Revision Type	2011-2012 LT	2011-2012 LT Description	2010-2011 LT	2010-2011 LT Description
4	MA.00.P41.02.03	Sort similar groups of objects into simple categories based on attributes. (CAS: P.4.1.b)	MA.00.04.12.02	Sort, match, place in a series, and group objects according to one attribute
4	MA.00.P42.02.03	Group objects according to their size using standard and non-standard forms (height, weight, length, or color brightness) of measurement. (CAS: P.4.2.b)	MA.00.10.01.02	Group objects according to their size using standard and non-standard forms (height, weight, length, or color brightness) of measurement
4	MA.00.K11.01.03	Count to 100 by ones and by tens. (CAS: K.1.1.a.i) (CCSS: K.CC.1)	MA.01.01.01.01	Count whole numbers to one hundred
4	MA.00.K11.04.03	Apply the relationship between numbers and quantities and connect counting to cardinality. (CAS: K.1.1.b.i) (CCSS: K.CC.4)	MA.00.01.01.01	Match a quantity to a numeral
4	MA.00.K11.05.03	Count and represent objects to 20. (CAS: K.1.1.b.ii) (CCSS: K.CC.5)	MA.00.01.05.02	Count and represent objects including coins to ten
4	MA.00.K11.06.03	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. (CAS: K.1.1.c.i) (CCSS: K.CC.6)	MA.01.02.15.02	Compare sets and use language to describe more, less, or the same
4	MA.00.K12.05.03	Use objects including coins and drawings to model addition and subtraction problems to 10. (PFL) (CAS: K.1.2.a.v)	MA.01.02.01.02	Use objects including coins and drawings to model addition and subtraction problems to 10
6	MA.00.K42.04.03	Order several objects by length, height, weight, or price. (PFL) (CAS: K.4.2.a.iv)	MA.01.10.02.01 MA.02.10.08.01	Recognize and compare attributes of length, height, weight, price, and capacity of objects Compare and order objects by length and weight

Revision Type	2011-2012 LT	2011-2012 LT Description	2010-2011 LT	2010-2011 LT Description
4	MA.01.111.02.03	Within 120, read and write numerals and represent a number of objects with a written numeral. (CAS: 1.1.1.a.ii) (CCSS: 1.NBT.1)	MA.02.01.01.01	Read and write whole numbers to 100
4	MA.01.111.05.03	Compare two sets of objects, including pennies, up to at least 25 using language such as "three more or three fewer". (PFL) (CAS: 1.1.1.b.iii)	MA.02.01.07.01	Compare two sets of objects, including pennies, up to at least 25 using language such as three more or three fewer
4	MA.01.111.07.03	Identify coins and find the value of a collection of two coins. (PFL) (CAS: 1.1.1.c.ii)	MA.02.01.06.02	Identify pennies, nickels, dimes, and quarters and their values
4	MA.01.112.03.03	Apply properties of operations as strategies to add and subtract. (CAS: 1.1.2.b.i) (CCSS: 1.OA.3)	MA.02.02.14.01	Manipulate sets to simulate addition and subtraction
4	MA.01.112.07.03	Demonstrate fluency for addition and subtraction within 10. (CAS: 1.1.2.c.iii) (CCSS: 1.OA.6)	MA.02.02.01.01	Automatically recalls addition and subtraction facts through sums to ten
4	MA.01.142.01.03	Order three objects by length; compare the lengths of two objects indirectly by using a third object. (CAS: 1.4.2.a.i) (CCSS: 1.MD.1)	MA.02.10.01.01	Use a non-standard unit of measurement to describe an object
4	MA.01.142.03.03	Tell and write time in hours and half-hours using analog and digital clocks. (CAS: 1.4.2.b.i) (CCSS: 1.MD.3)	MA.03.10.04.01	Tell time to the half hour
4	MA.01.K41.01.03	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. (CAS: K.4.1.a.i) (CCSS: K.G.1)	MA.01.07.01.01	Use relational vocabulary such as above, below, and next to describe spatial relationships
4	MA.01.K41.02.03	Correctly name shapes regardless of their orientations or overall size. (CAS: K.4.1.a.ii) (CCSS: K.G.2)	MA.00.06.01.01	Recognize and/or name the following shapes: heart, star, circle, oval, square, rectangle, triangle and diamond/ rhombus. (i.e., squares, triangles, circles, rectangles)
4	MA.01.K41.05.03	Model shapes in the world by building shapes from components and drawing shapes. (CAS: K.4.1.b.ii) (CCSS: K.G.5)	MA.00.06.08.01	Draws an identifiable circle and square.

