Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

Mathematics Standards of Learning – Kindergarten		
2009	**2001**	**Comments ***
K.1	**K.1**	
K.2a	**K.2a**	Number of objects increased to 15 (from 10).
K.2b	**K.2c**	
K.2c	**K.2b**	
K.3	**K.3, 1.5**	Number of objects increased to 10 (from 3). Details moved to Curriculum Framework.
K.4a	**K.5**	Count forward to 100 (increased from 30).
K.4b	**NEW CONTENT**	Identify one more than and one less than a number.
K.4c	**K.4**	Count by fives and tens to 100 (increased from 30). Details moved to Curriculum Framework.
K.5	**NEW CONTENT, 1.6**	Identify halves and fourths (not just the unit fractions). Details moved to Curriculum Framework.
K.6	**K.6**	*Model adding and subtracting* whole numbers, using up to 10 concrete objects (was "add and subtract").
K.7	**K.7**	
K.8	**K.8**	
K.9	**K.9**	Using analog *and* digital clocks (was "or").
K.10	**K.10**	
K.11a	**K.11**	Identify, describe, and *trace* figures (was "draw").
K.11b	**K.13**	
K.12	**K.12**	
K.13	**K.14**	
K.14	**K.15**	New: Answer questions related to the data.
REMOVED	**K.16**	
K.15	**K.17**	Details moved to Curriculum Framework.
K.16	**K.18**	Details moved to Curriculum Framework.
Removed: **2001 K.16** (investigate a two-colored counter or multicolored spinner)		

* Comments provided in the crosswalk do not restate the complete Standard of Learning (SOL) as written in the official 2009 *Mathematics Standards of Learning* document. Comments are provided as a brief comparison between the 2009 and 2001 Mathematics SOL. Italicized words are used for emphasis only.

Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

	Mathematics Standards of Learning – Grade 1	
2009	**2001**	**Comments***
1.1a	**1.1, 1.4**	Count from 0 to 100 (was 1 to 100).
1.1b	**1.2**	
1.2	**1.3**	Count forward by ones, *twos*, fives, and tens to 100. Count backward by ones from 30 (was 20).
1.3	**NEW CONTENT, 1.6**	New: Identify the parts of a set and/or region. Identify halves, *thirds*, and fourths (not just the unit fractions). New: Write the fractions.
1.4a, b	**1.7a, b**	
1.5	**1.8**	Sums and differences to 18 or less (was 10).
1.6	**1.9**	Sums and differences to 18 or less.
1.7a, b	**1.10a, b**	
1.8	**1.11**	Using analog *and* digital clocks (was "or").
1.9	**1.12**	Measure length, weight/*mass, and volume*.
1.10a	**1.13**	New vocabulary: *more*, *less*, and *equivalent* Details moved to Curriculum Framework.
1.10b	**1.14**	Weight/*mass*. New vocabulary: *more*, *less*, and *equivalent*
1.11	**2.18a**	Using calendar language: names of the months, *today*, *yesterday*, *next week*, *last week*.
1.12	**1.16**	*Identify and trace* geometric plane figures (was "draw"). New vocabulary: *vertices* and *right angles*
1.13	**1.17**	*Construct*, *model*, and describe objects in the environment as geometric shapes (was "identify"). New: Explain the reasonableness of each choice.
1.14	**1.18**	
1.15	**1.19**	
1.16	**1.20**	
1.17	**1.21**	Details moved to Curriculum Framework.
1.18	**3.25b**	Demonstrate an understanding of equality through the use of the equal sign.
Moved: **2001 1.5** (identify ordinal positions) to **2009 K.3** **Removed:** **2001 1.15** (describe the proximity of objects in space)		

* Comments provided in the crosswalk do not restate the complete Standard of Learning (SOL) as written in the official 2009 *Mathematics Standards of Learning* document. Comments are provided as a brief comparison between the 2009 and 2001 Mathematics SOL. Italicized words are used for emphasis only.

