Mathematics Common Core State Standards and Indiana Academic Standards Analysis

This document can be used to assist educators in analyzing the commonalities and differences between the Common Core State Standards (CCSS) and the Indiana Academic Standards (IAS). In particular, for schools teaching the CCSS, this document can be used to help identify IAS that do not align or only partially align with the CCSS. Students must be given the opportunity to learn the IAS as they will be assessed on these standards through the 2013-14 school year.

The first column states the CCSS. The second column states the IAS that partially align to the CCSS. The third column provides notes, usually highlighting differences between the standards. Please note that in most cases there are not complete matches between the two sets of standards, and it should not be assumed that either the content or skills found in one set of standards will match completely with those of the other set.

At the end of this document, we have listed the IAS Grade 8 indicators that are not aligned to the Grade 8 CCSS. These are presented in two ways: (1) IAS Grade 8 indicators that align to CCSS at a different grade level, with the best match indicated in the first column; and (2) IAS Grade 8 indicators that do not match any CCSS.

Grade 8 Common Core State Standards (CCSS)	Grade 8 Indiana Academic Standards (IAS)	Comment
The Number System		
Know that there are numbers that are not rational, and approximate them by rational numbers.		
8.NS.1 Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.	**8.1.2** Know that every rational number is either a terminating or repeating decimal and that every irrational number is a nonrepeating decimal.	CCSS requires students to show that rational numbers can be expanded into a repeating decimal and vice versa.
8.NS.2 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 (e.g., π^2). *For example, by truncating the decimal expansion of √2 (square root of 2), show that √2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.*	**8.1.7** Calculate and find approximations of square roots. *Example: For an integer that is not a perfect square, find the two integers (one larger, one smaller) that are closest to its square root and explain your reasoning.*	CCSS requires students to compare the size of irrational numbers using rational approximations and to approximate the locations of irrational numbers on a number line.
Expressions and Equations		
Work with radicals and integer exponents.		
8.EE.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example, $3^2 \times 3^{(-5)} = 3^{(-3)} = 1/(3^3) = 1/27$.*	**8.1.4** Understand and evaluate negative integer exponents. *Example: Write 2^{-3} as a fraction.*	CCSS 8.EE.1 requires students to perform operations with expressions containing exponents while IAS does not (see the example).
	8.1.5 Use the laws of exponents for integer exponents. *Example: Write $2^2 \times 2^3$ as 2 x 2 x 2 x 2 x 2 and then as a single power of 2. Explain what you are doing.*	
	8.3.3 Interpret positive integer powers as repeated multiplication and negative integer powers as repeated division or multiplication by the multiplicative inverse. *Example: Use a spreadsheet to explore the relationship between positive and negative integer powers by making a table of values of powers of 3, from 3^{-5} to 3^5.*	

8.EE.2 Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that √2 is irrational.	**8.1.6** Use the inverse relationship between squaring and finding the square root of a perfect square integer. *Example: Find the value of* $(\sqrt{144})^2$.	CCSS 8.EE.2 requires students to evaluate cube roots of small perfect cubes and to know that √2 is irrational.
8.EE.3 Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. *For example, estimate the population of the United States as* 3×10^8 *and the population of the world as* 7×10^9*, and determine that the world population is more than 20 times larger.*	**8.1.1** Read, write, compare, and solve problems using decimals in scientific notation. *Example: Write 0.00357 in scientific notation.*	CCSS 8.EE.3 requires students to apply the concept of scientific notation in the estimation of very large or very small quantities in a real-world context (see example). Students also need to express how many times larger one number in scientific notation is than another.
8.EE.4 Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.	***NEW***	

Understand the connections between proportional relationships, lines, and linear equations.		
8.EE.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.	**8.3.6** Find the slope of a linear function given the equation and write the equation of a line given the slope and any point on the line. *Example: Write an equation of the line with slope 2 and y-intercept -4.*	CCSS 8.EE.5 requires students to compare two different proportional relationships that are presented in two different ways. Students must interpret the unit rate of proportional relationships as the slope of the graph.
	8.3.7 Demonstrate an understanding of rate as a measure of one quantity with respect to another quantity. *Example: A car moving at a constant speed travels 90 km in 2 hours, 135 km in 3 hours, 180 km in 4 hours, etc. Draw a graph of distance as a function of time and find the slope of the graph. Explain what the slope tells you about the movement of the car.*	
	8.3.8 Demonstrate an understanding of the relationships among tables, equations, verbal expressions, and graphs of linear functions. *Example: Write an equation that represents the verbal description: "the perimeter of a square is four times the side length." Construct a table of values for this relationship and draw its graph.*	