Revision Type	2011-2012 LT	2011-2012 LT Description	2010-2011 LT	2010-2011 LT Description
4	MA.02.131.02.03	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. (CAS: 1.3.1.a.ii) (CCSS: 1.MD.4)	MA.02.12.01.01	Read information from pictographs, bar graphs, and tally charts
4	MA.02.141.01.03	Distinguish between defining attributes versus non-defining attributes. (CAS: 1.4.1.a) (CCSS: 1.G.1)	MA.03.06.01.01	Describe attributes of two-dimensional shapes (square, triangle, rectangle, rhombus)
4	MA.02.141.02.03	Build and draw shapes to possess defining attributes. (CAS: 1.4.1.b) (CCSS: 1.G.1)	MA.02.06.01.01	Draw basic shapes (i.e., squares, triangles, circles, rectangles)
4	MA.02.141.03.03	Compose two-dimensional shapes or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shape. (CAS: 1.4.1.c) (CCSS: 1.G.2)	MA.02.06.02.01	Combine and take apart shapes to create new shapes and describe results
5	MA.02.141.04.03	Describe shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. (CAS: 1.4.1.c.i) (CCSS: 1.G.3)	MA.02.01.11.01	Identifies unit fractions 1/2, 1/3, and 1/4 as parts of wholes or parts of groups
4	MA.02.141.05.03	Describe the whole as two of, or four of the equal shares. (CAS: 1.4.1.c.ii) (CCSS: 1.G.3)	MA.03.01.11.01	Partition basic shapes and sets using common fractions such as 1/2, 1/3, and 1/4
4	MA.02.211.03.03	Skip-count by 5s, 10s, and 100s. (CAS: 2.1.1.a.iii) (CCSS: 2.NBT.2)	MA.02.01.05.01	Skip count by 2's and 5's, and 10's to 100
4	MA.02.211.10.03	Explain why addition and subtraction strategies work, using place value and the properties of operations. (CAS: 2.1.1.b.v) (CCSS: 2.NBT.9)	MA.04.02.01.02	Explain and/or model the computation of addition and subtraction of two digit numbers (using place value) including regrouping
6	MA.02.212.03.03	Fluently add and subtract within 20 using mental strategies. (CAS: 2.1.2.b) (CCSS: 2.OA.2)	MA.03.02.01.01 MA.03.02.02.01	Automatically recall addition facts to 20 using whole numbers 1 to 10 Automatically recall subtraction facts using whole numbers 1 to 10
6	MA.02.212.04.03	Know from memory all sums of two one-digit numbers. (CAS: 2.1.2.c) (CCSS: 2.OA.2)	MA.03.02.16.01 MA.03.02.17.01	Apply two-digit addition without regrouping Apply two-digit subtraction without regrouping
4	MA.02.212.05.03	Determine whether a group of objects (up to 20) has an odd or even number of members. (CAS: 2.1.2.d.i) (CCSS: 2.OA.3)	MA.05.01.08.01	Identify odd and even numbers
4	MA.02.242.01.03	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. (CAS: 2.4.2.a.i) (CCSS: 2.MD.1)	MA.04.10.05.01	Measure (i.e., length, weight, temperature, and time) using U.S. customary and metric systems to nearest whole unit using the proper tool (''CAS 2.4.2a/c/d, K.4.2a'')

Revision Type	2011-2012 LT	2011-2012 LT Description	2010-2011 LT	2010-2011 LT Description
6	MA.02.242.02.03	Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen. (CAS: 2.4.2.a.ii) (CCSS: 2.MD.2)	MA.01.10.01.01 MA.03.10.02.01	Use estimates of measurements of everyday experiences Use a ruler to measure to the nearest inch, foot, yard
4	MA.02.242.07.03	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. (CAS: 2.4.2.c.i) (CCSS: 2.MD.7)	MA.04.10.04.01	Tell time to the nearest 5 minutes and is able to write that time (analog)
4	MA.02.242.08.03	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. (CAS: 2.4.2.c.ii) (CCSS: 2.MD.8)	MA.04.01.06.01	Create different combinations of currency and coins that should not exceed $100.00 (e.g., trading, adding, subtracting with money)