Mathematics Standards of Learning – Grade 2		
2009	**2001**	**Comments***
2.1a, b	**2.1a, b**	
2.1c	**2.2**	
2.2a	**2.3**	
2.2b	**NEW CONTENT**	Write the ordinal numbers.
2.3a, b	**2.4**	Identify the parts of a set and/or region that represent fractions for halves, thirds, fourths, *sixths*, eighths, and tenths (not just the unit fractions).
2.3c	**NEW CONTENT**	Compare unit fractions.
2.4a, b	**2.5a, b**	Details moved to Curriculum Framework.
2.4c	**2.5d**	Details moved to Curriculum Framework.
2.5	**2.6**	Sums and differences to 20 or less (was 18).
2.6a, b	**2.7a, b**	Details moved to Curriculum Framework.
2.7a, b	**2.8a, b**	Details moved to Curriculum Framework.
2.8	**2.9**	Create and solve one- *and two-step* addition and subtraction problems.
2.9	**2.10**	
2.10a, b	**2.11a, b**	*Correctly use* cent and dollar symbols, and decimal point.
2.11a	**2.12**	Removed: Determine perimeter.
2.11b	**2.15**	Estimate and measure weight/mass in pounds/*ounces* and kilograms/*grams* using a scale.
2.11c	**2.17**	*Estimate and measure* liquid volume (was "compare").
2.12	**2.16**	Tell and write time to the nearest five minutes (was quarter hour).
2.13a	**2.18b**	
2.13b	**2.18c**	
2.14	**2.19**	
2.15a, b	**2.21, 5.15d**	New: Draw a line of symmetry.
2.16	**2.20, 2.22**	Identify, describe, compare, and contrast plane and solid figures (removed "sort"). Removed: Square pyramid, cylinder, and cone. New vocabulary: rectangular *prism* (was "solid") Details moved to Curriculum Framework.
2.17	**2.23**	Use data from experiments to construct picture graphs, *pictographs*, and bar graphs.

Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

Mathematics Standards of Learning – Grade 2		
2009	**2001**	**Comments***
2.18	**2.24**	Use data from experiments to predict outcomes when the experiment is repeated.
2.19	NEW CONTENT	Analyze data displayed in picture graphs, pictographs, and bar graphs.
2.20	**2.25**	Details moved to Curriculum Framework.
2.21	**2.26**	
2.22	NEW CONTENT	Demonstrate an understanding of equality using the symbols = and ≠.
Moved: **2001 2.12** (measure length to determine the perimeter of a polygon) to **2009 3.10a** **2001 2.13** (count square units to determine area) to **2009 3.10b** **2001 2.18a** (use calendar language appropriately) to **2009 1.11** **2001 2.14** (count cubes to determine volume) to **2009 5.8a** **Removed:** **2001 2.5c** (group objects by threes and fours)		

* Comments provided in the crosswalk do not restate the complete Standard of Learning (SOL) as written in the official 2009 *Mathematics Standards of Learning* document. Comments are provided as a brief comparison between the 2009 and 2001 Mathematics SOL. Italicized words are used for emphasis only.

Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

Mathematics Standards of Learning – Grade 3		
2009	**2001**	**Comments***
3.1a	**3.1**	
3.1b	**3.2**	
3.1c	**3.3**	
3.2	**3.4**	
3.3a, b	**3.5a, b**	*Model* fractions (including mixed numbers) and write the fractions' names (was "divide regions and sets to represent"). Details moved to Curriculum Framework.
3.3c	**3.6**	Compare fractions *using words and symbols (>, <, or =).* Details moved to Curriculum Framework.
3.4	**3.8**	*Estimate solutions to* and solve *single-step and multistep* problems. Details moved to Curriculum Framework.
3.5	**3.9**	Recall multiplication facts through the *twelves* table, and the corresponding division facts (was "nines").
3.6	**3.10**	Represent multiplication and division using area, set, *and number line models*.
3.7	**3.11**	Add and subtract proper fractions having like denominators of *12* or less (was "10"). Details moved to Curriculum Framework.
3.8	**3.13**	
3.9a, b, c	**3.14a, b, c**	Estimate and measure length to the nearest *½ - inch* (was "inch").
3.9d	**NEW CONTENT**	Estimate and measure area and perimeter.
3.10a	**2.12**	Measure length to determine the perimeter of a polygon.
3.10b	**2.13**	Count square units to determine area.
3.11a	**3.15**	Tell time to the nearest *minute*.
3.11b	**NEW CONTENT**	Determine elapsed time in one-hour increments over a 12-hour period.
3.12	**3.16**	
3.13	**3.17**	
3.14	**3.18, 2.20**	*Identify, describe, compare*, and *contrast characteristics* (was "properties") of plane and solid geometric figures. New vocabulary: *angles* and *vertices*
3.15	**3.19**	Identify and draw representations of *points*, line segments, *rays*, angles, and *lines*.

