addition and subtraction are related and use that information to help solve equations.**	1.OA-3	Apply properties of operations as strategies to add and subtract.**[3]** Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)	I know the Commutative Property says I can switch the two numbers in an addition problem and the answer will stay the same.	If you know 3 + 8 = 11, then we also know that 8 + 3 = 11.	The student can accurately explain and demonstrate effective uses of the Commutative Property to solve problems.	The student can identify the Commutative Property but has difficulty in using it effectively to help solve problems.	The student often confuses the Commutative Property with other properties and cannot identify examples on a consistent basis.
				I know the Associative Property says I can mix the order that I add numbers in an addition problem and the answer will stay the same.	We can solve 2 + 6 + 4 in two ways. By adding the 2 + 6 first (8 + 4) or adding the 6 + 4 first (2 + 10).	The student can accurately explain and demonstrate effective uses of the Associative Property to solve problems.	The student can identify the Associative Property but has difficulty in using it effectively to help solve problems.	The student often confuses the Associative Property with other properties and cannot identify examples on a consistent basis.
		1.OA-4	Understand subtraction as an unknown-addend problem. For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.	I can solve a subtraction problem by finding the number to add to the smaller one to get the larger one.	To solve 10 - 8, think 8 + ? = 10	The student can efficiently switch between a subtraction problem and the equivalent addition problem with an unknown addend.	The student can sometimes switch between a subtraction problem and the equivalent addition problem with an unknown addend.	The student has difficulty switching between a subtraction problem and the equivalent addition problem with an unknown addend.
	I can add and subtract numbers less than 20 and I am confident with my addition and subtraction facts up to 10.	1.OA-5	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	I can explain how counting forward and backward relates to addition and subtraction strategies such as 1 more, 1 less, 2 more, and 2 less.	To solve 5 + 2, think "I will start at 5 and count 6, 7 to get the answer.	The student can see the relationship between counting and skip counting forward/backward to addition and subtraction.	The student can see the relationship between some counting and skip counting forward/backward to addition and subtraction.	The student has difficulty seeing the relationship between counting and skip counting forward/backward to addition and subtraction.
		1.OA-6	Add and subtract within 20, demonstrating fluency 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).	I know of variety of strategies for adding and subtracting numbers within 20 (the numbers 0-9).	8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); knowing that 8 + 4 = 12, one knows 12 – 8 = 4.	The student has a variety of strategies for adding and subtracting numbers less than 20.	The student has limited strategies for adding and subtracting numbers less than 20.	The student has limited strategies for adding and subtracting numbers less than 20.
				I can EASILY and QUICKLY add and subtract numbers within 10 (the numbers 0-5).**[5]**	Without any external assistance and without mentally counting, they can recite the addition and subtraction facts within 10.	The student, without any external assistance and without mentally counting, they can recite the addition and subtraction facts within 10.	The student can add and subtract most of the number combinations less than ten but occasionally needs extra time or has a few errors.	The student has some difficulty adding and subtracting the number combinations less than ten. They still rely on strategies such as counting to solve these problems.
	I can explain, use, and solve addition and subtraction equations.	1.OA-7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.	I know the equal sign means "the same as" and does not just mean an answer follows.	6 = 6; 7 = 8 – 1; 5 + 2 = 2 + 5; 4 + 1 = 5 + 2.	The student correctly interprets to mean the left side of the equation must be "the same as" the right side.	The student occasionally confuses the meaning of the equal sign.	The student often interprets the equal sign as "the answer follows" and does not understand the left side of the equation must be "the same as" the right side.
				I can determine if an equation is true or false even when written in a variety of ways.	7 = 8 - 1 is true 2 + 3 = 5 - 1 is false	The student can correctly assess if an equation is true or false when presented in a variety of formats.	The student occasionally has difficulty or is confused about whether an equation is true when presented in various ways.	The student has difficulty interpreting the truth of equation meaning the left and right side must be the same value.
		1.OA-8	Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.	I can find the missing number in an equation that has two other numbers given in an addition or subtraction equation.	5 = □ – 3 8 + ? = 11	The student can solve for the missing number in an addition or subtraction equation no matter where the missing number occurs or the format of the equation.	The student can usually solve for the missing number in an addition or subtraction equation but can have some difficulty with particular forms of the equation.	The student can only solve for the missing number when it is alone on the right side of the equation. Other formats are confusing.