Revision Type	2011-2012 LT	2011-2012 LT Description	2010-2011 LT	2010-2011 LT Description
4	MA.03.231.01.03	Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units. (CAS: 2.3.1.a.i) (CCSS: 2.MD.9)	MA.04.10.06.01	Read and interpret pictorial representations of measurements of length, weight, temperature, and capacity
4	MA.03.241.04.03	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. (CAS: 2.4.1.d) (CCSS: 2.G.3)	MA.04.01.11.01	Identify the fractional part of a drawing or a set (Restricted to halves, thirds, fourths)
4	MA.03.311.01.03	Use place value to round whole numbers to the nearest 10 or 100. (CAS: 3.1.1.a.i) (CCSS: 3.NBT.1)	MA.02.01.03.01	Identifies place value to the tens place
5	MA.03.312.01.03	Describe a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b. (CAS: 3.1.2.a.i) (CCSS: 3.NF.1)	MA.02.01.11.01	Identifies unit fractions 1/2, 1/3, and 1/4 as parts of wholes or parts of groups
4	MA.03.312.03.03	Identify two fractions as equivalent (equal) if they are the same size, or the same point on a number line. (CAS: 3.1.2.a.iii.1) (CCSS: 3.NF.3a)	MA.09.01.11.02	Identify positive fractions and decimals on a number line

Revision Type	2011-2012 LT	2011-2012 LT Description	2010-2011 LT	2010-2011 LT Description
4	MA.04.313.01.03	Interpret products of whole numbers. (CAS: 3.1.3.a.i) (CCSS: 3.OA.1)	MA.05.03.01.01	Recall multiplication facts for 0s, 1s, 2s, 3s, 5s, and 10s with automaticity
4	MA.04.313.02.03	Interpret whole-number quotients of whole numbers. (CAS: 3.1.3.a.ii) (CCSS: 3.OA.2)	MA.06.03.04.01	Explain and/or model the division of a two digit number by a one digit divisor
4	MA.04.313.05.03	Model strategies to achieve a personal financial goal using arithmetic operations. (PFL) (CAS: 3.1.3.a.v)	MA.05.02.01.01	Model strategies to achieve a personal financial goal using arithmetic operations
6	MA.04.313.08.03	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division or properties of operations. (CAS: 3.1.3.c.i) (CCSS: 3.OA.7)	MA.06.03.01.01 MA.06.03.02.01	Recall multiplication facts of whole numbers from 0 through 12 with automaticity Recall division facts of whole numbers 0 through 12 with automaticity
4	MA.04.313.12.03	Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (CAS: 3.1.3.d.iii) (CCSS: 3.OA.8)	MA.06.01.99.01	Use reasonable estimation techniques (i.e. front-end estimation, estimation by rounding, friendly numbers, compatible numbers, flexible rounding, clusters) before performing a basic math operations at this level
4	MA.04.313.13.03	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. (CAS: 3.1.3.d.iv) (CCSS: 3.OA.9)	MA.05.04.01.02	Reproduce, create, and extend patterns using objects and numbers
4	MA.04.331.01.03	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. (CAS: 3.3.1.a.i) (CCSS: 3.MD.3)	MA.04.12.02.01	Place information onto a data display (bar graphs, tallies, pictographs, and t-tables)
4	MA.04.342.05.03	Find the perimeter given the side lengths. (CAS: 3.4.2.c.i) (CCSS: 3.MD.8)	MA.05.08.01.01	Find the perimeter of a polygon given the dimensions
4	MA.04.343.01.03	Tell and write time to the nearest minute. (CAS: 3.4.3.a.i) (CCSS: 3.MD.1)	MA.05.10.04.01	Tell time to the minute using analog and digital clocks
4	MA.04.343.04.03	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). (CAS: 3.4.3.a.iv) (CCSS: 3.MD.2)	MA.07.10.08.01	Sort objects by their weight

