

Considerations for analyzing the CCSS-HCPS III Crosswalk Documents
and the Conceptual Categories for High School Mathematics

1. The accompanying Hawaii Department of Education (HIDOE) documents are based on the official Common Core State Standards (CCSS) for Mathematics document which can be accessed at <http://www.corestandards.org/the-standards>. The official CCSS document should be read to gain a more comprehensive understanding of the teaching and learning expectations presented in the HIDOE crosswalk documents.
2. The crosswalk documents show a mapping of the HCPS III benchmarks for Algebra I and Geometry, and of the American Diploma Project (ADP) benchmarks for Algebra II, mapped to the CCSS. This document will be updated with additional comments for each standard based upon documents currently being worked on by the writers of the Common Core mathematics standards as well as by national mathematics organizations (e.g., a joint task force of the National Council of Teachers of Mathematics, National Council of Supervisors of Mathematics, Association of State Supervisors of Mathematics, and the Association of Mathematics Teacher Educators).
3. For SY 2011-2012 and SY 2012-2013, Algebra I and Geometry courses should continue to use the learning expectations specified in HCPS III. Algebra II courses should continue to use the learning expectations specified in the ADP Algebra II End-of-Course exam standards (which are already closely aligned with the CCSS).
4. The document titled **CCSS – Overview of Grades 9-12** should be read PRIOR to reviewing the crosswalk documents as it provides a “big picture” perspective for the high school mathematics learning expectations in the CCSS.
 - a. In the CCSS document, the high school standards are not organized into grade-level or course-specific formats. Instead, the high school standards are organized into six conceptual categories that portray a coherent view of high school mathematics.
 - b. The high school standards were designed to delineate the mathematics that students should engage with to get them to the College and Career Ready “finish line”. It is important for high school teachers to review and understand the grades 6-8 Common Core mathematics standards to gain a perspective of students’ prior learning expectations and experiences.

Note: The Hawaii DOE is a member of the SMARTER Balanced Assessment Consortium (SBAC), collaborating with 30 other states to design a common state assessment system. One significant component of the work of the consortium is to develop the state assessments (for grades 3-8 and one for high school) that are aligned to the CCSS. The consortium intends for the assessments to be operational in SY 2014-2015. Thus, over the next one to two years, based on the work with other SBAC states, Hawaii DOE will be identifying (and creating as needed) the high school courses and course pathways that should be offered so students will be able to meet the expectations of the CCSS and reach the College and Career Ready “finish line”.

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5. Important features of the “big picture” overview.

a. Domains

- i. Groups of related standards are organized into domains. Domains are overarching big ideas that connect topics across grades.
- ii. Standards from different domains may be closely related. This was done purposefully by the lead writing team to convey an internal coherence among the domains.
- iii. In Hawaii Content and Performance Standards (HCPS) III, the benchmarks were organized into larger categories called “strands.” However, there are no strands in CCSS. With the transition to CCSS, what we used to call a *strand* will now be referred to as a “domain.”

b. Clusters

- i. Within a domain, smaller groups of related standards are organized into clusters. The clusters should inform teachers’ instructional planning and design.
- ii. The cluster helps us to be mindful of the important mathematical ideas that we want to promote student understanding of. We don’t want to simply teach to the standards (i.e., as if checking off a to-do list of tasks completed). Rather, we want to teach **THROUGH** the standards, using the specific learning expectations as building blocks for student understanding of significant mathematical ideas that will better prepare them for the mathematics they will be engaging with in subsequent grades.

c. Standards

- i. The specific learning expectations for each grade level defining what students should understand and be able to do.
- ii. In HCPS III, the specific learning expectations were called “benchmarks.” However, there are no benchmarks in CCSS. With the transition to CCSS, what we used to call a *benchmark* will now be referred to as a “standard.”
- iii. Some standards are designated with a “plus” (+) symbol to indicate that this particular learning expectation exceeds the College and Career Ready finish line. These “plus” standards indicate additional mathematics that students should learn in order to take advanced courses such as calculus or advanced statistics, and thus are considered optional.
- iv. All standards that do not have a “plus” symbol are learning expectations for all students.
- v. HIDOE will be organizing teams of teachers and higher education faculty to organize the high school standards into course pathways.

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5. Important features of the “big picture” overview (continued).

d. Mathematical Practices

- i. The CCSS includes eight Standards for Mathematical Practice. These practices encompass both the mathematical process standards (i.e., the five NCTM process standards) and the strands of mathematical proficiency (as described in *Adding it Up*, a publication by the National Research Council), informing us of the broader learning goals that we should have for all students as they study mathematics throughout grades K-12.
- ii. The Mathematical Practices are based on what is known about how successful students approach and engage with mathematics, and thus, the type of expertise we want all students to develop over time.
- iii. Descriptions of the eight Standards for Mathematical Practice can be found in the official CCSS document (pages 6-8) which can be accessed at <http://www.corestandards.org/the-standards>.
- iv. **“Encouraging these practices in students of all ages should be as much a goal of the mathematics curriculum as the learning of specific content.”**