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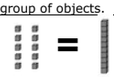
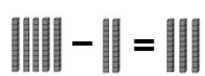
Domain Target	Cluster Target	Grade & Domain	*Standard*	*Learning Target*	A Specific Example	Assessment		
Number Base Ten * Number Base Ten * Number Base Ten * Number Base Ten * Number Base Ten * Number Base Ten * Number Base Ten * Number Base Ten *						**mastery**	**emerging**	**novice**
I have different ways to think about and solve addition and subtraction problems using the place value of the numbers.	**I can count to at least 120 starting at different numbers.**	1.NBT-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.	I can count to 120 or more by ones.	1, 2, 3, 4, . . . 118, 119, 120.	The student can accurately and consistently count to 120 by ones.	The student can count to 120 by ones with some support and few errors.	The student has difficulty counting to 120 by ones and needs support.
				I can count to 120 starting with any number my teacher names.	23, 24, 25, . . . 118, 119, 120.	Given a random number, the student can count on by ones.	Given a random number, the student can usually count on by ones.	Given a random number, the student can seldom count on by ones.
				I can write any of the numbers up to 120.	Write any number from 1 to 120 when prompted.	The student can write the numeral when given a number from 1 to 120.	The student can usually write the correct numeral (1 to 120) when given.	The student has difficulty writing the correct numeral (1 to 120) when given.
				I can name and write the number of a group of objects up to 120 or more.	Given a random group of objects, count and name the number of the group of objects.	The student can write the numeral naming a random group of objects from 1 to 120.	The student can usually write the numeral naming a random group of objects from 1 to 120.	The student has difficulty writing the numeral naming a random group of objects from 1 to 120.
	I can explain how the numbers in the second column represent groups of ten and how the numbers in each column can make the number larger or smaller.	1.NBT-2a	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. 10 can be thought of as a bundle of ten ones — called a "ten."	I can explain how ten "ones" can be grouped together and given a new name of "ten".	 Ten ones can be grouped together to make one ten - or 10.	The student understands the concept of "tens". They can demonstrate and communicate the process of grouping by ten.	The student can put things into groups of ten but has trouble clearly explaining why we do this and what it has to do with the numeral 10.	The student does not grasp the concept of "tens" and cannot relate how making a group of ten relates to the numeral 10.
		1.NBT-2b	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.	I can explain how the teen numbers are formed by one "ten" and the correct number of "ones".	**13 is**  **plus** 13 is one ten and 3 ones.	The student understands the concept of "tens and ones". They can demonstrate and communicate the process of displaying the teen numbers using manipulatives and numerals.	The student seems to understand the concept of "tens and ones". They have some difficulty in demonstrating and communicating the teen numbers using blocks and numerals.	The student has difficulty with the concept of "tens and ones". They might demonstrate the teen numbers using blocks but do not accurately communicate how they connect to the teen numbers.
		1.NBT-2c	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 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).	I can explain how 10, 20, 30, 40, 50, 60, 70, 80, and 90 are made from a number of "tens" and no "ones".	The ten numbers (10, 20, 30, . . .) are all made from bundles of tens. They have no additional ones.	The student understands the concept of "multiple tens". They can demonstrate and communicate the process of displaying the multiples of 10 using manipulatives and numerals.	The student generally understands the concept of "multiple tens". They have some difficulty in demonstrating and communicating the multiples of 10 using manipulatives and numerals.	The student has difficulty with the concept of "multiples of 10". They might demonstrate these numbers using manipulatives but do not accurately communicate how they relate to the numbers.
		1.NBT-3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	I can compare two numbers from 10 to 99 and say how many "tens" and how many "ones" each number has.	23 has 2 tens and three ones while 32 has 3 tens and two ones.	The student can use the information about the number of tens and ones to evaluate the relative size of a number compared to another.	The student might be able to tell which two digit number is larger but has trouble explaining it in terms of the number of tens and ones for each two digit number.	The student has difficulty telling which two digit number is larger and also has trouble explaining it in terms of the number of tens and ones for each two digit number.
				I can compare two numbers from 10 to 99 and write the proper number sentence to compare them.	23 < 32 because 23 has fewer tens than the number 32.	The student can accurately determine the size comparison of two numbers and correctly communicate this in an equation or inequality.	The student can accurately determine the size comparison of two numbers but sometimes has difficulty writing the correct equation or inequality.	The student has some difficulty determining the size comparison of two numbers and has difficulty writing the correct equation or inequality.
	I can explain how place value works with the ones and tens and how it can help me add and subtract numbers.	1.NBT-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 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.	I can add two numbers from 0 to 100 (two digit + one digit or two digit + multiple of 10) using many different ways and explain how I did it.	23 + 40 = 63 because I added the twenty and forty together to get sixty and then added the three ones to get 63.	The student can add the stated numbers in various way and can communicate the strategy to others.	The student can add the stated numbers using only one strategy and can usually communicate the strategy to others.	The student has difficulty adding the stated numbers together and can have problems communicating the strategy to others.
				I can add two numbers from 0 to 100 (two digit + one digit or two digit + multiple of 10) and can explain how it is sometimes necessary to take ten "ones" and regroup/rename as "ten".	When I add 36 + 5 I initially have 3 tens. But when I add the 5 ones and 6 ones it becomes a 10 and 1 one. So 30 plus 10 is 40 plus 1 more one is 41.	The student can add the stated numbers in various way and can communicate specifically how you may need to regroup the ones into tens and ones to obtain the answer.	The student can add the stated numbers using only one strategy and can sometimes explain how you may need to regroup the ones into tens-and-ones to obtain the answer.	Even when the student can correctly add the two stated numbers together, they have difficulty explain how you may need to regroup the ones into tens-and-ones to obtain the answer.
		1.NBT-5	Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	I can add or subtract 10 from any number from 10 to 99 in my head and explain how I did it using the properties of place value.	78 - 10 will be 68 because I take one bundle of ten from 78 (7 - 1) and that gives me 68.	The student can mentally add or subtract ten from a two digit number and properly explain how this changes the tens digit.	The student can mentally add or subtract ten from a two digit number but has difficulty explaining the reasoning.	The student can sometimes mentally add or subtract ten from a two digit number but has difficulty explaining the reasoning.
		1.NBT-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.	I can subtract multiples of 10 from multiples of 10 (all from 10-90), and explain the answer with a drawing, base ten blocks, or other ways.	50 + 20 = 30 because . . . 	The student can subtract the stated numbers (zero or positive answers only) and can explain the process in various ways. (equations, using place values, the inverse operation of addition, or other models)	The student can subtract the stated numbers (zero or positive answers only) but may have difficulty in explaining the answer in multiple ways.	The student can sometimes subtract the stated numbers (zero or positive answers only) but may have difficulty in explaining the answer with a model.

