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 7 indicators that are not aligned to the Grade 7 CCSS. These are presented in two ways: (1) IAS Grade 7 indicators that align to CCSS at a different grade level, with the best match indicated in the first column; and (2) IAS Grade 7 indicators that do not match any CCSS.

Grade 7 Common Core State Standards (CCSS)	Grade 7 Indiana Academic Standards (IAS)	Comment
Ratios and Proportional Relationships **Analyze proportional relationships and use them to solve real-world and mathematical problems.**		
7.RP.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. *For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction (1/2)/(1/4) miles per hour, equivalently 2 miles per hour.*	***NEW***	
7.RP.2 Recognize and represent proportional relationships between quantities.	***NEW***	
7.RP.2a Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.	**7.3.9** Identify functions as linear or nonlinear and examine their characteristics in tables, graphs, and equations. *Example: A plant is growing taller according to the formula H = 2d + 3, where H is the height after d days. Draw the graph of this function and explain what the point where it meets the vertical axis represents. Is this graph linear or nonlinear?*	CCSS 7.RP.2abcd are specifically limited to those linear relationships that are proportional.
7.RP.2b Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	**7.3.10** Identify and describe situations with constant or varying rates of change and know that a constant rate of change describes a linear function. *Example: In the last example, how will the graph be different if the plant's speed of growth changes?*	CCSS 7.RP.2abcd are specifically limited to those linear relationships that are proportional. CCSS 7.RP.2b introduces the constant of proportionality (unit rate).
7.RP.2c Represent proportional relationships by equations. *For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t = pn.*	***NEW***	

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7.RP.2d Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate.	***NEW***	
7.RP.3 Use proportional relationships to solve multistep ratio and percent problems. *Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.*	**7.2.2** Calculate the percentage increase and decrease of a quantity. *Example: The population of a country was 36 million in 1990 and it rose to 41.4 million during the 1990s. What was the percentage increase in the population?*	CCSS 7.RP.3 requires students to use proportional relationships in solving these problems.
	7.2.3 Solve problems that involve discounts, markups, and commissions. *Example: A merchant buys CDs for $11 wholesale and marks up the price by 35%. What is the retail price?*	CCSS 7.RP.3 requires students to use proportional relationships in solving these problems.
The Number System		
Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.		
7.NS.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	**7.2.1** Solve addition, subtraction, multiplication, and division problems that use integers, fractions, and decimals, and combinations of the four operations. *Example: The temperature one day is 5º. It then falls by 3º each day for 4 days and, after that, rises by 2º each day for 3 days. What is the temperature on the last day? Explain your method.*	CCSS 7.NS.1 requires students to represent additional and subtraction on a horizontal or vertical number line. CCSS 7.NS.1 is limited to addition and subtraction.

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7.NS.1a Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.	**7.2.1** Solve addition, subtraction, multiplication, and division problems that use integers, fractions, and decimals, and combinations of the four operations. *Example: The temperature one day is 5º. It then falls by 3º each day for 4 days and, after that, rises by 2º each day for 3 days. What is the temperature on the last day? Explain your method.*	CCSS 7.NS.1a requires students to describe situations where opposites added together make 0.
7.NS.1b Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	***NEW***	
7.NS.1c Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	**7.2.1** Solve addition, subtraction, multiplication, and division problems that use integers, fractions, and decimals, and combinations of the four operations. *Example: The temperature one day is 5º. It then falls by 3º each day for 4 days and, after that, rises by 2º each day for 3 days. What is the temperature on the last day? Explain your method.*	CCSS 7.NS.1c is limited to subtraction as addition of the additive inverse.
7.NS.1d Apply properties of operations as strategies to add and subtract rational numbers.	**7.2.1** Solve addition, subtraction, multiplication, and division problems that use integers, fractions, and decimals, and combinations of the four operations. *Example: The temperature one day is 5º. It then falls by 3º each day for 4 days and, after that, rises by 2º each day for 3 days. What is the temperature on the last day? Explain your method.*	CCSS 7.NS.1d requires the application of the properties of operations.
7.NS.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	**7.2.1** Solve addition, subtraction, multiplication, and division problems that use integers, fractions, and decimals, and combinations of the four operations. *Example: The temperature one day is 5º. It then falls by 3º each day for 4 days and, after that, rises by 2º each day for 3 days. What is the temperature on the last day? Explain your method.*	CCSS 7.NS.2abc is limited to multiplication and division and extends the multiplication and division of fractions to all rational numbers.