Revision Type	2011-2012 LT	2011-2012 LT Description	2010-2011 LT	2010-2011 LT Description
4	MA.05.411.01.03	Explain that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. (CAS: 4.1.1.a.i) (CCSS: 4.NBT.1)	MA.04.01.03.01	Identify place value of whole numbers to 10,000
4	MA.05.411.02.03	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. (CAS: 4.1.1.a.ii) (CCSS: 4.NBT.2)	MA.04.01.01.01	Read and write basic whole numbers to 10,000
4	MA.05.411.05.03	Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. (CAS: 4.1.1.b.i) (CCSS: 4.NF.5)	MA.06.01.11.01	Identify and match visual representation of fractions and decimals
4	MA.05.411.07.03	Compare two decimals to hundredths by reasoning about their size. (CAS: 4.1.1.b.iii) (CCSS: 4.NF.7)	MA.06.01.12.01	Read, write, and identify the value of decimals to the hundredths place
4	MA.05.413.01.03	Fluently add and subtract multi-digit whole numbers using standard algorithms. (CAS: 4.1.3.a.i) (CCSS: 4.NBT.4)	MA.06.02.01.02	Explain and model addition and subtraction of 3-digit whole numbers with regrouping
4	MA.05.413.02.03	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. (CAS: 4.1.3.a.ii) (CCSS: 4.NBT.5)	MA.08.03.01.01	Explain and/or model the computation of multiplication of two digit numbers by two digit numbers
6	MA.05.413.03.03	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. (CAS: 4.1.3.a.iii) (CCSS: 4.NBT.6)	MA.07.03.02.02 MA.08.03.02.01	Explain and/or model the division of positive whole numbers with multiple digits. Justify reasonableness of solutions Explain and/or model the computation of division of whole numbers by one or two digit numbers involving remainders (interpret remainders)
4	MA.05.421.01.03	Use number relationships to find the missing number in a sequence. (CAS: 4.2.1.a.i) (CCSS: 4.OA.5)	MA.03.04.02.01	Identify a missing number in a sequence and describe a rule
4	MA.05.421.03.03	Complete input/output tables. (CAS: 4.2.1.a.iii) (CCSS: 4.OA.5)	MA.07.04.02.01	Describe how changing one quantity affects another quantity (in-out box)
4	MA.05.441.01.03	Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. (CAS: 4.4.1.a.i) (CCSS: 4.MD.1)	MA.05.10.09.01	Estimate the length of common objects to a reasonable measurement unit

Revision Type	2011-2012 LT	2011-2012 LT Description	2010-2011 LT	2010-2011 LT Description
4	MA.05.441.02.03	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. (CAS: 4.4.1.a.ii) (CCSS: 4.MD.1)	MA.06.10.12.01	Convert within the same measurement system (e.g., inches to feet, centimeters to meters, ounces to pounds, liters to milliliters)
4	MA.05.441.04.03	Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. (CAS: 4.4.1.a.iv) (CCSS: 4.MD.2)	MA.07.10.07.01	Make and use direct and indirect measurements to describe and make comparisons (e.g., total time, elapsed time, temperature)
6	MA.05.442.01.03	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. (CAS: 4.4.2.a) (CCSS: 4.G.1)	MA.05.06.04.01 MA.06.06.06.01 MA.08.10.11.01	Identify and compare geometric terms (e.g., rays, points, angles, lines, line segments) Identify and justify pairs of lines as intersecting, parallel or perpendicular Classify and describe angles (e.g., acute, right, obtuse, straight, and reflex)
4	MA.05.442.03.03	Classify and identify two-dimensional figures according to attributes of line relationships or angle size. (CAS: 4.4.2.c) (CCSS: 4.G.2)	MA.05.06.01.01	Classify and compare two dimensional shapes
4	MA.05.442.04.03	Identify a line of symmetry for a two-dimensional figure. (CAS: 4.4.2.d) (CCSS: 4.G.3)	MA.06.06.02.01	Identify and justify at least two lines of symmetry in a two dimensional shape
4	MA.05.512.02.03	Use strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. (CAS: 5.1.2.b.i) (CCSS: 5.NBT.6)	MA.07.01.07.01	Describe relationships between related facts in multiplication and division (i.e., fact families)

Revision Type	2011-2012 LT	2011-2012 LT Description	2010-2011 LT	2010-2011 LT Description
4	MA.06.412.04.03	Compose and decompose fractions as sums and differences of fractions with the same denominator in more than one way and justify with visual models. (CAS: 4.1.2.b.i.1)	MA.08.02.03.02	Explain and/or model adding and subtracting positive rational numbers including decimals and fractions with common denominators
4	MA.06.412.09.03	Solve word problems involving multiplication of a fraction by a whole number. (CAS: 4.1.2.b.ii.3) (CCSS: 4.NF.4c)	MA.08.03.03.02	Explain and or model the multiplication of fractions by fractions (positive values) Include tax and saving rates
4	MA.06.511.06.03	Use place value understanding to round decimals to any place. (CAS: 5.1.1.c) (CCSS: 5.NBT.4)	MA.05.01.99.01	Make reasonable estimates of a value by rounding off the nearest given value