8.EE.6 Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y =mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b.	***NEW***	
Analyze and solve linear equations and pairs of simultaneous linear equations.		
8.EE.7 Solve linear equations in one variable.	**8.3.1** Write and solve linear equations and inequalities in one variable, interpret the solution or solutions in their context, and verify the reasonableness of the results. *Example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be least $100. Write an inequality for the number of sales you need to make, solve it, and check that your answer is reasonable.*	CCSS 8.EE.7 is limited to linear equations and does not include inequalities.
8.EE.7a Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).	***NEW***	

8.EE.7b Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	**8.3.1** Write and solve linear equations and inequalities in one variable, interpret the solution or solutions in their context, and verify the reasonableness of the results. *Example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be least $100. Write an inequality for the number of sales you need to make, solve it, and check that your answer is reasonable.*	CCSS 8.EE.7b is focused on and limited to solving equations that contain coefficients and requiring the use of the distributive property, expanding, and collecting like terms.
	8.3.4 Use the correct order of operations to find the values of algebraic expressions involving powers. *Example: Use a scientific calculator to find the value of* $3(2x + 5)^2$ *when* $x = -35$.	
8.EE.8 Analyze and solve pairs of simultaneous linear equations.	**8.3.2** Solve systems of two linear equations using the substitution method and identify approximate solutions graphically. *Example: Solve the system. 2x + 3y = 7 x + 2y =5*	
8.EE.8a Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.	**8.3.2** Solve systems of two linear equations using the substitution method and identify approximate solutions graphically. *Example: Solve the system. 2x + 3y = 7 x + 2y =5*	CCSS 8.EE.8a requires students to identify the solution of two linear equations in two variables as the point(s) of intersection of their graphs and to describe the point(s) of intersection etween two lines as points that satisfy both equations simultaneously.

8.EE.8b Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.*	**8.3.2** Solve systems of two linear equations using the substitution method and identify approximate solutions graphically. *Example: Solve the system. 2x + 3y = 7 x + 2y =5*	CCSS 8.EE.8b requires students to solve the two equations "algebraically" (e.g. substitution, elminiation), while IAS 8.3.2 is limited to substitution.
8.EE.8c Solve real-world and mathematical problems leading to two linear equations in two variables. *For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.*	***NEW***	
Functions		
Define, evaluate, and compare functions.		
8.F.1 Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	***NEW***	Function notation is not required in IAS Grade 8.

8.F.2 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.*	**8.3.5** Identify and graph linear functions and identify lines with positive and negative slope. *Example: Draw the graphs of y = 2x - 1, y = 3x - 1, y = -2x - 1, and y = -3x - 1.* *Find the slope of each graph. What do you notice?*	CCSS 8.F.2 requires students to compare two different functions represented in two different ways. IAS 8.3.8 requires students to understand the different ways in which a linear function may be represented. IAS 8.3.9 specifes quadratic equations, while CCSS 8.F.2 does not mention quadratics.
	8.3.8 Demonstrate an understanding of the relationships among tables, equations, verbal expressions, and graphs of linear functions. *Example: Write an equation that represents the verbal description: "the perimeter of a square is four times the side length." Construct a table of values for this relationship and draw its graph.*	
	8.3.9 Represent simple quadratic functions using verbal descriptions, tables, graphs, and formulas and translate among these representations. *Example: Draw the graph of y t x2, y t 2x2, and y t 3x2. Describe their similarities and differences.*	

