

# Math Textbook Reviews:

Section 1, August 2014

Publisher: Bedford Freeman Worth W. H. Freeman and Co.

Textbook Title: Rogawski's Calculus for AP, Second Edition

Grade band: High school

Focus Metrics	
A. In any single course, 100% of the content standards are present in the materials for that course	Yes
B. Topics from earlier courses are used to support course-level work. Content from prior courses is clearly indicated as such.	Yes
Does this textbook meet the requirements for focus?	Yes
Justification/Notes: Alignment: The correlation document provided by the publisher has several errors. The textbook however, did have 100% of the AP Calculus Course requirements as set forth by The College Board. Chapter 1 is clearly marked Pre-Calculus review and included material on analysis of graphs required by The College Board. Chapter 12, Hyperbolic functions in Chapter 3 (Lesson 3.9), the Method of Cylindrical Shells in Chapter 6 (Lesson 6.4), Hyperbolic Integrals in Chapter 7 (Lesson 7.4), and Probability and Integration in Chapter 7 (Lesson 7.7) contained material not required by The College Board.	

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: Lessons contain problems to be solved algebraically, with CAS, using a graphing calculator, and by writing explanations. Additional problems labeled Further Insights and Challenges are also provided. At the end of each chapter there are review exercises and a Preparing for the AP Exam section with multiple choice and free response practice problems that would appear on the AP Exam. This textbook met the minimum requirements for rigor	

Using the lessons on the Fundamental Theorem of Calculus (5.3 and 5.4) as an example, there were 108 integration problems to solve with increasing difficulty, 1 CAS problem, 3 writing prompts, 7 proofs, 3 graphing calculator problems, and 2 applications problems.

**Were both non-negotiables in Section I met? Yes**

Optional Additional Comments from Reviewers: n/a

## Section 2

	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.	0	No teacher directed materials that explain the role of the practice standards.
6c Particular attention is given to: MP3 - Construct viable arguments and critique the reasoning of others: Students 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.	1	Writing prompts that ask for justification and explanation could be used to critique the reasoning of others but it would have to be teacher planned and facilitated.

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	
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	2	<p>Materials provided for teachers include –</p> <ul style="list-style-type: none"> <li>• On CD <ul style="list-style-type: none"> <li>○ Art (Diagrams and drawings by chapter)</li> </ul> </li> </ul>

lessons, assessment types, vocabulary.		<ul style="list-style-type: none"> <li>○ Applications Index</li> <li>○ Correlation Guide</li> <li>○ Solution Manual (Complete)</li> <li>○ Teacher's Resource Binder <ul style="list-style-type: none"> <li>▪ Pacing Guide</li> <li>▪ For each lesson <ul style="list-style-type: none"> <li>• Class Time</li> <li>• Key points</li> <li>• Lecture material</li> <li>• Worksheet with solution</li> <li>• Class activities</li> <li>• Suggested problems</li> <li>• Flashcards</li> </ul> </li> </ul> </li> <li>○ ExamView Suite test generator</li> <li>• Hard copy <ul style="list-style-type: none"> <li>○ Teacher's Resource Binder (contents same as the one on CD)</li> <li>○ Test Bank</li> </ul> </li> </ul> <p>The Teacher's Resource binder contains material that will provide teachers with the support they need to be successful.</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	0	No EL material or material for below grade level. Some lessons have further insights and challenges that could provide some above grade level material.

are below grade level, advanced students.		
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