Revision Type	2011-2012 LT	2011-2012 LT Description	2010-2011 LT	2010-2011 LT Description
4	MA.07.513.01.03	Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.) (CAS: 5.1.3.a.i) (CCSS: 5.NF.1)	MA.09.02.03.02	Explain and/or model the computation of addition and subtraction of all forms of positive fractions (i.e., common denominators, uncommon denominators, improper, proper, mixed fractions); justify reasonableness of solutions.
6	MA.07.514.06.03	Apply the principle of fraction equivalence a/b = (n × a)/(n × b) to the effect of multiplying a/b by 1. (CAS: 5.1.4.e.ii) (CCSS: 5.NF.5b)	MA.07.01.08.02 MA.07.01.13.01	Identify characteristics of numbers (e.g., factors, multiples, even, odd) Identify prime factors and composite factors of a whole number
4	MA.07.521.02.03	Identify apparent relationships between corresponding terms. (CAS: 5.2.1.b) (CCSS: 5.OA.3)	MA.08.04.01.01	Represent, describe, and analyze geometric and numeric patterns involving whole numbers
4	MA.07.521.05.03	Use patterns to solve problems including those involving saving and checking accounts. (CAS: 5.2.1.e) (PFL)	MA.07.04.01.01	Use patterns to solve problems including those involving saving and checking accounts such as saving $10/month or spending more means saving less
4	MA.07.542.01.03	Graph points on the coordinate plane to solve real-world and mathematical problems. (CAS: 5.4.2.a) (CCSS: 5.G)	MA.07.07.06.02	Identify and plot an ordered pair on a graph in the all quadrants
4	MA.07.542.03.03	Explain that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. (CAS: 5.4.2.c.i) (CCSS: 5.G.3)	MA.05.07.03.01	Compare and contrast similar and congruent shapes
4	MA.07.542.04.03	Classify two-dimensional figures in a hierarchy based on properties. (CAS: 5.4.2.c.ii) (CCSS: 5.G.4)	MA.07.06.04.01	Identify, compare, and analyze the attributes of two and three dimensional shapes and develop vocabulary to describe the attributes (acute, obtuse, right angles, parallel lines, perpendicular lines, intersecting lines, and line segments)

Revision Type	2011-2012 LT	2011-2012 LT Description	2010-2011 LT	2010-2011 LT Description
4	MA.08.612.07.03	Compute quotients of fractions. (CAS: 6.1.2.g) (CCSS: 6.NS.1)	MA.09.03.04.02	Divide whole numbers, mixed numbers, and fractions by whole numbers, mixed numbers, and fractions. Justify reasonableness of solutions
4	MA.08.612.08.03	Solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. (CAS: 6.1.2.h) (CCSS: 6.NS.1)	MA.10.02.03.02	Explain and/or model addition and subtraction of all positive rational numbers expressed in any form (i.e., fractions, mixed numbers, decimals) and justify the reasonableness of solutions
4	MA.08.621.02.03	Write expressions that record operations with numbers and with letters standing for numbers. (CAS: 6.2.1.b.i) (CCSS: 6.EE.2a)	MA.08.05.05.01	Translate written word problems into algebraic equations
4	MA.08.621.04.03	Evaluate expressions at specific values of their variables including expressions that arise from formulas used in real world problems. (CAS: 6.2.1.b.iii) (CCSS: 6.EE.2c)	MA.09.05.01.01	Evaluate expressions by substituting whole number values for variables
4	MA.08.621.06.03	Apply the properties of operations to generate equivalent expressions. (CAS: 6.2.1.c) (CCSS: 6.EE.3)	MA.07.05.02.01	Evaluate a variable expression
4	MA.08.622.01.03	Describe solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? (CAS: 6.2.2.a) (CCSS: 6.EE.5)	MA.10.04.01.01	Describe patterns using variables, expressions, equations, and inequalities in problem solving situations
4	MA.08.622.04.03	Solve real-world and mathematical problems by writing and solving equations of the form x + p = q and px = q for cases in which p, q and x are all nonnegative rational numbers. (CAS: 6.2.2.d) (CCSS: 6.EE.7)	MA.09.04.02.01	Solve linear equations in problem solving situations using a variety of methods and tools (informal, formal, and graphical)
6	MA.08.631.04.03	Display numerical data in plots on a number line, including dot plots, histograms, and box plots. (CAS: 6.3.1.d.i) (CCSS: 6.SP.4)	MA.07.12.04.01 MA.10.12.05.01	Organize, construct, and interpret bar graphs, pictographs, and t-tables Read and construct data displays of data using appropriate techniques (line graphs, circle graphs, scatter plots, box plots, stem and leaf plots and histogram)
6	MA.08.641.01.03	Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes. (CAS: 6.4.1.a.i) (CCSS: 6.G.1)	MA.08.08.10.01 MA.09.08.04.01	Solve problems involving the area of triangles Find the area of composite shape composed of polygons