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Domain Target	Cluster Target	Grade & Domain	Standard	Learning Target	A Specific Example	Assessment		
Measurement & Data * Measurement & Data * Measurement & Data * Measurement & Data * Measurement & Data * Measurement & Data * Measurement & Data *						**mastery**	**emerging**	**novice**
I can explain what it means to measure an object. **I can collect and answer questions about small groups of data.**	**I can compare the lengths of objects and use a small object to measure a larger one.**	1.MD-1	Order three objects by length; compare the lengths of two objects indirectly by using a third object.	I can put three objects in order from longest to shortest using one of the objects to measure the other two.	Using Unifix cubes I can arrange three different stacks in order from shortest to longest.	The student can arrange the lengths of various objects by the indirect measurement by a third object.	The student can usually arrange the lengths of various objects by the indirect measurement by a third object.	The student has difficulty arranging the lengths of various objects by the indirect measurement by a third object.
		1.MD-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.	I can measure the length of an object by using a smaller object multiple times to describe the length.	I can measure the length of my pencil by using a single Unifix cube and finding how many laid end to end would be the same as my pencil.	The student can measure and explain how a smaller object can be laid end-to-end multiple times to measure a larger object.	The student can measure but sometimes has difficulty explaining how a smaller object can be laid end-to-end multiple times to measure a larger object.	The student has difficulty measuring an object by using smaller object laid end-to-end multiple times and also has difficulty explaining how this works.
	I can tell time to the nearest half hour.	1.MD-3	Tell and write time in hours and half-hours using analog and digital clocks.	I can tell time to the nearest hour or half hour on any clock.	The time is 3:30. 	The student can accurately and consistently tell time to the hour and half hour.	The student can tell time to the hour but may occasionally have problems with half hour. (especially with the analog clock)	The student has difficulty telling time, especially with the analog clock.
	I can collect data and organize it to answer questions.	1.MD-4	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.	I can collect data and organize it in a list or a chart. (graph is optional)	I can organize data into a neat display of categories.	The student can collect data and create an easily readable chart or display of categories.	The student can collect data but their display of the data may not be clear or accurate.	The student has difficulty in putting data into any organized structure that has meaning.
				I can answer questions about the data such as how many in each group, which group has more, and which group has less.	I can count the data points in each category and determine which categories have more or less.	The student can compare the sizes of the categories to tell how much more or less each one is compared to the other.	The student can usually compare the sizes of the categories to tell how much more or less each one is compared to the other.	The student cannot compare the sizes of the categories to tell how much more or less each one is compared to the other.
Geometry * Geometry * Geometry * Geometry * Geometry * Geometry * Geometry * Geometry * Geometry * Geometry * Geometry *						**mastery**	**emerging**	**novice**
I can identify shapes, put them together to make new shapes, and explain the things that make them the same or different.	**I can identify shapes, put them together to make new shapes, and explain the things that make them the same or different.**	1.G-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.	I can describe the IMPORTANT parts about what makes triangles, squares, trapezoids, and rectangles special.	What's important about a triangle is that it has three sides - not the color.	The student can describe defining attributes of the stated figures.	The student can usually describe the defining attributes of the stated figures.	The student has difficulty describing the defining attributes of the stated figures.
				I can build a shape with the attributes that someone gives me.	Build a shape that has four sides and all the sides are of equal length.	Given particular attributes, the student can accurately draw the shape(s).	Given particular attributes, the student can usually draw the shape(s).	Given particular attributes, the student has difficulty drawing the shape(s).
		1.G-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.**[4]**	I can put two-dimensional shapes together to make triangles, squares, trapezoids, and rectangles.	Put these triangles together to form other shapes and name the attributes of these new shapes.	The student can put 2-D shapes together in various ways to create new shapes. (optional - describe attributes of new shape)	The student can put 2-D shapes together to create new shapes but is somewhat limited in the understanding of the new shape.	The student can put 2-D shapes together to create new shapes but has little understanding of the new shape.
				I can put three-dimensional shapes together to make cubes, right rectangular prisms, right circular cones, and right circular cylinders.	Put these 3-D shapes (cubes, cones, prisms, etc) together to make new shapes and describe them.	The student can put 3-D shapes together in various ways to create new shapes. (optional - describe attributes of new shape)	The student can put 3-D shapes together to create new shapes but is somewhat limited in the understanding of the new shape.	The student can put 3-D shapes together to create new shapes but has little understanding of the new shape.
		1.G-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	I can divide circles and rectangles into two and four equal parts and name the parts.	Divide the circle into four equal parts and name each part. 	The student can describe the equal shares of a divided circle using proper vocabulary and accurate relationships.	The student can describe the equal shares of a divided circle and usually uses proper vocabulary and accurate relationships.	The student has difficulty describing the equal shares of a divided circle and confuses vocabulary and relationships.
				I can explain how dividing a circle or rectangle into more parts means there will be smaller parts.	If two students divide the same size circle into equal parts and one has 2 parts and the other has 4 parts, how does the size of the parts compare?	The student can accurately explain how the size of the share (of the divided circle) compares to the number of shares.	The student can partially explain how the size of the share (of the divided circle) compares to the number of shares.	The student has difficulty explaining how the size of the share (of the divided circle) compares to the number of shares.