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7.NS.2a Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.	***NEW***	
7.NS.2b Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers then –(p/q) = (–p)/q = p/(–q). Interpret quotients of rational numbers by describing real-world contexts.	***NEW***	
7.NS.2c Apply properties of operations as strategies to multiply and divide rational numbers.	**7.2.1** Solve addition, subtraction, multiplication, and division problems that use integers, fractions, and decimals, and combinations of the four operations. *Example: The temperature one day is 5º. It then falls by 3º each day for 4 days and, after that, rises by 2º each day for 3 days. What is the temperature on the last day? Explain your method.*	CCSS 7.NS.2c requires the application of the properties of operations.
7.NS.2d Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.	***NEW***	
7.NS.3 Solve real-world and mathematical problems involving the four operations with rational numbers.	**7.2.1** Solve addition, subtraction, multiplication, and division problems that use integers, fractions, and decimals, and combinations of the four operations. *Example: The temperature one day is 5º. It then falls by 3º each day for 4 days and, after that, rises by 2º each day for 3 days. What is the temperature on the last day? Explain your method.* (Partial)	CCSS 7.NS.3 requires the application of the properties of operations.

Grade 7 Common Core State Standards (CCSS)	Grade 7 Indiana Academic Standards (IAS)	Comment
Expressions and Equations		
Use properties of operations to generate equivalent expressions.		
7.EE.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients	**7.3.3** Use correct algebraic terminology, such as variable, equation, term, coefficient, inequality, expression, and constant. *Example: Name the variable, terms, and coefficient in this equation: 7x + 4 = 67.*	
	7.3.4 Evaluate numerical expressions and simplify algebraic expressions by applying the correct order of operations and the properties of rational numbers (e.g., identity, inverse, commutative, associative, distributive properties). Justify each step in the process. *Example: Simplify 3(4x + 5x – 1) + 2(x + 3) by removing the parentheses and rearranging. Explain each step you take.*	CCSS 7.EE.1 focuses on expressions with rational coefficients.
7.EE.2 Understand that rewriting an expression in different forms in a *problem context can shed light on the problem and how the quantities in it are related. For example, a + 0.05a = 1.05a means that "increase by 5%" is the same as "multiply by 1.05."*	***NEW***	

Grade 7 Common Core State Standards (CCSS)	Grade 7 Indiana Academic Standards (IAS)	Comment
Solve real-life and mathematical problems using numerical and algebraic expressions and equations.		
7.EE.3 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations as strategies to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. *For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.*	**7.2.1** Solve addition, subtraction, multiplication, and division problems that use integers, fractions, and decimals, and combinations of the four operations. *Example: The temperature one day is 5º. It then falls by 3º each day for 4 days and, after that, rises by 2º each day for 3 days. What is the temperature on the last day? Explain your method.*	
	7.2.3 Solve problems that involve discounts, markups, and commissions. *Example: A merchant buys CDs for $11 wholesale and marks up the price by 35%. What is the retail price?*	CCSS 7.EE.3 includes solving these types of problems.
	7.2.4 Use estimation to decide whether answers are reasonable in problems involving fractions and decimals. *Example: Your friend says that 3 3/8 × 2 2/9 = 10. Without solving, explain why you think the answer is wrong.*	
	7.2.5 Use mental arithmetic to compute with simple fractions, decimals, and powers. *Example: Find 34 without using pencil and paper.*	
	7.3.1 Use variables and appropriate operations to write an expression, a formula, an equation, or an inequality that represents a verbal description. *Example: Write in symbols the inequality: 5 less than twice the number is greater than 42.*	
	7.3.4 Evaluate numerical expressions and simplify algebraic expressions by applying the correct order of operations and the properties of rational numbers (e.g., identity, inverse, commutative, associative, distributive properties). Justify each step in the process. *Example: Simplify 3(4x + 5x – 1) + 2(x + 3) by removing the parentheses and rearranging. Explain each step you take.*	

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7.EE.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	**7.3.1** Use variables and appropriate operations to write an expression, a formula, an equation, or an inequality that represents a verbal description. *Example: Write in symbols the inequality: 5 less than twice the number is greater than 42.*	
7.EE.4a 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. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, The perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*	**7.3.2** Write and solve two-step linear equations and inequalities in one variable and check the answers. *Example: Solve the equation 4x – 7 = 12 and check your answer in the original equation.*	CCSS 7.EE.4a requires students to compare an algebraic solution to an arithmetic solution and to identify the squence of operations used in each approach.
	7.3.4 Evaluate numerical expressions and simplify algebraic expressions by applying the correct order of operations and the properties of rational numbers (e.g., identity, inverse, commutative, associative, distributive properties). Justify each step in the process. *Example: Simplify 3(4x + 5x – 1) + 2(x + 3) by removing the parentheses and rearranging. Explain each step you take.*	
	7.3.5 Solve an equation or formula with two variables for a particular variable. *Example: Solve the formula C = 2πr for r.*	
7.EE.4b Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. *For example, As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.*	**7.3.2** Write and solve two-step linear equations and inequalities in one variable and check the answers. *Example: Solve the equation 4x – 7 = 12 and check your answer in the original equation.*	CCSS 7.EE.4b requires students to graph the solution set of the inequality and to interpret in the context of the problem.
	7.3.4 Evaluate numerical expressions and simplify algebraic expressions by applying the correct order of operations and the properties of rational numbers (e.g., identity, inverse, commutative, associative, distributive properties). Justify each step in the process. *Example: Simplify 3(4x + 5x – 1) + 2(x + 3) by removing the parentheses and rearranging. Explain each step you take.*	