Revision Type	2011-2012 LT	2011-2012 LT Description	2010-2011 LT	2010-2011 LT Description
4	MA.09.611.07.03	Solve problems involving finding the whole, given a part and the percent. (CAS: 6.1.1.c.v) (CCSS: 6.RP.3c)	MA.09.01.07.01	Generate equivalency of all positive fractions, decimals, and percents
4	MA.09.611.09.03	Express the comparison of two whole number quantities using differences, part-to-part ratios, and part-to-whole ratios in real contexts, including investing and saving. (CAS: 6.1.1.c.vii) (PFL)	MA.10.01.10.02	Solve problems using rational numbers including the concepts of ratio and proportion (include investments, savings, and purchase decisions)
4	MA.09.712.10.03	Interpret products of rational numbers by describing real-world contexts. (CAS: 7.1.2.b.ii) (CCSS: 7.NS.2a)	MA.10.03.03.02	Explain and/or model multiplication and division of all positive rational numbers expressed in any form (fractions, mixed numbers, decimals) and justify the reasonableness of solutions
4	MA.09.722.03.03	Fluently solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. (CAS: 7.2.2.c.i) (CCSS: 7.EE.4a)	MA.09.05.05.01	Translate written word problems to algebraic expressions/equations and vice versa (include the use of squares and square roots)
4	MA.09.731.04.03	Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. (CAS: 7.3.1.a.iv) (CCSS: 7.SP.2)	MA.07.12.01.01	Create a graphical representation (line or bar graph) of given data and uses it to make a prediction
4	MA.09.731.06.03	Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. (CAS: 7.3.1.b.ii) (CCSS: 7.SP.4)	MA.11.12.08.02	Analyze the effects of data manipulation on central tendency and variability. Evaluate arguments on statistical claims
4	MA.09.732.01.03	Explain that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. (CAS: 7.3.2.a) (CCSS: 7.SP.5)	MA.08.13.03.01	Determine the probability of a simple event
4	MA.09.732.02.03	Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. (CAS: 7.3.2.b) (CCSS: 7.SP.6)	MA.09.13.06.01	Make predictions and compare results using both experimental and theoretical probability drawn from the use of a chance device, die, or coin
5	MA.09.732.04.03	Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. (CAS: 7.3.2.c.ii) (CCSS: 7.SP.7a)	MA.07.13.03.01	Create a fair and unfair spinner and explains why it is fair or unfair

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5	MA.09.732.05.03	Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. (CAS: 7.3.2.c.iii) (CCSS: 7.SP.7b)	MA.07.13.03.01	Create a fair and unfair spinner and explains why it is fair or unfair
4	MA.09.732.08.03	For an event described in everyday language identify the outcomes in the sample space which compose the event. (CAS: 7.3.2.d.iii) (CCSS: 7.SP.8b)	MA.09.13.05.01	Determine the number of possible outcomes for simple events using a variety of methods such as organized lists and tree diagrams
4	MA.09.742.01.03	State the formulas for the area and circumference of a circle and use them to solve problems. (CAS: 7.4.2.a) (CCSS: 7.G.4)	MA.10.08.05.01	Solve problems involving area and circumference of a circle
4	MA.09.742.03.03	Use properties of supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure. (CAS: 7.4.2.c) (CCSS: 7.G.5)	MA.12.06.06.01	Use the properties of intersecting lines to determine angles, given parallel and perpendicular lines and transversals
6	MA.09.742.04.03	Solve real-world and mathematical problems involving area, volume, and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. (CAS: 7.4.2.d) (CCSS: 7.G.6)	MA.11.08.09.01 MA.12.08.04.01	Solve problems involving the surface area of three-dimensional figures including right prisms and cylinders Use properties of polygons to find perimeter, area, and volume of irregular figures (e.g., pyramid, cylinder)

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4	MA.10.711.01.03	Analyze proportional relationships and use them to solve real-world and mathematical problems. (CAS: 7.1.1.a) (CCSS: 7.RP)	MA.10.07.09.01	Apply the concept of ratio, proportion, and similarity in problem solving situation. Apply proportions to unit of measure conversions. (Both standard and metric)
4	MA.10.741.01.03	Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale. (CAS: 7.4.1.a.i) (CCSS: 7.G.1)	MA.08.10.10.01	Apply a scale to approximate a distance or area on a map or drawing
4	MA.10.831.04.03	Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. (CAS: 8.3.1.d) (CCSS: 8.SP.3)	MA.13.12.13.02	Determine the line of best fit to match a data set, writing its equation, explaining what the equation terms mean and making a prediction

