

Math Textbook Reviews:

Section 1, Aug 2014

Publisher: Pearson/Prentice Hall

Textbook Title: Pre-Calculus: Graphical, Numerical, Algebraic

Grade band: High school advanced math

Focus Metrics	
A. In any single course, materials are designed so teachers and students spend at least 50% of their time on the Widely Applicable Prerequisites (see Appendix B).	Yes
B. Topics from future courses are clearly identified as such in the materials and do not detract from focus.	Yes
Does this textbook meet the requirements for focus?	Yes
Justification/Notes: Alignment: The correlation document was updated to reflect Tennessee AP standards. There is a Chapter P at the beginning of the textbook that is for review. There is a Looking Ahead to Calculus icon for information that students will encounter in their future Calculus course. Several textbook pages in the student and teacher edition were updated to try to include all required. To meet the A-S.4 requirement to calculate the truncation error in specific examples the publisher added 2 truncation error problems and a short narrative to the margin of page 663. To satisfy N-CN.5 to calculate the midpoint of a segment in the complex plane, the publisher added a table of formulas but no problems were added to the problem set for that section.	

Rigor Metrics	
A. For the widely applicable prerequisites, the three aspects of rigor are given full attention: conceptual understanding, procedural fluency, and application.	Yes
B. High quality problems and questions designed to invite exploration and support conceptual understanding are included for content standards and clusters that explicitly call for it. A variety of conceptual problems enable students to connect mathematical ideas and representations, and transfer understandings to new situations.	Yes
C. Materials support the development of fluency, including opportunities to practice algebraic manipulation and computation, appropriately apply tools, and use technology. Sometimes problems are purely procedural, none are based on non-mathematical tricks or mnemonics.	Yes
Does this textbook meet the requirements for rigor?	Yes
Justification/Notes: Rigor: There are multiple places where students use a graphing utility to solve problems as well as algebraically. A graphing utility is heavily integrated into the curriculum. At the end of each lesson, there are many practice problems to address skill and fluency. There are multiple levels of application exercises including real world applications. There are projects in each chapter that look at a specific application type problem but they do not ask students to justify or explain their reasoning. In each	

lesson, there is an exploration activity that pushes for a greater understanding by asking questions like "why" and requiring students to explain their reasoning. (Pg 391) There is a writing to learn section with each chapter which ask students to explain their observations or solution. As an example, The lesson containing the Binomial Theorem (9.2) , has 34 practice problems, 1 exploration problematic includes Writing to Learn where students are explaining their reasoning, 1 group activity problem, and 3 extension problems. Application problems are more prevalent in other sections. The lesson Parametric Equations and Motion (6.3) has 36 practice problems, 29 application problems in many cases students are explaining their reasoning in the Writing to Learn problems, 1 exploration problem , and two group activity problems. This textbook met the minimum requirements for rigor.

Were both non-negotiables in Section I met? Yes

Optional Additional Comments from Reviewers:

SECTION 2

Pearson	Pre-calculus: Graphical, Numerical, Algebraic	
	Number rating	Comments
6a Materials connect the math practices to the content standards in meaningful and intentional ways. The development of the practices is well-grounded in content and not in isolation.	1	Mathematical Practices are present but not explicitly stated or referred to.
6b Materials include teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. Problems and activities present opportunities for students to make use of an exhibit the practices as they work on content.	1	The practice standards are explained in the beginning of the text but it only cites a few examples and does not cite where practices are used throughout the entire text. Problems are presented that allow students to make use of the Mathematical Practices. Problems are presented that allow students to make use of the Mathematical Practices.
6c Particular attention is given to: MP3 - Construct viable arguments and critique the reasoning of others: Students	2	The teacher materials include Standards Practice problems that include constructed response and extended

are encouraged to create and test mathematical arguments, make generalizations and provide justifications, particularly in standards that explicitly call for it, in a manner of reasoning appropriate to the course.		response questions. There are also 4 performance tasks that require students to utilize MP3.
6d Particular attention is given to: MP4 - Model with mathematics: Students should be given opportunities to apply mathematics learned in novel situations, with an appropriate tradeoff between the complexity and novelty of the problem and the newness of the content they are asked to use. Modeling problems should draw heavily from major work of the grade level or securely-held content, integrated across multiple domains/clusters where appropriate. Standards with explicit expectations for modeling are indicated with a star (*).	2	Explorations problems in each section and the 4 performance tasks provided in the teacher materials allow for practice of MP4.
7a Connections are made within a course between clusters and domains, where these connections are appropriate and natural.	2	
7b Materials are vertically coherent with previous courses and these connections are made clear in the materials. Materials include attention to the development of the math practices appropriate to the level of the course.	2	

8a Materials support teachers in ways such as the following: planning(including ideas for pacing), introducing lessons, assessment types, vocabulary.	2	<p>Materials provided:</p> <p>MathXL for School for students and teachers</p> <p>Access to MyMath!ab include:</p> <ul style="list-style-type: none"> Pre built assignments and quizzes, tests and homework Pearson's Instructors Resource Center Instructors manual (includes 3 Common core benchmark tests and EOC test, 4 Common core performance tasks, and Common core standards practice problem sets) Transparencies Test bank Components of cd/DVD Test item file Test generator PowerPoints <p>The publisher has developed material that could prepare students for Common core type assessments.</p>
8b Materials are clear and easy to read for students, teachers, parents. The design and graphics do not distract from the mathematics.	2	
8c. Materials include supports for all learners, e.g., EL, students who are below grade level, advanced students.	0	No evidence is shown for support for all learners.