Mathematics Standards of Learning – Grade 3		
2009	**2001**	**Comments***
3.16	**3.20, 4.17b**	Identify and describe congruent *and noncongruent* plane figures. Removed: Symmetrical plane figures.
3.17a, b	**3.21a, b**	New vocabulary: *data* (was "results")
3.17c	**3.22**	
3.18	**3.23**	
3.19	**3.24**	
3.20a	**3.25a**	
3.20b	**NEW CONTENT**	Identify examples of the identity and commutative properties for addition and multiplication.
Moved: **2001 3.7** (read and write decimals) to **2009 4.3a** **2001 3.12** (add and subtract with decimals) to **2009 4.5c** **2001 3.25b** (demonstrate an understanding of equality and the = sign) to **2009 1.18 and 2.22**		

* Comments provided in the crosswalk do not restate the complete Standard of Learning (SOL) as written in the official 2009 *Mathematics Standards of Learning* document. Comments are provided as a brief comparison between the 2009 and 2001 Mathematics SOL. Italicized words are used for emphasis only.

Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

	Mathematics Standards of Learning – Grade 4	
2009	**2001**	**Comments***
4.1a, b, c	**4.1a ,b, c**	
4.2a, b	**4.2a, b**	*Compare and order* fractions and mixed numbers (was "identify, model, and compare").
4.2 c	**NEW CONTENT**	Identify the division statement that represents a fraction.
4.3a, b, c	**4.4a ,b, c**	Compare and *order* decimals.
4.3d	**4.2c, NEW CONTENT**	Given a model, write the decimal and fraction equivalents.
4.4a	**4.5, 4.7, 4.8**	Details moved to Curriculum Framework.
4.4b	**4.6, 4.7**	Details moved to Curriculum Framework.
4.4c	**4.8**	Divide whole numbers, finding quotients with and without remainders.
4.4d	**NEW CONTENT**	Solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers.
4.5a	**6.3a**	Determine common multiples and factors, including least common multiple and greatest common factor.
4.5b	**4.9a**	Add and subtract fractions having like and unlike denominators *that are limited to 2, 3, 4, 5, 6, 8, 10, and 12*, and *simplify the resulting fractions, using common multiples and factors*. Details moved to Curriculum Framework.
4.5c	**4.9b**	
4.5d	**4.9c**	Solve *single-step and multistep practical* problems involving addition and subtraction with fractions and with decimals.
4.6a, b	**4.10a, b**	Identify equivalent measurements between units within the U.S. Customary system (ounces, pounds, and *tons*).
4.7a, b	**4.11a, b**	Identify equivalent measurements between units within the U.S. Customary system (inches and feet; feet and yards; inches and yards; *yards and miles*). Details moved to Curriculum Framework.
4.8a, b	**4.12a, b**	Liquid volume in U.S. Customary units. Removed: Metric units.
4.9	**NEW CONTENT**	Determine elapsed time in hours and minutes within a 12-hour period.
4.10a	**4.14, 4.15a**	Identify and *describe* representations of points, lines, line segments, rays, and angles, *including endpoints and vertices*.
4.10b	**4.16**	
4.11a	**4.17c**	Removed vocabulary: *slide*, *flip*, *turn*

Mathematics Standards of Learning – Grade 4		
2009	**2001**	**Comments***
4.11b	**5.15e**	Recognize the images of figures resulting from geometric transformations, such as translation, reflection, and rotation. Removed vocabulary: *slide*, *flip*, *turn*
4.12a, b	**NEW CONTENT**	Define polygon. Identify polygons with 10 or fewer sides.
REMOVED	**4.18**	
4.13a	**4.19a, 5.17b**	
4.13b	**4.19b, 5.17b**	Represent probability as a number between 0 and 1, inclusive.
4.14	**4.20**	Details moved to Curriculum Framework.
4.15	**4.21**	
4.16a	**4.22**	
4.16b	**7.3a**	Investigate and describe the associative property for addition and multiplication.

