Math Textbook Reviews:

Section 1, August 2014

Publisher: Cengage/National Geographic

Textbook Title: Understanding Basic Statistics
Grade band: High school advanced math

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: Missing standards include S-CP1 (everything is there EXCEPT describing “or” & “and” as “union” or “intersection”), S-IC13 (the point estimators do not include any mention of biased or unbiased, but do evaluate variability) Based on criteria given, the book meets almost all standards. It presents ideas that will have been already addressed without acknowledging that they are review of previous standards. The text seems to underachieve when compared to the TN standards. An example of this is S-ID-2, which includes “Understand…parallel box plots.” While there are two examples of parallel box plots in the text, the emphasis is on simple box plots. However, the standard is emphasizing parallel box plots. While they are mentioned, parallel box plots are not the point of emphasis in the text. S-ID-7 is only addressed in one problem, so it is included as a missing standard. B. We chose to say "yes" to 5. B., because although the previous learning is not identified as such, it is required for the understanding of Statistics standards.	

Rigor Metrics	
A) High quality problems and questions designed to invite exploration and support conceptual understanding and 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
B) 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
C) Students are given opportunity to apply mathematical knowledge and skills for standards that set a clear expectation for modeling. A variety of grade-level appropriate problems provide students the opportunity to apply mathematical models in a variety of contextual situations using knowledge and skills articulated in the standards prior to or during the current course.	Yes
Does this textbook meet the requirements for rigor?	Yes
Justification/Notes:	

B. Procedural problems for fluency will require analysis in Statistics by definition. C.Statistics lends itself to mathematical modeling. Every problem in every lesson requires mathematical modeling.

Were both non-negotiables in Section I met? Yes

Optional Additional Comments from Reviewers:

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 n content and not in isolation.	2	
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 book does not overtly explain the role of the practice standards in the classroom and in student's mathematical development. It does present opportunities for students to make use of and exhibit the practices as they work on content.
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.	2	
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	2	

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 (*).		
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	The idea of materials being vertically coherent to a stats course implies a previous stats course. Although there are previous stats topics taught in earlier math courses(mean, standard deviation, etc), they are addressed at an appropriate level here as well. There is no connection made *per se*, but the delivery is appropriate to the course.
8a Materials support teachers in ways such as the following: planning(including ideas for pacing), introducing lessons, assessment types, vocabulary.	2	
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 seen of any support for all learners.