Indiana Department of Education

Dr. Katie Jenner, Secretary of Education

Indiana Academic Standards 2020
Geometry
Standards Correlation Guidance Document

Intentional alignment of instructional practices and curricular materials to the Indiana Academics Standards (IAS) is vital to improving student outcomes. This guide is meant to encourage strong standards-based instruction when utilizing curricular materials not aligned to IAS but to Common Core State Standards (CCSS). Purchased curricula are not designed to perfectly align with IAS and often align with CCSS. Use of this guide will ensure strong alignment to IAS and foster critical conversations around instructional decisions.

Considerations for use:

- Identify the desired IAS;
- Unpack the IAS, referencing the IDOE Math Framework;
- Determine the correlating CCSS;
- Consider the differences between IAS and learning objective from CCSS aligned curricular material;
- Identify instructional gaps (in content or complexity) and consider strategies to supplement; and
- Prioritize content in curricular material that is identified in the IAS.

IDOE's Math Framework provides student success criteria, vertical planning, digital resources, and clarifying examples to consider when planning, implementing, and teaching IAS.

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Indiana Academic Standards (IAS) 2020	Common Core State Standards (CCSS)	Difference Between IAS 2020 and CCSS
Process Standards for Mathematics		
PS.1: Make sense of problems and persevere in solving them. Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway, rather than simply jumping into a solution attempt. They consider analogous problems and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?” and "Is my answer reasonable?" They understand the approaches of others to solving complex problems and identify correspondences between different approaches. Mathematically proficient students understand how mathematical ideas interconnect and build on one another to produce a coherent whole.	**MP1: Make sense of problems and persevere in solving them.** Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem.	IAS removes criteria involving a graphing calculator and does not distinguish between younger and older students.

	Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.	
PS.2: Reason abstractly and quantitatively. Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.	**MP.2: Reason abstractly and quantitatively.** Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.	*No content differences identified.*

PS.3: Construct viable arguments and critique the reasoning of others. Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They analyze situations by breaking them into cases and recognize and use counterexamples. They organize their mathematical thinking, justify their conclusions and communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. They justify whether a given statement is true always, sometimes, or never. Mathematically proficient students participate and collaborate in a mathematics community. They listen to or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.	**MP.3: Construct viable arguments and critique the reasoning of others.** Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense,	IAS includes the justification of statements that are true always, sometimes, or never. IAS includes collaboration in a mathematics community and does not distinguish between younger and older students.

	and ask useful questions to clarify or improve the arguments.	
PS.4: Model with mathematics. Mathematically proficient students apply the mathematics they know to solve problems arising in everyday life, society, and the workplace using a variety of appropriate strategies. They create and use a variety of representations to solve problems and to organize and communicate mathematical ideas. Mathematically proficient students apply what they know and are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.	**MP.4: Model with mathematics.** Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.	IAS does not distinguish between younger and older students.

PS.5: Use appropriate tools strategically. Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Mathematically proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. Mathematically proficient students identify relevant external mathematical resources, such as digital content, and use them to pose or solve problems. They use technological tools to explore and deepen their understanding of concepts and to support the development of learning mathematics. They use technology to contribute to concept development, simulation, representation, reasoning, communication and problem solving.	**MP.5: Use appropriate tools strategically.** Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.	IAS does not distinguish between younger and older students.

PS.6: Attend to precision. Mathematically proficient students communicate precisely to others. They use clear definitions, including precision. correct mathematical language, in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They express solutions clearly and logically by using the appropriate mathematical terms and notation. They specify units of measure and label axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently and check the validity of their results in the context of the problem. They express numerical answers with a degree of precision appropriate for the problem context.	**MP.6: Attend to precision.** Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.	IAS does not distinguish between younger and older students.
PS.7: Look for and make use of structure. Mathematically proficient students look closely to discern a pattern or structure. They step back for an overview and shift perspective. They recognize and use properties of operations and equality. They organize and classify geometric shapes based on their attributes. They see expressions, equations, and geometric figures as single objects or as being composed of several objects.	**MP.7: Look for and make use of structure.** Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7 × 8 equals the well remembered 7 × 5 + 7 × 3, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2 × 7 and the 9 as 2 + 7.	IAS has removed examples and does not distinguish between younger and older students.

	They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.	
PS.8: Look for and express regularity in repeated reasoning. Mathematically proficient students notice if calculations are repeated and look for general methods and shortcuts. They notice regularity in mathematical problems and their work to create a rule or formula.Mathematically proficient students maintain oversight of the process, while attending to the details as they solve a problem. They continually evaluate the reasonableness of their intermediate results.	**MP.8: Look for and express regularity in repeated reasoning.** Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students	IAS has removed examples and does not distinguish between younger and older students.

	maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.	