Moved:
2001 4.3 (compare fractions) to **2009 3.3c**
2001 4.10c (estimate conversions between metric and US Customary: weight) to **2009 6.9**
2001 4.11c (estimate conversions between metric and US Customary: length) to **2009 6.9**
2001 4.12c (estimate conversions between metric and US Customary: volume) to **2009 6.9**
2001 4.13a, b (perimeter and area) **to 2009 3.9d; 5.8a, b**
2001 4.17a (analyze properties of 2D and 3D figures) to **2009 3.14**
2001 4.17b (identify congruent and noncongruent shapes) to **2009 3.16**
2001 4.19a (predict likelihood using *certain*, *likely*, *unlikely*, *impossible*) to **2009 2.18**
Removed:
2001 4.15b (describe the path of shortest distance between two points on a flat surface)
2001 4.18 (identify ordered pairs in the first quadrant of a coordinate plane)

* Comments provided in the crosswalk do not restate the complete Standard of Learning (SOL) as written in the official 2009 *Mathematics Standards of Learning* document. Comments are provided as a brief comparison between the 2009 and 2001 Mathematics SOL. Italicized words are used for emphasis only.

Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

	Mathematics Standards of Learning – Grade 5	
2009	**2001**	**Comments***
5.1	**5.1b**	Given a decimal through thousandths, round to the nearest *whole number*, tenth, or hundredth.
5.2a, b	**5.2a, b**	*Compare* and order fractions and decimals in a given set from least to greatest *and greatest to least*. Details moved to Curriculum Framework.
5.3a	**6.3b**	Identify and describe the characteristics of prime and composite numbers.
5.3b	**6.3c**	Identify and describe the characteristics of even and odd numbers.
5.4	**5.3, 5.5**	Create and solve *single-step and multistep practical* problems involving addition, subtraction, multiplication, *and division with and without remainders* of whole numbers.
5.5a	**5.4, 5.6**	
5.5b	**NEW CONTENT**	Create and solve single-step and multistep practical problems involving decimals.
5.6	**5.7**	Solve *single-step and multistep practical problems* involving addition and subtraction with fractions and mixed numbers and express answers in simplest form. Details moved to Curriculum Framework.
5.7	**7.2**	Evaluate whole number numerical expressions, using the order of operations limited to parentheses, addition, subtraction, multiplication, and division.
5.8a	**5.8, 4.13a, b**	Find perimeter, area, *and volume* in standard units of measure.
5.8b	**5.10**	
5.8c	**4.10b, 4.11b, 4.12b**	Identify equivalent measurements within the metric system (removed "U.S. Customary system").
5.8d, e	**5.11a, b, c, d, e**	*Estimate* and then measure to solve problems, using U.S. Customary and metric units. Details moved to Curriculum Framework.
5.9	**5.9**	
5.10	**5.12**	
5.11	**5.13**	Measure (removed "draw") right, acute, obtuse, *and straight* angles (removed "triangles").
5.12a	**5.14**	Classify angles as right, acute, obtuse, *or straight*.
5.12b	**5.14, NEW CONTENT**	Classify triangles as right, acute, obtuse, *equilateral, scalene, or isosceles*.
5.13a	**5.15a**	

Mathematics Standards of Learning – Grade 5		
2009	**2001**	**Comments***
5.13b	**5.15c**	
5.14	**5.17a**	
5.15	**5.18**	
5.16a	**6.19**	Describe mean, median, and mode as measures of center.
5.16b	**NEW CONTENT**	Describe mean as fair share.
5.16c	**5.19**	
5.16d	**6.19**	Describe the range of a set of data as a measure of variation.
5.17	**5.20**	*Describe* the relationship found in a number pattern and express the relationship (was "analyze"). Details moved to Curriculum Framework.
5.18a	**5.21a**	
5.18b	**5.21c**	
5.18c	**NEW CONTENT**	Model one-step linear equations in one variable, using addition and subtraction.
5.18d	**5.22**	
5.19	**7.3b**	Investigate and recognize the distributive property of multiplication over addition.

Moved:
2001 5.1a (read, write, and identify decimal place values) **to 2009 4.3a**
2001 5.1c (compare decimals) **to 2009 4.3c**
2001 5.15b (identify congruent and noncongruent figures) to **2009 3.16**
2001 5.15d (identify and describe a line of symmetry) to **2009 2.15a, b**
2001 5.15e (recognize transformations) to **2009 4.11b**
2001 5.16 (analyze properties of 3D shapes) to **2009 3.14**
2001 5.17b (represent probability with fractions or decimals from 0 to 1) to **2009 4.13b**
Removed:
2001 5.15b (identify similar figures)
2001 5.17c (create a problem statement involving probability)
2001 5.21b (use a variable expression to represent a given verbal quantitative expression)

* Comments provided in the crosswalk do not restate the complete Standard of Learning (SOL) as written in the official 2009 *Mathematics Standards of Learning* document. Comments are provided as a brief comparison between the 2009 and 2001 Mathematics SOL. Italicized words are used for emphasis only.

Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

Mathematics Standards of Learning – Grade 6		
2009	**2001**	**Comments***
6.1	**6.2**	
6.2a	**NEW CONTENT**	Investigate and describe fractions, decimals, and percents as ratios.
6.2b	**6.1**	Identify a given *fraction*, *decimal* or percent from a representation.
6.2c	**6.1**	*Demonstrate* (was "describe") equivalent relationships among fractions, decimals, and percents.
6.2d	**6.4**	Compare and order fractions, decimals, *and percents*. Removed: Compare and order whole numbers.
6.3a, b	**6.5**	
6.3c	**NEW CONTENT**	Identify and describe absolute value of integers.
6.4	**NEW CONTENT**	Demonstrate multiple representations of multiplication and division of fractions.
6.5	**6.22**	Removed: Square roots and scientific notation (moved to **2009 7.1d, b**).
6.6a	**6.6a**	*Multiply* and *divide* fractions and mixed numbers (computation only; problem solving moved to **2009 6.6b**).
6.6b	**6.6a, 6.7**	*Estimate* solutions and then solve *single-step and multistep practical problems* involving addition, subtraction, multiplication, and division of fractions.
6.7	**6.7, 6.8**	Solve *single-step and multistep practical problems* involving addition, subtraction, multiplication, and division of decimals. Removed: Practical problems with whole numbers (moved to **2009 5.4**), and fractions (moved to **2009 6.6.b**)
6.8	**7.2**	Evaluate whole number numerical expressions, using the order of operations.
6.9	**6.9**	*Make ballpark comparisons between* measurements in the U.S. Customary System of measurement and the metric system (was "compare and convert").
6.10a	**6.12b**	*Define pi* (π) as the ratio of the circumference of a circle to its diameter (was "derive approximations for pi").
6.10b	**6.12a**	Solve *practical* problems involving circumference and area of a circle, given the diameter or radius.
6.10c	**6.11, 7.7b**	*Solve practical problems* involving area and perimeter.
6.10d	**7.8**	Describe and determine the volume and surface area of a rectangular prism.
6.11a, b	**7.12**	Identify the coordinates of a point in a coordinate plane. Graph ordered pairs in a coordinate plane.

Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

	Mathematics Standards of Learning – Grade 6	
2009	**2001**	**Comments***
6.12	**6.15**	
6.13	**6.14**	Describe and identify (removed "classify") *properties* (was "characteristics") of *quadrilaterals* (was "plane figures").
REMOVED	**6.16**	
REMOVED	**6.17**	
6.14a	**6.18a**	*Construct* circle graphs.
6.14b	**6.18a**	*Draw conclusions* and *make predictions*, using circle graphs.
6.14c	**NEW CONTENT**	Compare and contrast graphs that present information from the same data set. Details moved to Curriculum Framework.
6.15a, b	**NEW CONTENT, 6.19**	Describe mean as a balance point. Decide which measure of center is appropriate for a given purpose.
6.16a, b	**NEW CONTENT, 6.20b**	Compare and contrast dependent and independent events. Determine probabilities for dependent and independent events.
6.17	**6.21**	*Identify* (was "investigate, describe") and extend geometric and *arithmetic* (was "numerical") sequences. Details moved to Curriculum Framework.
6.18	**6.23b**	
6.19a	**7.3c**	Investigate and recognize the identity properties for addition and multiplication.
6.19b	**7.3e**	Investigate and recognize the multiplicative property of zero.
6.19c	**7.3d**	Investigate and recognize the inverse property for multiplication.
6.20	**7.22a**	Graph inequalities on a number line.

Moved:
2001 6.3a (find common multiples and factors) **to 2009 4.5a**
2001 6.3b (identify and describe prime and composite numbers) **to 2009 5.3a**
2001 6.3c (identify and describe the characteristics of even and odd numbers) **to 2009 5.3b**
2001 6.6b (division with decimals - computation only) **to 2009 5.5a**
2001 6.10 (estimate and measure length, weight/mass, area, and liquid volume) **to 2009 5.8d**
2001 6.13b (measure and draw angles and triangles) **to 2009 5.11**
2001 6.18a (line graphs) **to 2009 4.14, 5.15**; (bar graphs) **to 2009 2.17, 2.19; 3.17b, c; 4.14 2001 6.18b** (stem-and-leaf plots) **to 2009 5.15**
2001 6.18c (box-and-whisker plots) **to 2009 A.10**
2001 6.23a (model and solve algebraic equations) **to 2009 5.18c**
Removed:

2001 6.13a (estimate angle measures)
2001 6.16 (construct the perpendicular bisector of a line segment and an angle bisector)
2001 6.17 (sketch, construct models of, and classify solid figures)
2001 6.23c (use the terms *variable, coefficient, term,* and *equation*)

* Comments provided in the crosswalk do not restate the complete Standard of Learning (SOL) as written in the official 2009 *Mathematics Standards of Learning* document. Comments are provided as a brief comparison between the 2009 and 2001 Mathematics SOL. Italicized words are used for emphasis only.

Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

	Mathematics Standards of Learning – Grade 7	
2009	**2001**	**Comments***
7.1a	**8.1b**	Investigate and describe the concept of negative exponents for powers of ten.
7.1b	**7.1**	
7.1c	**7.1**	
7.1d	**6.22**	Determine square roots.
7.1e	**NEW CONTENT**	Identify and describe absolute value for rational numbers.
7.2	**7.19, NEW CONTENT**	Describe and represent arithmetic and geometric sequences *using variable expressions*.
7.3a, b	**7.5**	*Model* addition, subtraction, multiplication and division of integers (was "formulate rules for"). Add, subtract, multiply, and divide integers.
7.4	**7.4a, b; 7.6**	Solve *single-step and multistep practical* problems, *using proportional reasoning*. Details moved to Curriculum Framework.
7.5a, b	**7.8**	New: *Describe* volume and surface area of cylinders.
7.5c	**NEW CONTENT**	Describe how changing one measured attribute of a rectangular prism affects its volume and surface area.
7.6	**7.11**	Determine whether *plane* (was "geometric") figures – quadrilaterals and triangles – are similar and write proportions to express the relationships between corresponding *sides* (was "parts") of similar figures.
7.7	**7.9**	Details moved to Curriculum Framework.
7.8	**7.13**	Represent transformations (*reflections*, *dilations*, rotations, and translations) by graphing in the coordinate plane.
7.9	**7.14**	Investigate and describe the difference between the *experimental probability* and theoretical probability of an event (was "event found through simulation").
7.10	**7.15**	Determine the probability of *compound events*, using the Fundamental (Basic) Counting Principle (removed "using a tree diagram").
7.11a	**7.17c**	Given data in a practical situation, *construct* and analyze histograms (removed "collect", "display", and "interpret").
7.11b	**7.18, 7.17c, NEW CONTENT**	Compare and contrast histograms with other types of graphs presenting information from the same data set.
7.12	**7.19**	Represent relationships with tables, graphs, rules, and words. Details moved to Curriculum Framework.
7.13a	**7.20**	
REMOVED	**7.21**	
7.13b	**8.4**	Evaluate algebraic expressions for given replacement values of the variables.

Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

Mathematics Standards of Learning – Grade 7		
2009	**2001**	**Comments***
7.14a	**7.22a**	Solve one- *and two-step* linear equations in one variable.
7.14b	**7.22b**	Solve practical problems requiring the solution of one- *and two-step* linear equations.
7.15a	**7.22a**	
7.15b	**NEW CONTENT**	Graph solutions to inequalities on the number line.
7.16a, b, c, d, e	**7.3a, b, c, d, e**	Apply (removed: "identify") the following properties of operations with real numbers…
Moved: 2001 7.2 (simplify expressions with whole numbers) to **2009 6.8** 2001 7.3a, b, c, d, e (identify properties) to **2009 3.20a, b; 4.16b; 5.19; 6.19a, b, c** 2001 7.7a (estimate and find area of polygons by subdividing) to **2009 8.11** 2001 7.7b (apply perimeter and area formulas) to **2009 6.10c** 2001 7.10 (identify and draw polygons) to **2009 4.12** 2001 7.12 (identify and graph ordered pairs in a coordinate plane) to **2009 6.11** 2001 7.15 (using a tree diagram) to **2009 5.14** 2001 7.16 (solve problems involving measures of central tendency and the range) to **2009 5.16** 2001 7.17b (line plots) to **2009 3.17b** 2001 7.17d (stem-and-leaf plots) to **2009 5.15** 2001 7.17e (box-and-whisker plots) to **2009 A.10** 2001 7.17f (scatterplots) to **2009 8.13b** **Removed:** 2001 7.17a (frequency distributions) 2001 7.21 (using the terms *equation, inequality,* and *expression*)		

* Comments provided in the crosswalk do not restate the complete Standard of Learning (SOL) as written in the official 2009 *Mathematics Standards of Learning* document. Comments are provided as a brief comparison between the 2009 and 2001 Mathematics SOL. Italicized words are used for emphasis only.

Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

Mathematics Standards of Learning – Grade 8		
2009	**2001**	**Comments***
8.1a	**8.1a**	
8.1b	**8.1c**	
8.2	**8.2**	
8.3a	**8.3, 8.17**	Details moved to Curriculum Framework.
8.3b	**NEW CONTENT**	Determine the percent increase or decrease for a given situation.
8.4	**8.4**	Details moved to Curriculum Framework.
8.5a, b	**8.5**	Details moved to Curriculum Framework.
8.6a, b	**8.6**	Describe the relationships among vertical angles, *adjacent angles*, supplementary angles, and complementary angles. Measure angles of less than 360° (removed "draw").
8.7a	**8.7**	Removed vocabulary: *rectangular solids* (now "prisms")
8.7b	**NEW CONTENT**	Describe how changing one measured attribute of the figure affects the volume and surface area.
8.8a, b	**8.8**	Removed vocabulary: *slide*, *flip*, *turn* Details moved to Curriculum Framework.
8.9	**8.9**	Construct a three-dimensional model, given the top or bottom, side, *and front* views.
8.10a, b	**8.10a, b**	Details moved to Curriculum Framework.
8.11	**NEW CONTENT**	The student will solve practical area and perimeter problems involving composite, plane figures.
8.12	**8.11**	Determine the *probability of independent and dependent events with and without replacement*.
8.13a	**8.12**	Details moved to Curriculum Framework.
8.13b	**7.17f**	Construct and analyze *scatterplots* (was "scattergrams").
REMOVED	**8.13**	
8.14	**8.14**	
8.15a	**8.15**	Solve *multistep linear* equations in one variable *on one and two sides of the equation*.
8.15b	**8.15**	Solve two-step *linear* inequalities *and graph the results on a number line*.
8.15c	**NEW CONTENT**	Identify properties of operations used to solve an equation.
8.16	**8.16**	
8.17	**8.18**	*Identify* the domain, range, independent variable or dependent variable in a given situation.
Moved: **2001 8.1b** (compare and order rational numbers expressed in scientific notation) to **2009 7.1c** **Removed:** **2001 8.13** (matrices)		

* Comments provided in the crosswalk do not restate the complete Standard of Learning (SOL) as written in the official 2009 *Mathematics Standards of Learning* document. Comments are provided as a brief comparison between the 2009 and 2001 Mathematics SOL. Italicized words are used for emphasis only.

Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

Mathematics Standards of Learning – Algebra I		
2009	**2001**	**Comments***
A.1	**A.2**	
A.2a	**A.10**	
A.2b	**A.11**	
A.2c	**A.12**	
A.3	**A.13**	Express square roots and *cube roots* of whole numbers *and the square root of a monomial expression* in simplest radical form. Removed: Decimal approximations of square roots.
A.4	**A.1, A.14**	Solve multistep linear and quadratic equations in *two* variables.
A.4a	**A.1**	
A.4b	**A.3**	New vocabulary: *field properties* New: Using axioms of equality.
A.4c	**A.14**	
A.4d	**A.1**	
A.4e	**A.1, A.9**	
A.4f	**A.1**	
A.5	**A.1**	Solve multistep linear inequalities in *two* variables.
A.5a	**A.1**	
A.5b	**A.1**	New: Using axioms of inequality and properties of order.
A.5c	**A.3**	
A.5d	**AII.13**	Solve systems of linear inequalities.
A.6	**A.6**	
A.6a	**A.7**	
A.6b	**A.8**	
A.7a, b	**A.5**	Investigate and analyze function (linear *and quadratic*) families.
A.7c	**A.15**	
A.7d	**A.6**	
A.7e	**A.15**	
A.7f	**A.5**	
A.8	**A.18, AII.20**	Analyze a relation to determine whether a direct *or inverse* variation exists.
A.9	**NEW CONTENT**	Interpret variation in real-world contexts and calculate and interpret mean absolute deviation, standard deviation, and z-scores.
A.10	**A.17**	Content reduced to only Box-and-Whisker Plots. Removed: Measures of Central Tendency

Mathematics Standards of Learning – Algebra I		
2009	**2001**	**Comments***
A.11	**A.16**	Determine the equation of the *curve* of best fit (was "line"). New: Solve real-world problems using mathematical (linear and quadratic functions) models.
Moved: **2001 A.4** (matrices) to **2009 MA.14**		

* Comments provided in the crosswalk do not restate the complete Standard of Learning (SOL) as written in the official 2009 *Mathematics Standards of Learning* document. Comments are provided as a brief comparison between the 2009 and 2001 Mathematics SOL. Italicized words are used for emphasis only.

Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

Mathematics Standards of Learning – Geometry		
2009	**2001**	**Comments***
G.1	**G.1**	
G.2a, b	**G.4**	
G.2c	**G.3**	Removed: Relationships between angles (moved to **2009 8.6a**).
G.3a	**G.2a**	
G.3b	**NEW CONTENT**	Applying slope to verify and determine whether lines are parallel or perpendicular.
G.3c	**G.2b**	
G.3d	**G.2c**	Determining whether a figure has been translated, reflected, rotated *or dilated*.
G.4	**G.11**	Construct *and justify* the constructions of… New: A line parallel to a given line through a point not on the given line.
G.5	**G.6**	
G.6	**G.5**	
G.7	**G.5**	
G.8	**G.7**	Solve real-world problems involving right triangles by using the Pythagorean Theorem *and its converse*.
G.9	**G.8**	
G.10	**G.9**	
G.11	**G.10**	
G.12	**AII.18**	Write the equation of a circle.
REMOVED	**G.12**	
G.13	**G.13**	
G.14a	**G.14**	*Compare ratios* (was "use proportional reasoning") between side lengths, perimeters, areas and *volumes*.
G.14c	**G.14**	Determine how changes in area and/or volume of an object affect one or more dimensions of the object.
Removed: **2001 G.12** (two-dimensional and three-dimensional models and representations)		

* Comments provided in the crosswalk do not restate the complete Standard of Learning (SOL) as written in the official 2009 *Mathematics Standards of Learning* document. Comments are provided as a brief comparison between the 2009 and 2001 Mathematics SOL. Italicized words are used for emphasis only.

Mathematics Standards of Learning Crosswalk Between the 2009 and 2001 Standards

		Mathematics Standards of Learning – Algebra II
2009	**2001**	**Comments***
AII.1a	**AII.2**	
AII.1b	**AII.3a**	Radical expressions containing *rational numbers* (was "positive rational numbers").
AII.1c	**AII.3b**	
AII.1d	**AII.5**	
AII.2	**AII.16**	
AII.3	**AII.17**	New: Identify field properties that are valid for the complex numbers.
AII.4a	**AII.4**	
AII.4b	**AII.6**	
AII.4c, d	**AII.7**	
AII.5	**AII.14**	
AII.6	**AII.8, AII.15**	Recognize the general shape of function (absolute value, *square root, cube root, rational,* polynomial, exponential, and logarithmic) families. Removed: Step functions. Details moved to Curriculum Framework.
AII.7a, b	**AII.9**	
AII.7c	**NEW CONTENT**	Identify *x*- and *y*- intercepts.
AII.7d, e	**MA.1**	Identify intervals in which a function is increasing or decreasing. Find the equations of vertical and horizontal asymptotes of functions.
AII.7f	**NEW CONTENT**	Describe the end behavior of a function.
AII.7g, h	**AII.9**	
AII.8	**AII.10**	
REMOVED	**AII.11**	
REMOVED	**AII.12**	
AII.9	**AII.19**	Mathematical models will include *polynomial,* exponential, and logarithmic functions. Details moved to Curriculum Framework.
AII.10	**AII.20**	Solve real-world problems involving inverse variation, *joint variation,* and a combination of direct and inverse variations.
AII.11	**NEW CONTENT**	Identify properties of a normal distribution and apply those properties to determine probabilities associated with areas under the standard normal curve.
AII.12	**NEW CONTENT**	Compute and distinguish between permutations and combinations.
Moved:		

2001 AII.1 (properties of real numbers) to **2009 A.4b**
2001 AII.13 (solving systems of linear inequalities) to **2009 A.5d**
2001 AII.18 (conic sections) to **2009 MA.8**
Removed:
2001 AII.11 (matrix multiplication)
2001 AII.12 (solving systems of linear equations using the inverse matrix method)

* Comments provided in the crosswalk do not restate the complete Standard of Learning (SOL) as written in the official 2009 *Mathematics Standards of Learning* document. Comments are provided as a brief comparison between the 2009 and 2001 Mathematics SOL. Italicized words are used for emphasis only.