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4	MA.11.811.04.03	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions. (CAS: 8.1.1.c) (CCSS: 8.NS.2)	MA.10.01.17.01	Recognize and use equivalent representations of positive rational and common irrational numbers (e.g., v2, v5, pi)
4	MA.11.811.07.03	Evaluate square roots of small perfect squares and cube roots of small perfect cubes. (CAS: 8.1.1.f) (CCSS: 8.EE.2)	MA.12.01.14.01	Simplifies square roots
4	MA.11.811.09.03	Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities. (CAS: 8.1.1.h.i) (CCSS: 8.EE.4)	MA.12.01.07.01	Convert equivalent representations of scientific notation and decimal notation for large and small numbers in real world situations
4	MA.11.822.02.03	Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms. (CAS: 8.2.2.a.ii) (CCSS: 8.EE.7b)	MA.11.04.03.01	Explain and model the process of solving simple linear equations involving rational numbers and integers
5	MA.11.841.03.03	Demonstrate that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations. (CAS: 8.4.1.c) (CCSS: 8.G.2)	MA.13.07.05.01	Identify and justify the similarity and/or congruence of geometric transformations. (i.e. translations, rotations, reflections, and dilations) using distance formula
5	MA.11.841.05.03	Demonstrate that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations. (CAS: 8.4.1.e) (CCSS: 8.G.4)	MA.13.07.05.01	Identify and justify the similarity and/or congruence of geometric transformations. (i.e. translations, rotations, reflections, and dilations) using distance formula
5	MA.11.842.02.03	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions. (CAS: 8.4.2.b) (CCSS: 8.G.7)	MA.11.09.02.01	Apply the Pythagorean theorem in problem solving situations
5	MA.11.842.03.03	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system. (CAS: 8.4.2.c) (CCSS: 8.G.8)	MA.11.09.02.01	Apply the Pythagorean theorem in problem solving situations
4	MA.11.842.04.03	State the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems. (CAS: 8.4.2.d) (CCSS: 8.G.9)	MA.11.08.08.02	Solve problems involving the volume of three dimensional figures, including right prisms and cylinders

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				Explain and/or model the addition and subtraction of radical numbers
6	MA.12.H11.01.03	Explain why the sum or product of two rational numbers is rational. (CAS: HS.1.1.b.i) (CCSS: N-RN.3)	MA.12.02.08.01 MA.12.03.11.02	Explain and model multiplication and division of radical numbers
4	MA.12.H21.01.03	Graph linear functions and show intercepts. (CAS: HS.2.1.c.ii) (CCSS: F-IF.7a)	MA.12.04.03.01	Apply and manipulate multi-step linear equations and formulas
4	MA.12.H22.01.03	Analyze the impact of interest rates on a personal financial plan. (CAS: HS.2.2.d.i) (PFL)	MA.11.01.20.01	Analyze how credit and dept impact personal financial goals
4	MA.12.H24.09.03	Solve systems of linear equations exactly and approximately, focusing on pairs of linear equations in two variables. (CAS: HS.2.4.d.ii) (CCSS: A-REI.6)	MA.12.05.11.02	Solve simple systems of linear equations using algebraic and graphical methods
4	MA.12.H24.10.03	Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes. (CAS: HS.2.4.e.iii) (CCSS: A-REI.12)	MA.12.04.04.01	Represent and apply linear relationships using written explanations, tables, equations, and graphs
4	MA.12.H33.03.03	Using the conditional probability of A given B as P(A and B)/P(B), interpret the independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B. (CAS: HS.3.3.a.iii) (CCSS: S-CP.3)	MA.13.13.11.01	Determine the probability of a compound event
4	MA.12.H45.03.03	Apply geometric methods to solve design problems. (CAS: HS.4.5.a.iii) (CCSS: G-MG.3)	MA.13.06.05.02	Solve problems involving angle measurement of polygonal figures.

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4	MA.13.H21.04.03	Calculate and interpret the average rate of change of a function over a specified interval. Estimate the rate of change from a graph. (CAS: HS.2.1.b.i) (CCSS: F-IF.6)	MA.11.10.14.01	Use measurement to solve rate of change problems (e.g., distance, rate, and time)
4	MA.13.H21.06.03	Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context. (CAS: HS.2.1.c.vi.1) (CCSS: F-IF.8a)	MA.13.04.07.01	Solve quadratic equations with real roots by variety of methods (e.g., graphing, factoring, quadratic formula)
4	MA.13.H21.07.03	Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior. (CAS: HS.2.1.c.iv) (CCSS: F-IF.7c)	MA.14.05.14.01	Determine roots and local extrema (local maximums/minimums) to analyze and graph polynomial functions (preferably with technology)
4	MA.13.H42.01.03	Explain that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles. (CAS: HS.4.2.c.i) (CCSS: G-SRT.6)	MA.14.09.04.01	Apply properties of special right triangles (i.e, 45-45-90, 30-60-90) to solve situational problems.
4	MA.13.H42.03.03	Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems. (CAS: HS.4.2.c.iii) (CCSS: G-SRT.8)	MA.14.09.01.01	Apply basic trig identities and inverse identities to find any part of a right triangle including missing angles