Grade 7 Common Core State Standards (CCSS)	Grade 7 Indiana Academic Standards (IAS)	Comment
Geometry		
Draw, construct, and describe geometrical figures and describe the relationships between them.		
7.G.1 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.	**7.5.3** Read and create drawings made to scale, construct scale models, and solve problems related to scale. *Example: On a plan of your school, your classroom is 5 cm long and 3 cm wide. The actual classroom is 10 m long. How wide is it? Explain your answer.*	CCSS 7.G.1 requires reproducing a scale drawing at a different scale.
7.G.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	***NEW***	
7.G.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.	***NEW***	
Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.		
7.G.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	***NEW***	
7.G.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.	***NEW***	

Grade 7 Common Core State Standards (CCSS)	Grade 7 Indiana Academic Standards (IAS)	Comment
7.G.6 Solve real-world and mathematical problems involving perimeter, area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	**7.5.4** 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, right prisms, and cylinders. *Example: Find the surface area of a cylindrical can 15 cm high and with a diameter of 8 cm.*	
	7.5.5 Estimate and compute the area of more complex or irregular two-dimensional shapes by dividing them into more basic shapes. *Example: A room to be carpeted is a rectangle 5 m × 4 m. A semicircular fireplace of diameter 1.5 m takes up some of the floor space. Find the area to be carpeted.*	
	7.5.6 Use objects and geometry modeling tools to compute the surface area of the faces and the volume of a three-dimensional object built from rectangular solids. *Example: Build a model of an apartment building with blocks. Find its volume and total surface area.*	

Grade 7 Common Core State Standards (CCSS)	Grade 7 Indiana Academic Standards (IAS)	Comment
Statistics and Probability		
Use random sampling to draw inferences about a population.		
7.SP.1 Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.	**7.6.2** Make predictions from statistical data. *Example: Record the temperature and weather conditions (sunny, cloudy, or rainy) at 1 p.m. each day for two weeks. In the third week, use your results to predict the temperature from the weather conditions.*	CCSS 7.SP.1, 2 reuqire a deeper understanding of random sampling and the variation in estimates and predictions.
7.SP.2 Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. *For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.*		
Draw informal comparative inferences about two populations.		
7.SP.3 Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.*	***NEW***	

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7.SP.4 Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.*	***NEW***	
Draw informal comparative inferences about two populations.		
7.SP.5 Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	**7.6.5** Know that if P is the probability of an event occurring, then 1 – P is the probability of that event not occurring. *Example: The weather forecast says that the probability of rain today is 0.3. What is the probability that it won't rain?* Partial)	CCSS 7.SP.5 is limited to the concept of probability as the number 0 to 1 that expresses the likelihood of an event. IAS moves beyond into the assigning of 1 - P as the probability of the event not occurring.
7.SP.6 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.	***NEW***	
7.SP.7 Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.	***NEW***	
7.SP.7a Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. *For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.*	***NEW***	

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7.SP.7b Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. *For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?*	***NEW***	
7.SP.8 Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	**7.6.6** Understand that the probability of either one or the other of two disjoint events occurring is the sum of the two individual probabilities. *Example: Find the probability of rolling 9 with two number cubes. Also find the probability of rolling 10. What is the probability of rolling 9 or 10?*	
	7.6.7 Find the number of possible arrangements of several objects using a tree diagram. *Example: A state's license plates contain 6 digits and one letter. How many different license plates can be made if the letter must always be in the third position and the first digit cannot be a zero?*	
7.SP.8a Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.	***NEW***	
7.SP.8b Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.	**7.6.7** Find the number of possible arrangements of several objects using a tree diagram. *Example: A state's license plates contain 6 digits and one letter. How many different license plates can be made if the letter must always be in the third position and the first digit cannot be a zero?*	
7.SP.8c Design and use a simulation to generate frequencies for compound events. For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?	***NEW***	