Indiana Academic Standards (IAS) 2020	Common Core State Standards (CCSS)	Difference Between IAS 2020 and CCSS
Logic and Proofs		
G.LP.1: Understand and describe the structure of and relationships within an axiomatic system (undefined terms, definitions, axioms and postulates, methods of reasoning, and theorems). Understand the differences among supporting evidence, counterexamples, and actual proofs.	*No CCSS equivalent.*	
G.LP.2: Use precise definitions for angle, circle, perpendicular lines, parallel lines, and line segment, based on the undefined notions of point, line, and plane. Use standard geometric notation.	**HSG.CO.A.1:** Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.	IAS omits distance along a line and distance around a circular arc as undefined notions; requires the use of precise definitions not simply the knowledge of them.
G.LP.3: State, use, and examine the validity of the converse, inverse, and contrapositive of conditional ("if – then") and bi-conditional ("if and only if") statements.	*No CCSS equivalent.*	
G.LP.4: Understand that proof is the means used to demonstrate whether a statement is true or false mathematically. Develop geometric proofs, including those involving coordinate geometry, using two-column, paragraph, and flow chart formats.	**HSG.GPE.B.4:** Use coordinates to prove simple geometric theorems algebraically.	IAS extends to two-column proofs, paragraph proofs, and flow chart formats of proof; requires students to develop an understanding of the purpose of proof in mathematics.

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Points, Lines, and Angles		
G.PL.1: Prove and apply theorems about lines and angles, including the following: • Vertical angles are congruent. • When a transversal crosses parallel lines, alternate interior angles are congruent, alternate exterior angles are congruent, and corresponding angles are congruent. • When a transversal crosses parallel lines, same side interior angles are supplementary. • Points on a perpendicular bisector of a line segment are exactly those equidistant from the endpoints of the segment.	**HSG.CO.B.9:** Prove theorems about lines and angles. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.	IAS adds that when a transversal crosses parallel lines, alternate exterior angles are congruent and same side interior angles are supplementary.
G.PL.2: Explore the relationships of the slopes of parallel and perpendicular lines. Determine if a pair of lines are parallel, perpendicular, or neither by comparing the slopes in coordinate graphs and equations.	**HSG.GPE.B.5:** Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems.	IAS emphasizes exploration of slopes of parallel and perpendicular lines rather than formal proof.
G.PL.3: Use tools to explain and justify the process to construct congruent segments and angles, angle bisectors, perpendicular	**HSG.CO.D.12:** Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic	IAS emphasizes explaining and justifying the process to construct, rather than fluency in construction.

bisectors, altitudes, medians, and parallel and perpendicular lines.	geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.	
G.PL.4: Develop the distance formula using the Pythagorean Theorem. Find the lengths and midpoints of line segments in the two-dimensional coordinate system.	**HSG.GPE.B.7:** Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.	IAS requires students to develop the distance formula using the Pythagorean Theorem; extends to include finding midpoints of segments.

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Triangles		
G.T.1: Prove and apply theorems about triangles, including the following: ● Measures of interior angles of a triangle sum to 180°. ● The Isosceles Triangle Theorem and its converse. ● The Pythagorean Theorem. ● The segment joining midpoints of two sides of a triangle is parallel to the third side and half the length. ● A line parallel to one side of a triangle divides the other two proportionally, and its converse. ● The Angle Bisector Theorem.	**HSG.CO.C.10:** Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point. **HSG.SRT.B.4:** Prove theorems about triangles. Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.	IAS specifies the Angle Bisector Theorem; omits the medians of a triangle meet at a point; omits using similarity to prove the Pythagorean Theorem.
G.T.2: Explore and explain how the criteria for triangle congruence (ASA, SAS, AAS, SSS, and HL) follow from the definition of congruence in terms of rigid motions.	**HSG.CO.B.8:** Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.	IAS includes AAS and HL criteria.
G.T.3: Use tools to explain and justify the process to construct congruent triangles.	**HSG.CO.B.7:** Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and	IAS allows for tools in lieu of definitions; emphasizes explaining and justifying the

	only if corresponding pairs of sides and corresponding pairs of angles are congruent. **HSG.CO.D.12:** Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.	process to construct, rather than fluency in construction; specific to triangles.
G.T.4: Use the definition of similarity in terms of similarity transformations, to determine if two given triangles are similar. Explore and develop the meaning of similarity for triangles.	**HSG.SRT.A.2:** Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides. **HSG.SRT.A.3:** Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.	IAS is specific to triangles; emphasises exploration over simply explaining; does not explicitly cite the AA criterion.
G.T.5: Use congruent and similar triangles to solve real-world and mathematical problems involving sides, perimeters, and areas of triangles.	**HSG.SRT.B.5:** Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.	IAS omits proving relationships in geometric figures.