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5	MA.14.H12.01.03	Describe factors affection take-home pay and calculate the impact. (CAS: HS.1.2.a.iv) (PFL)	MA.13.01.20.01	Design and use a budget including the following: 1. Describe factors of take home pay 2. Evaluate the cost and benefits of credit 3. Analyze the impacts of interest rates 4. Analyze various lending sources 5. Analyze the cost of insurance as a method to off set the risk of a situation
5	MA.14.H12.02.03	Design and use a budget, including income (net take-home pay) and expenses (mortgage, car loans, and living expenses) to demonstrate how living within your means is essential for a secure financial future. (CAS: HS.1.2.a.v) (PFL)	MA.13.01.20.01	Design and use a budget including the following: 1. Describe factors of take home pay 2. Evaluate the cost and benefits of credit 3. Analyze the impacts of interest rates 4. Analyze various lending sources 5. Analyze the cost of insurance as a method to off set the risk of a situation
4	MA.14.H21.05.03	Graph absolute value functions. (CAS: HS.2.1.c.iii) (CCSS: F-IF.7b)	MA.14.05.15.02	Evaluate and graphically analyze absolute value functions
1	MA.14.H21.06.03	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). (CAS: HS.2.1.c.vi.3) (CCSS: F-IF.9)	MA.11.05.03.01	Convert from one functional representation to another (e.g., table, graph, verbal, standard algebraic notation)
4	MA.14.H21.07.03	Identify the effect on the graph of replacing f(x) by f(x) + k, k f(x), f(kx), and f(x + k) for specific values of k, 9 and find the value of k given the graphs. (CAS: HS.2.1.e.i) (CCSS: F-BF.3)	MA.13.04.06.01	Describe and explain how changes to a simple quadratic equation change the graph and solutions of the equations
4	MA.14.H21.11.03	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. (CAS: HS.2.1.c.i) (CCSS: F-IF.7)	MA.14.05.13.01	Identify the equations and graphs associated with a family of functions (e.g., odd and even to nth degree)
4	MA.14.H21.14.03	Combine standard function types using arithmetic operations. (CAS: HS.2.1.d.i.2) (CCSS: F-BF.1b)	MA.14.05.18.01	Combine standard function types using arithmetic operations
4	MA.14.H21.15.03	Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms. (CAS: HS.2.1.d.ii) (CCSS: F-BF.2)	MA.11.05.09.02	Represent, describe, and analyze patterns and relationships using arithmetic and geometric sequences

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4	MA.14.H23.01.03	Use the properties of exponents to transform expressions for exponential functions. (CAS: HS.2.3.b.i.3) (CCSS: A-SSE.3c)	MA.14.04.08.02	Solve simple exponential equations by using equivalent exponents without the use of logarithms
5	MA.14.H23.03.03	Rewrite rational expressions. (CAS: HS.2.3.f) (CCSS: A-APR)	MA.14.04.14.01	Simplify and solve equations involving radicals and rational exponents
5	MA.14.H23.04.03	Rewrite simple rational expressions in different forms. (CAS: HS.2.3.g) (CCSS: A-APR.6)	MA.14.04.14.01	Simplify and solve equations involving radicals and rational exponents
4	MA.14.H31.04.03	Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages and identify data sets for which such a procedure is not appropriate. (CAS: HS.3.1.a.iv) (CCSS: S-ID.4)	MA.14.12.12.02	Model the normal distribution of a data set given the mean and standard deviation.
4	MA.14.H42.03.03	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures. (CAS: HS.4.2.b.iii) (CCSS: G-SRT.5)	MA.14.07.10.01	Use logical multi-step reasoning to complete a mathematically valid argument using properties of two-dimensional shapes
5	MA.14.H43.03.03	Find the point on a directed line segment between two given points that partitions the segment in a given ratio. (CAS: HS.4.3.a.ii.3) (CCSS: G-GPE.6)	MA.12.07.08.01	Demonstrate understanding of the midpoint, distance, and slope formulas on the coordinate plane
5	MA.14.H43.04.03	Use coordinates and the distance formula to compute perimeters of polygons and areas of triangles and rectangles. (CAS: HS.4.3.a.ii.4) (CCSS: G-GPE.7)	MA.12.07.08.01	Demonstrate understanding of the midpoint, distance, and slope formulas on the coordinate plane