IAS Grade 7 Standards Not Matched by CCSS at Grade 7		
No match in CCSS Grade 7.	**7.1.1** Read, write, compare, and solve problems using whole numbers in scientific notation. *Example: Write 300,000 in scientific notation.*	
No match in CCSS Grade 7.	**7.1.2** Compare and order rational and common irrational numbers and place them on a number line. *Example: Place in order: -2, , -2.45, 0.9, π, -1 .*	
No match in CCSS Grade 7.	**7.1.3** Identify rational and common irrational numbers from a list. *Example: Name all the irrational numbers in the list: -2, , -2.45, 0.9, π, -1 .*	
No match in CCSS Grade 7.	**7.1.4** Understand and compute whole number powers of whole numbers. *Example: 35 = 3 × 3 × 3 × 3 × 3 = ?*	
No match in CCSS Grade 7.	**7.1.5** Find the prime factorization of whole numbers and write the results using exponents. *Example: 24 = 2 × 2 × 2 × 3 = 23 × 3.*	
No match in CCSS Grade 7.	**7.1.6** Understand and apply the concept of square root. *Example: Explain how you can find the length of the hypotenuse of a right triangle with legs that measure 5 cm and 12 cm.*	
No match in CCSS Grade 7.	**7.1.7** Convert terminating decimals into reduced fractions. *Example: Write 0.95 as a fraction.*	
No match in CCSS Grade 7.	**7.3.6** Define slope as vertical change per unit of horizontal change and recognize that a straight line has constant slope or rate of change. *Example: Examine a table of values and make a conjecture about whether the table represents a linear function.*	
No match in CCSS Grade 7.	**7.3.7** Find the slope of a line from its graph. *Example: Draw the graph of y = 2x – 1. Choose two points on the graph and divide the change in y-value by the change in x-value. Repeat this for other pairs of points on the graph. What do you notice?*	
No match in CCSS Grade 7.	**7.3.8** Draw the graph of a line given the slope and one point on the line, or two points on the line. *Example: Draw the graph of the equation with slope of 3 and passing through the point with coordinates (0, -2).*	

No match in CCSS Grade 7.	**7.4.1** Understand coordinate graphs and use them to plot simple shapes, find lengths and areas related to the shapes, and find images under translations (slides), rotations (turns), and reflections (flips). *Example: Draw the triangle with vertices (0, 0), (3, 0), and (0, 4). Find the lengths of the sides and the area of the triangle. Translate (slide) the triangle 2 units to the right. What are the coordinates of the new triangle?*	
No match in CCSS Grade 7.	**7.4.2** Understand that transformations such as slides, turns, and flips preserve the length of segments, and that figures resulting from slides, turns, and flips are congruent to the original figures. *Example: In the last example, find the lengths of the sides and the area of the new triangle. Discuss your results.*	
No match in CCSS Grade 7.	**7.4.3** Know and understand the Pythagorean Theorem and use it to find the length of the missing side of a right triangle and the lengths of other line segments. Use direct measurement to test conjectures about triangles. *Example: Use the length and width of your classroom to calculate the distance across the room diagonally. Check by measuring.*	
No match in CCSS Grade 7.	**7.4.4** Construct two-dimensional patterns (nets) for three-dimensional objects, such as right prisms, pyramids, cylinders, and cones. *Example: Draw a rectangle and two circles that will fit together to make a cylinder.*	Assessed in the classroom, not assessed on ISTEP+.
No match in CCSS Grade 7.	**7.5.1** Compare lengths, areas, volumes, weights, capacities, times, and temperatures within measurement systems. *Example: The area of the school field is 3 acres. How many square yards is that? Explain your method.*	
No match in CCSS Grade 7.	**7.5.2** Use experimentation and modeling to visualize similarity problems. Solve problems using similarity. *Example: At a certain time, the shadow of your school building is 36 feet long. At the same time, the shadow of a yardstick held vertically is 4 feet long. How high is the school building?*	

No match in CCSS Grade 7.	**7.6.1** Analyze, interpret, and display data in appropriate bar, line, and circle graphs and stem-and-leaf plots and justify the choice of display. *Example: You survey the students in your school to find which of three designs for a magazine cover they prefer. To display the results, which would be more appropriate: a bar chart or a circle graph? Explain your answer.*	
No match in CCSS Grade 7.	**7.6.3** Describe how additional data, particularly outliers, added to a data set may affect the mean, median, and mode. *Example: You measure the heights of the students in your grade on a day when the basketball team is playing an away game. Later you measure the players on the team and include them in your data. What kind of effect will including the team have on the mean, median, and mode? Explain your answer.*	
No match in CCSS Grade 7.	**7.6.4** Analyze data displays, including ways that they can be misleading. Analyze ways in which the wording of questions can influence survey results. *Example: On a bar graph of a company's sales, it appears that sales have more than doubled since last year. Then you notice that the vertical axis starts at $5 million and can see that sales have in fact increased from $5.5 million to $6.2 million.*	