G.T.6: Prove and apply the inequality theorems, including the following: ● Triangle inequality. ● Inequality in one triangle. ● The hinge theorem and its converse.	*No CCSS equivalent.*	
G.T.7: Explore the relationships that exist when the altitude is drawn to the hypotenuse of a right triangle. Understand and use the geometric mean to solve for missing parts of triangles.	*No CCSS equivalent.*	
G.T.8: Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.	**HSG.SRT.C.6:** Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.	*No content differences identified.*
G.T.9: Use trigonometric ratios (sine, cosine and tangent) and the Pythagorean Theorem to solve real-world and mathematical problems involving right triangles.	**HSG.SRT.C.8:** Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.	IAS is limited to sine, cosine, and tangent.
G.T.10: Explore the relationship between the sides of special right triangles (30° - 60° and 45° - 45°) and use them to solve real-world and other mathematical problems.	*No CCSS equivalent.*	

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Quadrilaterals and Other Polygons		
G.QP.1: Prove and apply theorems about parallelograms, including those involving angles, diagonals, and sides.	**HSG.CO.C.11:** Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.	*No content differences identified.*
G.QP.2: Prove that given quadrilaterals are parallelograms, rhombuses, rectangles, squares, kites, or trapezoids. Include coordinate proofs of quadrilaterals in the coordinate plane.	*No CCSS equivalent.*	
G.QP.3: Develop and use formulas to find measures of interior and exterior angles of polygons.	*No CCSS equivalent.*	
G.QP.4: Identify types of symmetry of polygons, including line, point, rotational, and self-congruencies.	*No CCSS equivalent.*	
G.QP.5: Compute perimeters and areas of polygons in the coordinate plane to solve real-world and other mathematical problems.	**HSG.GPE.B.7:** Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.	*No content differences identified.*

G.QP.6: Develop and use formulas for areas of regular polygons.	*No CCSS equivalent.*	

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Circles		
G.CI.1: Define, identify and use relationships among the following: radius, diameter, arc, measure of an arc, chord, secant, tangent, congruent circles, and concentric circles.	*No CCSS equivalent.*	
G.CI.2: Derive the fact that the length of the arc intercepted by an angle is proportional to the radius; derive the formula for the area of a sector.	**HSG.C.B.5:** Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.	IAS omits using similarity; omit defining the radian measure of the angle as the constant of proportionality.
G.CI.3: Explore and use relationships among inscribed angles, radii, and chords, including the following: ● The relationship that exists between central, inscribed, and circumscribed angles. ● Inscribed angles on a diameter are right angles. ● The radius of a circle is perpendicular to a tangent where the radius intersects the circle.	**HSG.C.A.2:** Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.	*No content difference identified.*

G.CI.4: Solve real-world and other mathematical problems that involve finding measures of circumference, areas of circles and sectors, and arc lengths and related angles (central, inscribed, and intersections of secants and tangents).	*No CCSS equivalent.*	
G.CI.5: Use tools to explain and justify the process to construct a circle that passes through three given points not on a line, a tangent line to a circle through a point on the circle, and a tangent line from a point outside a given circle to the circle.	**HSG.C.A.4:** Construct a tangent line from a point outside a given circle to the circle.	IAS additionally requires students to construct a circle that passes through three given points not on a line and a tangent line to a circle through a point on the circle.
G.CI.6: Use tools to construct the inscribed and circumscribed circles of a triangle. Prove properties of angles for a quadrilateral inscribed in a circle.	**HSG.C.A.3:** Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.	*No content difference identified.*

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Transformations		
G.TR.1: Use geometric descriptions of rigid motions to transform figures and to predict and describe the results of translations, reflections and rotations on a given figure. Describe a motion or series of motions that will show two shapes are congruent.	**HSG.CO.A.5:** Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another. **HSG.CO.A.6:** Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.	**G.TR.1** extends beyond prediction and requires students to describe results.
G.TR.2: Verify experimentally the properties of dilations given by a center and a scale factor. Understand the dilation of a line segment is longer or shorter in the ratio given by the scale factor.	**HSG.SRT.A.1:** Verify experimentally the properties of dilations given by a center and a scale factor. **HSG.SRT.A.1.B:** The dilation of a line segment is longer or shorter in the ratio given by the scale factor.	*No content differences identified.*

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Three-Dimensional Solids		
G.TS.1: Create a net for a given three-dimensional solid. Describe the three-dimensional solid that can be made from a given net (or pattern).	*No CCSS equivalent.*	
G.TS.2: Explore and use symmetries of three-dimensional solids to solve problems.	*No CCSS equivalent.*	
G.TS.3: Explore properties of congruent and similar solids, including prisms, regular pyramids, cylinders, cones, and spheres and use them to solve problems.	*No CCSS equivalent.*	
G.TS.4: Solve real-world and other mathematical problems involving volume and surface area of prisms, cylinders, cones, spheres, and pyramids, including problems that involve composite solids and algebraic expressions.	**HSG.GMD.A.3:** Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.	**G.TS.4** includes surface area; includes prisms; emphasizes composite solids and including algebraic expressions.
G.TS.5: Apply geometric methods to create and solve design problems.	**HSG.MG.A.3:** Apply geometric methods to solve design problems.	**G.TS.5** extends to create.