8.F.3 Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. *For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.*	**8.3.5** Identify and graph linear functions and identify lines with positive and negative slope. *Example: Draw the graphs of y = 2x - 1, y = 3x - 1, y = -2x - 1, and y = -3x - 1. Find the slope of each graph. What do you notice?*	CCSS 8.F.3 requires students to provide examples of non-linear functions.
	8.3.6 Find the slope of a linear function given the equation and write the equation of a line given the slope and any point on the line. *Example: Write an equation of the line with slope 2 and y-intercept -4.*	
	8.3.10 Graph functions of the form y = nx2 and y = nx3 and describe the similarities and differences in the graphs. *Example: Draw the graphs of y = 2x2 and y = 2x3. Explain which graph shows faster growth.*	
Use functions to model relationships between quantities.		
8.F.4 Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.value as magnitude for a positive or negative quantity in a real-world situation. *For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars.*	**8.3.7** Demonstrate an understanding of rate as a measure of one quantity with respect to another quantity. *Example: A car moving at a constant speed travels 90 km in 2 hours, 135 km in 3 hours, 180 km in 4 hours, etc. Draw a graph of distance as a function of time and find the slope of the graph. Explain what the slope tells you about the movement of the car.*	CCSS 8.F.4 requires students to construct a function to model a linear relationship between two quantities and to relate the rate of change and initial value to real world quantities in a linear function in terms of the situation modeled and in terms of its graph or a table of values.
	8.3.8 Demonstrate an understanding of the relationships among tables, equations, verbal expressions, and graphs of linear functions. *Example: Write an equation that represents the verbal description: "the perimeter of a square is four times the side length." Construct a table of values for this relationship and draw its graph.*	

Grade 8 Common Core State Standards (CCSS)	Grade 8 Indiana Academic Standards (IAS)	Comment
8.F.5 Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	***NEW***	

Geometry		
Draw, construct, and describe geometrical figures and describe the relationships between them.		
8.G.1 Verify experimentally the properties of rotations, reflections, and translations:	**8.4.4** Draw the translation (slide), rotation (turn), reflection (flip), and dilation (stretches and shrinks) of shapes. *Example: Draw a rectangle and slide it 3 inches horizontally across your page. Then rotate it clockwise through 90º about the bottom left vertex. Draw the new rectangle in a different color.*	CCSS 8.G.1 requires students to verify these properties experimentally; however it does not include dilations. CCSS 8.G.1a,b,c specifically address rotations, reflections, and translations with respect to lines, line segments, angles, and parallel lines.
8.G.1a Lines are taken to lines, and line segments to line segments of the same length.		
8.G.1b Angles are taken to angles of the same measure.		
8.G.1c Parallel lines are taken to parallel lines.		
8.G.2 Understand 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; given two congruent figures, describe a sequence that exhibits the congruence between them.	***NEW***	
8.G.3 Describe the effect of dilations, translations, rotations and reflections on two-dimensional figures using coordinates.	**8.4.4** Draw the translation (slide), rotation (turn), reflection (flip), and dilation (stretches and shrinks) of shapes. *Example: Draw a rectangle and slide it 3 inches horizontally across your page. Then rotate it clockwise through 90º about the bottom left vertex. Draw the new rectangle in a different color.*	CCSS 8.G.3 requires students to describe these effects using coordinates.
8.G.4 Understand 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; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.	***NEW***	

8.G.5 Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. *For example, arrange three copies of the same triangle so that the three angles appear to form a line, and give an argument in terms of transversals why this is so.*	***NEW***	
Understand and apply the Pythagorean Theorem.		
8.G.6 Explain a proof of the Pythagorean Theorem and its converse.	***NEW***	IAS do not require Grade 8 students to explain this proof or the proof of its converse.
8.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	**8.4.5** Use the Pythagorean Theorem and its converse to solve problems in two and three dimensions. *Example: Measure the dimensions of a shoe box and calculate the length of a diagonal from the top right to the bottom left of the box. Measure with a string to evaluate your solution.*	CCSS does not specificy using the converse of the Pythagorean Theorem to solve problems.
8.G.8 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	**8.4.5** Use the Pythagorean Theorem and its converse to solve problems in two and three dimensions. *Example: Measure the dimensions of a shoe box and calculate the length of a diagonal from the top right to the bottom left of the box. Measure with a string to evaluate your solution.*	CCSS requires students to find the distance between two points on a coordinate plane by utilizing the Pythagorean Theorem.

Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.		
8.G.9 Know the formulas for the volume of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	**8.5.4** Use formulas for finding the perimeter and area of basic two-dimensional shapes and the surface area and volume of basic three-dimensional shapes, including rectangles, parallelograms, trapezoids, triangles, circles, prisms, cylinders, spheres, cones, and pyramids. *Example: Find the total surface area of a right triangular prism 14 feet high and with a base that measures 8 feet by 6 feet.*	CCSS 8.G.9 is limited to volume of cones, cylinders, and spheres. *NOTE: The area of a trapezoid is not required in CCSS until high school.
Statistics and Probability		
Investigate patterns of association in bivariate data.		
8.SP.1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	**8.6.5** Represent two-variable data with a scatterplot on the coordinate plane and describe how the data points are distributed. If the pattern appears to be linear, draw a line that appears to best fit the data and write the equation of that line. *Example: Survey some of the students at each grade level in your school, asking them how much* *time they spend on homework. Plot the grade level and time of each student as a point (grade, time) on a scatter diagram. Describe and justify any relationship between grade and time spent on homework.*	CCSS 8.SP.1 requires students to address specific types of patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
8.SP.2 Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.	**8.6.5** Represent two-variable data with a scatterplot on the coordinate plane and describe how the data points are distributed. If the pattern appears to be linear, draw a line that appears to best fit the data and write the equation of that line. *Example: Survey some of the students at each grade level in your school, asking them how much* *time they spend on homework. Plot the grade level and time of each student as a point (grade, time) on a scatter diagram. Describe and justify any relationship between grade and time spent on homework.*	CCSS 8.SP.2 requires students to informally assess the fitness of the model line by evaluating the closeness of the data points to the model line.

8.SP.3 Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.*	***NEW***	
8.SP.4 Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. *For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?*	***NEW***	

	IAS Grade 8 Standards Not Matched by CCSS	Comments/Partial Matches In Other Grades
No match in CCSS Grade 8.	**8.1.3** Understand that computations with an irrational number and a rational number (other than zero) produce an irrational number. *Example: Tell whether the product of 7 and f is rational or irrational. Explain how you know that your answer is correct.*	This IAS is assessed in the classroom; not assessed on the Grade 8 ISTEP+. See high school CCSS N-RN.3
No match in CCSS Grade 8.	**8.2.1** Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) in multi-step problems. *Example: -3.4 + 2.8 x 5.75 = ?, 1 4⁄5 + -3⁄8 x 22⁄9 = ?, 81.04 ÷ 17.4 - 2.79 = ?.*	7.NS.1 7.NS.2 7.NS.3 7.EE.3
No match in CCSS Grade 8.	**8.2.2** Solve problems by computing simple and compound interest. *Example: You leave $100 in each of three bank accounts paying 5% interest per year. One account pays simple interest, one pays interest compounded annually, and the third pays interest compounded quarterly. Use a spreadsheet to find the amount of money in each account after one year, two years, three years, ten years, and twenty years. Compare the results in the three accounts and explain how compounding affects the balance in each account.*	7.RP.1 = simple interest Compound interest is referenced in the example in the high school standard A-SSE.3c
No match in CCSS Grade 8.	**8.2.3** Use estimation techniques to decide whether answers to computations on a calculator are reasonable. *Example: Your friend uses his calculator to find 15% of $25 and gets $375. Without solving, explain why you think the answer is wrong.*	This IAS is assessed in the classroom; not assessed on the Grade 8 ISTEP+. CCSS does not mention calculators in this regard; however estimation and reasonableness is part of 7.EE.3
No match in CCSS Grade 8.	**8.2.4** Use mental arithmetic to compute with common fractions, decimals, powers, and percents. *Example: Find 20% of $50 without using pencil and paper.*	This IAS is assessed in the classroom; not assessed on the Grade 8 ISTEP+. 7.EE.3
No match in CCSS Grade 8.	**8.3.4** Use the correct order of operations to find the values of algebraic expressions involving powers. *Example: Use a scientific calculator to find the value of 3(2x + 5)2 when x = -35.*	6.EE.2c