[2] See Glossary, Table 1 (shown below).
[3] Students need not use formal terms for these properties
[4] Students do not need to learn formal names such as "right rectangular prism."
[5] Easily and quickly refers to the student doing the computation mentally without tedious counting strategies.

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Domain Target	Cluster Target	Grade & Domain	Standard	Learning Target	A Specific Example	Assessment

	Result Unknown	Change Unknown	Start Unknown
Add to	Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? 2 + 3 = ?	Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were five bunnies. How many bunnies hopped over to the first two? 2 + ? = 5	Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were five bunnies. How many bunnies were on the grass before? ? + 3 = 5
Take from	Five apples were on the table. I ate two apples. How many apples are on the table now? 5 – 2 = ?	Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? 5 – ? = 3	Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? ? – 2 = 3

	Total Unknown	Addend Unknown	Both Addends Unknown[1]
Put Together/ Take Apart[2]	Three red apples and two green apples are on the table. How many apples are on the table? 3 + 2 = ?	Five apples are on the table. Three are red and the rest are green. How many apples are green? 3 + ? = 5, 5 – 3 = ?	Grandma has five flowers. How many can she put in her red vase and how many in her blue vase? 5 = 0 + 5, 5 = 5 + 0 5 = 1 + 4, 5 = 4 + 1 5 = 2 + 3, 5 = 3 + 2

	Difference Unknown	Bigger Unknown	Smaller Unknown
Compare[3]	("How many more?" version): Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy? ("How many fewer?" version): Lucy has two apples. Julie has five apples. How many fewer apples does Lucy have than Julie? 2 + ? = 5, 5 – 2 = ?	(Version with "more"): Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have? (Version with "fewer"): Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have? 2 + 3 = ?, 3 + 2 = ?	(Version with "more"): Julie has three more apples than Lucy. Julie has five apples. How many apples does Lucy have? (Version with "fewer"): Lucy has 3 fewer apples than Julie. Julie has five apples. How many apples does Lucy have? 5 – 3 = ?, ? + 3 = 5

[1] These take apart situations can be used to show all the decompositions of a given number. The associated equations, which have the total on the left of the equal sign, help children understand that the = sign does not always mean makes or results in but always does mean is the same number as.

[2] Either addend can be unknown, so there are three variations of these problem situations. Both Addends Unknown is a productive extension of this basic situation, especially for small numbers less than or equal to 10.

[3] For the Bigger Unknown or Smaller Unknown situations, one version directs the correct operation (the version using more for the bigger unknown and using less for the smaller unknown). The other versions are more difficult.

Created by Carl Jones * Darke County ESC * 1-3-2011