Project: CCSSM Standards Investigation   Names _____

This project involves the Common Core State Standard for Mathematics elaborated on the following site: http://www.corestandards.org/Math . Complete the following quote.

"The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important 'processes and proficiencies' with longstanding importance in mathematics education. The first of these are the NCTM process standards of _____ _____, _____ and _____, communication, _____, and connections. The second are the strands of mathematical proficiency specified in the National Research Council's report _____ *It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, _____ , efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, _____, and worthwhile, coupled with a belief in diligence and one's own efficacy)."

The Common Core State Standards in Mathematics introduce "Geometry" in which grade level?

_____

Fill in the blank with the appropriate term from the list: Clusters, Domains, Standards.

_____ define what students should understand and be able to do.

_____ summarize groups of related standards. Note that standards from different clusters may sometimes be closely related, because mathematics is a connected subject.

_____ are larger groups of related standards. Standards from different domains may sometimes be closely related.

Here is an example from grade 3:
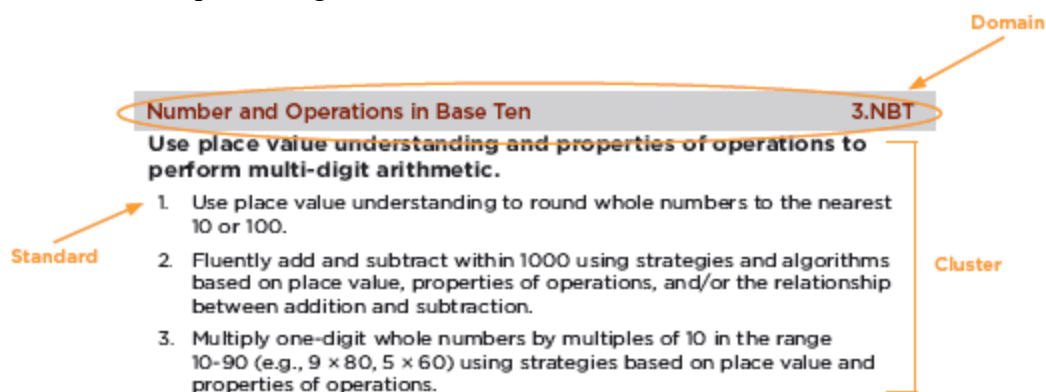
To illustrate the overlap between various content areas, notice the following measurement and data standards:

- CCSS.Math.Content.2.MD.D.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a _____ _____, where the horizontal scale is marked off in whole-number units.

- [CCSS.Math.Content.2.MD.D.10](#) Draw a _____ graph and a _____ graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

These are clearly statistical concepts. They are taught in what grade here in CCSSM? _____

Focus now on the "Geometry" standards. Complete the following Kindergarten-level standards.

Kindergarten

Identify and describe shapes.

CCSS.MATH.CONTENT.K.G.A.1

Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.

CCSS.MATH.CONTENT.K.G.A.2

Correctly name shapes regardless of their _____ or overall size.

CCSS.MATH.CONTENT.K.G.A.3

Identify shapes as two-dimensional (lying in a _____ , "flat") or _____ -dimensional ("solid").

Analyze, compare, create, and compose shapes.

CCSS.MATH.CONTENT.K.G.B.4

Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and _____ /"corners") and other attributes (e.g., having sides of equal length).

CCSS.MATH.CONTENT.K.G.B.5

Model shapes in the world by building shapes from components (e.g., sticks and _____ _____) and drawing shapes.

CCSS.MATH.CONTENT.K.G.B.6

Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"*

Grade 1

Reason with shapes and their attributes.

CCSS.MATH.CONTENT.1.G.A.1

Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining

attributes (e.g., color, orientation, overall size); _____ and _____ shapes to possess defining attributes.

CCSS.MATH.CONTENT.1.G.A.2

Compose two-dimensional shapes (rectangles, squares, _____ , _____ , half-circles, and quarter-circles) or three-dimensional shapes (_____, right rectangular _____ , right circular _____, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.[1]

CCSS.MATH.CONTENT.1.G.A.3

Partition circles and rectangles into two and _____ equal shares, describe the shares using the words _____ , *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that _____ into more equal shares creates smaller shares.

Grade 2

Reason with shapes and their attributes.

CCSS.MATH.CONTENT.2.G.A.1

Recognize and draw shapes having specified attributes, such as a given number of _____ or a given number of equal faces.[1] Identify triangles, _____ , pentagons, _____ , and cubes.

CCSS.MATH.CONTENT.2.G.A.2

Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

CCSS.MATH.CONTENT.2.G.A.3

Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

Grade 3

Reason with shapes and their attributes.

CCSS.MATH.CONTENT.3.G.A.1

Understand that shapes in different categories (e.g., _____ , rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and _____ as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

CCSS.MATH.CONTENT.3.G.A.2

Partition shapes into parts with equal areas. Express the area of each part as a _____ _____ of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.*

Grade 4

Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

CCSS.MATH.CONTENT.4.G.A.1

Draw points, lines, line segments, _____ , angles (right, acute, _____), and perpendicular and _____ lines. Identify these in two-dimensional figures.

CCSS.MATH.CONTENT.4.G.A.2

Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

CCSS.MATH.CONTENT.4.G.A.3

Recognize a line of _____ for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Grade 5

Graph points on the _____ plane to solve real-world and mathematical problems.

CCSS.MATH.CONTENT.5.G.A.1

Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the _____) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its _____ . Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).

CCSS.MATH.CONTENT.5.G.A.2

Represent real world and mathematical problems by graphing points in the first _____ of the coordinate plane, and interpret coordinate values of points in the context of the situation.

Classify two-dimensional figures into categories based on their properties.

CCSS.MATH.CONTENT.5.G.B.3

Understand that attributes belonging to a category of two-dimensional figures also belong to all

subcategories of that category. For example, all rectangles have four right angles and _____ are _____ , so all squares have four right angles.

CCSS.MATH.CONTENT.5.G.B.4

Classify two-dimensional figures in a hierarchy based on properties.

Grade 6

Solve real-world and mathematical problems involving area, surface area, and _____ .

CCSS.MATH.CONTENT.6.G.A.1

Find the area of right triangles, other triangles, special quadrilaterals, and _____ by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.

CCSS.MATH.CONTENT.6.G.A.2

Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V =$ _____ and $V = Bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.

CCSS.MATH.CONTENT.6.G.A.3

Draw polygons in the coordinate plane given coordinates for the _____ ; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.

CCSS.MATH.CONTENT.6.G.A.4

Represent three-dimensional figures using _____ made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.