No match in CCSS Grade 8.	**8.4.1** Identify and describe basic properties of geometric shapes: altitudes, diagonals, angle and perpendicular bisectors, central angles, radii, diameters, and chords. *Example: Describe a central angle of a circle in words and draw a diagram.*	7.G.4 = area and circumference of circles The remainder of this IAS is covered in CCSS high school geometry.
No match in CCSS Grade 8.	**8.4.2** Perform simple constructions, such as bisectors of segments and angles, copies of segments and angles, and perpendicular segments. Describe and justify the constructions. *Example: Explain the procedures used to construct the three angle bisectors of a triangle.*	This IAS is assessed in the classroom; not assessed on the Grade 8 ISTEP+. G.CO.12
No match in CCSS Grade 8.	**8.4.3** Identify properties of three-dimensional geometric objects (e.g., diagonals of rectangular solids) and describe how two or more figures intersect in a plane or in space. *Example: Find two lines in your classroom that are not parallel, yet do not meet.*	This IAS is assessed in the classroom; not assessed on the Grade 8 ISTEP+. 7.G.3 CCSS high school geometry
No match in CCSS Grade 8.	**8.5.1** Convert common measurements for length, area, volume, weight, capacity, and time to equivalent measurements within the same system. *Example: The area of a hall is 40 square yards. What is the area in square feet?*	5.MD.1 6.RP.3d
No match in CCSS Grade 8.	**8.5.2** Solve simple problems involving rates and derived measurements for attributes such as velocity and density. *Example: A car travels at 60 mph for 20 minutes. How far does it travel? What units are appropriate for distance? Explain your answer.*	6.RP.2 6.RP.3 7.RP.1
No match in CCSS Grade 8.	**8.5.3** Solve problems involving scale factors, area, and volume using ratio and proportion. *Example: Calculate the volume and surface area of cubes with side 1 cm, 2 cm, 3 cm, etc. Make a table of your results and describe any patterns in the table.*	7.G.1 7.RP.2

No match in CCSS Grade 8.	**8.5.5** Estimate and compute the area of irregular two-dimensional shapes and the volume of irregular three-dimensional objects by breaking them down into more basic geometric objects. *Example: Find the volume of a dog house that has a rectangular space that is 3 ft by 2 ft by 5 ft and has a triangular roof that is 1.5 ft higher than the walls of the house.*	6.G.1 6.G.2 7.G.6
No match in CCSS Grade 8.	**8.6.1** Identify claims based on statistical data and, in simple cases, evaluate the reasonableness of the claims. Design a study to investigate the claim. *Example: A study shows that teenagers who use a certain brand of toothpaste have fewer cavities than those using other brands. Describe how you can test this claim in your school.*	Not a specific requirement of CCSS; partially covered in the Grades 6-8 Statics and Probability Standards
No match in CCSS Grade 8.	**8.6.2** Identify different methods of selecting samples, analyzing the strengths and weaknesses of each method, and the possible bias in a sample or display. *Example: Describe possible bias in the following survey: A local television station has a daily call-in poll. Viewers of the morning and noon newscasts are asked to call one telephone number to answer "yes" and a different telephone number to answer "no." The results are reported on the six-o'clock newscast.*	7.SP.1 7.SP.2
No match in CCSS Grade 8.	**8.6.3** Understand the meaning of, and be able to identify or compute the minimum value, the lower quartile, the median, the upper quartile, the interquartile range, and the maximum value of a data set. *Example: Arrange a set of test scores in increasing order and find the lowest and highest scores, the median, and the upper and lower quartiles.*	6.SP.4 6.SP.5c,d 7.SP.4
No match in CCSS Grade 8.	**8.6.6** Understand and recognize equally likely events. *Example: When you roll a number cube, what is the probability that the number on the top face will be a 6? Explain your answer.*	7.SP.5 7.SP.8

No match in CCSS Grade 8.	**8.6.7** Find the number of possible arrangements of several objects by using the Basic Counting Principle. *Example: You are planning to place four pictures in a line on a shelf. Find the number of ways you can arrange the four pictures.*	Not addressed in CCSS through Grade 8.