

General Points for Mathematics Instructional Materials:

- Instructional Materials based on the new Florida mathematics content standards should be an instructional tool for students and teachers, and not just a practice workbook. Instructional Materials should help students master the mathematics concepts in their grade level and should move from concrete understanding, to several different models and representations (using diagrams and manipulatives where applicable), to abstract representations.
- Introduction of new materials should build on materials and mathematics concepts introduced in earlier grade-levels. For example, in grade 6, students are introduced to multiplying and dividing fractions. Instructional Materials could introduce multiplication of fractions in grade six as repeated addition of fractions – a skill expected to be mastered by students in grade 5.
- The order of benchmarks presented in the new Florida mathematics content standards is not the order of instruction or order of importance. Providers of Instructional Materials should examine all of the benchmarks for a specific grade level or course and present material in a manner that makes sense and integrates mathematics skills that were introduced in earlier grade levels.
- All math courses will have some Reading and Language Arts benchmarks included as part of the course. The Office of Math and Science (OMS) will provide an online resource with the new math content standards that will include a glossary, model lessons, appropriate use of technology, and literal equations for each grade level or Body of Knowledge. These resources may be useful to Providers of Instructional Materials as they develop new materials to support instruction based on the new math content standards.
- Instructional materials should address the appropriate use of technology as required by the new math content standards. For example, standard MA.912.A.4.11 states “Solve a polynomial inequality by examining the graph with and without the use of technology.”

Points Specific to Grade K – 8 Instructional Materials:

- The number of math concepts for grades K – 8 has been significantly reduced. The purpose behind this is to allow K – 8 teachers more time to teach mathematical concepts in depth and to mastery rather than quickly “covering” concepts. With the previous Grade Level Expectations (GLE), K – 8 math teachers had 2 to 3 days per GLE. With the new math content standards, K – 8 teachers will have 10 to 14 days per benchmark.
- The extended amount of time with the new math content standards will allow teachers to help students move from concrete understanding, to several different models (with diagrams and manipulatives), to abstract representations with the new benchmarks. The intent is NOT to have students just do MORE practice of the same skills, but to have time to really explore the same skill in different contexts and to increase rigor over time to gain depth and mastery of the smaller number of math concepts in their grade level.
- The K – 8 benchmarks are built around 3 big ideas and 3 to 5 supporting ideas at each grade level. These provide a framework that allows the instructor to keep coming back to over-arching concepts that the benchmarks will help students see a consistent, unifying theme in their learning for mathematics at a specific grade-level. All benchmarks are of equal importance.
- The power of the new K – 8 math content standards is to allow teachers in these grade levels to FOCUS on the smaller number of mathematical concepts and teach them to mastery. Instructional materials should reflect this focus and **not** include material that is outside the scope of the concepts for a particular grade level. Although students are expected to build on math skills that were mastered in early grades, the new math materials are not intended to repeat full instruction of an early math concept (for example, adding and subtracting fractions, a Big Idea in Grade 5) all over again in the next higher

- grade (Grade 6, for example, is where students focus on multiplying and dividing fractions).
- The math benchmarks in Grade 8 are intended to be a strong focus on pre-Algebra materials that will prepare 8th grade students who are not taking Algebra I to be fully prepared to successfully complete Algebra I in high school.

Points Specific to High School Instructional Materials:

- There will still be a high school pre-Algebra course that will be a Level 1 course. This is a different audience than students completing 8th grade math, which will also largely be a pre-Algebra course. Instructional materials will need to differentiate instruction for these two different student groups.
- The Bodies of Knowledge (BOK) for grades 9 – 12 are **NOT** courses. The benchmarks that make up the Algebra BOK can be used to create courses for pre-Algebra, Algebra I, Algebra IA, Algebra IB, Honors Algebra I, Algebra II, and possibly others. Providers of Instructional Materials would need to look at **BOTH** the math content standards **AND** the course descriptions to fully understand what content will be included in the high school math courses.
- High school course descriptions will not pull benchmarks from the same BOK. An Algebra I course may have benchmarks from the Algebra BOK, the Statistics BOK, and the Discrete Math BOK (for example). It will be important for Providers of Instructional Materials to see the course descriptions for these high school courses to understand the course-specific content.
- Previous high school math courses have not had clearly delineated content standards because the math content standards were broadly written for 9 -12 and did not specifically address upper level courses such as Calculus or Math Analysis. The new math content standards will more clearly define the math content for these upper level courses.
- Because of the effort by the writers of the math standards to more clearly specify the math content for upper level courses, there will be a greater number of math content standards for courses offered in grades 9 – 12.
- The FL Sunshine State Standards for mathematics are not intended to be used for courses that have their curriculum determined by organizations outside the Florida Department of Education. Course descriptions for AP mathematics courses will be determined by the College Board standards. A similar paradigm applies to courses designated as International Baccalaureate (IB) and Advanced International Certificate of Education (AICE).
- Some new standards, such as the standards for Financial Literacy, may not have existing courses that implement these standards. Courses that use these new standards will be developed over time and added to the FL Course Code Directory. As those course descriptions are written, there will be a need for instructional materials to support the new courses.