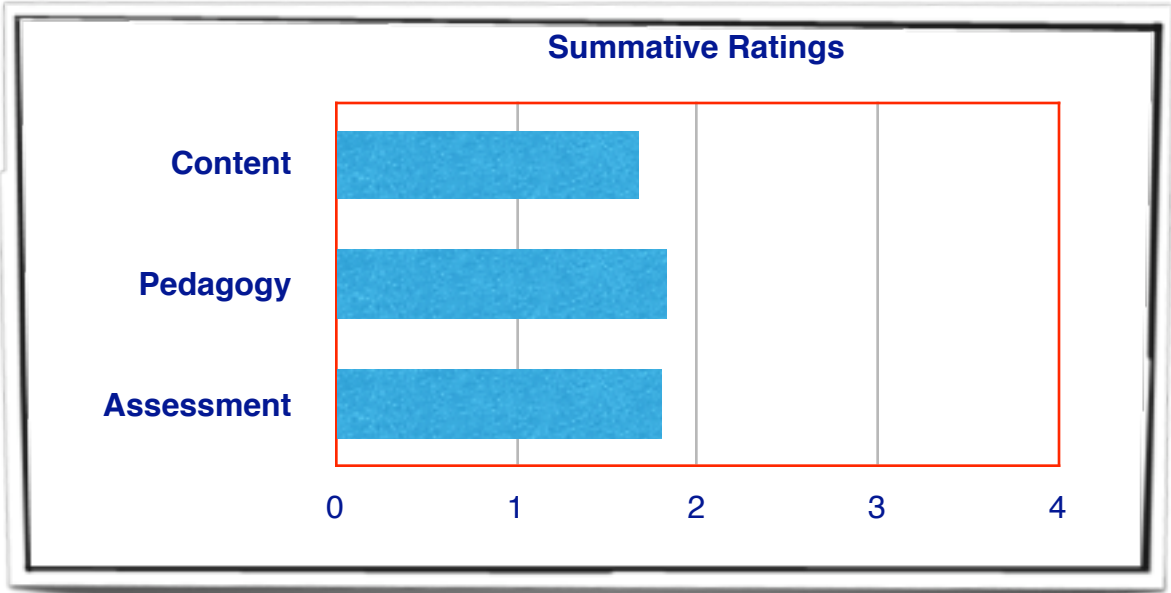


**Curriculum Materials Review
Delaware Mathematics Coalition**

Name:	Holt Algebra I
Authors:	Burger, Kennedy, Leinwand, Seymour, Waits
Publisher:	Holt McDougal
Copyright:	2 nd Edition, 2007



- Not Recommended
- Recommended

□

	Commentary
Rationale	<p>This most recent edition of <i>Holt Algebra I</i> represents a significant departure from the last edition and was judged by our panel as clearly inferior to previous editions. While this series was first conceived of as one in which each lesson would be introduced by an engaging problem, the commitment to that pedagogical scheme has been clearly eroded if not lost altogether in this latest instantiation. This newest edition represents an essentially cynical return to what our panel judged to be perhaps the most traditional of texts we reviewed. There is little or no investment in problem-based learning with most of the material presented in a match-and-mimic format. Exercises with any significant cognitive demand are typically buried near the end of very large problem sets. There is little indication that students are expected to use the mathematics presented to model real world situations. This seems, in sum, a non-apologetic but neither rigorous nor artful return to a rote learning of symbolic manipulations ill-suited, in the estimation of our panel, to engaging many students in the study of significant mathematics.</p>

	Commentary
Content	<p>The review panel judged that <i>Holt Algebra</i> did not even make an attempt to strike a balance between the goals of procedural fluency and conceptual understanding. There was a strong consensus that this represents “a very traditional approach to learning mathematics.” This was summarized by one reviewer in the following observation: “Students are not asked to reflect. Students are not asked to use multiple strategies or representations, but instead they are asked to repeat and practice <i>ad nauseum</i> the strategies presented through the examples.” Wrote another reviewer who has taught from the most recent edition of this text: “Students are presented information and expected to follow the step-by-step instructions. Unfortunately, the problems presented are variations of the examples given in the text. In my opinion, even as a traditional text, the content is presented poorly.” Another observation, perhaps not a surprise, was that there were very few problems presented in context and that it was unlikely that this organization of the content would promote deep connections between mathematical topics.</p>
Pedagogy	<p>Our reviewers had some difficulty finding evidence of a purposeful pedagogy in these materials. Wrote one, “I’m not convinced that concern with pedagogy was contemplated with this text on the part of the authors.” (The fact that a team of eight authors is listed for the series may help explain this lack of pedagogical viewpoint.) Our review panel agreed that the approach is “not investigative” and that there is little attempt to promote a problem-solving approach to the learning of mathematics. The cognitive demand of most problems was judged to be low and those problems that may elicit higher-order thinking are typically buried near the end of very large problem sets. One committee member likened the newest <i>Holt Algebra I</i> text to “the mathematics that was taught 40 years ago” and most agreed that “the text was mostly worked-out examples and practice.” This was seen as extremely problematic because, as another reviewer who has taught out of this text for several years concluded, “the information probably could not be retained by most students, as they are learning ‘rules’ as opposed to connecting ideas.”</p>
Assessment	<p><i>Holt Algebra I</i> features both quizzes and several forms of unit tests for each chapter. Application problems or opportunities for any problem solving, for that matter, seem scarce. The emphasis in these assessments appears to be strictly symbolic in nature. According to one panelist, “while there are loads of practice tests and skills worksheets for one to use to help students master the skills they have learned, I didn’t find any assessment questions which prompted students to make connections or further their understanding of the concepts learned in the unit.” Another panelist comments, “there were no problems that a student could sink his/her teeth into and no transfer tasks that this panelist could find.”</p> <p>The authors do include a performance assessment for the unit, but the consensus among our panel was that there was nothing particularly “performance based” about it. An “Are You Ready?” assessment can be found at the beginning of each chapter. The teacher’s edition provides suggestions for ongoing assessment by making recommendations regarding the questions in the lesson that are related to diagnosing (before the lesson), monitoring (during the lesson) and assessing (a PowerPoint quiz for the lesson). Embedded within each unit is a “Ready to Go On?” quiz, and the end of the unit includes a study review which includes more examples and exercises, a chapter test, a college entrance practice exam, a standardized test prep, and a “test tackler section.” The text comes with a CD that allows one to choose multiple choice or free response questions.</p>

	Commentary
Support	<p>The Holt curriculum is set up in an “introduce,” “teach,” and “summarize” format. Lessons come with a PowerPoint slideshow that includes all components of the lesson including the warm up problems, examples (and even additional examples), and a quiz to go with the lesson. The main pedagogical focus of the lessons seems to be a “show and tell” mode of learning. Lessons also include “scaffolding questions” and solutions for problems. In general, the authors don’t appear to acknowledge the value of multiple solution strategies. The lesson is introduced with a set of worked out examples, followed by a couple of “check it out” practice problems which precede a set of exercises.</p> <p>The teacher’s guide includes prompts for how to “guide the instruction,” potential graphic organizers (in fact there is an entire resource devoted to organizers), journal prompts, as well as alternative assessment prompts. As with many publishers, there are a host of additional resources that go with the book including reading strategy masters, re-teaching masters, problem solving masters, and even a challenge master. Each lesson is preceded by a lesson objective and students can access the unit online. The book also includes intervention questions, a “reaching all learners” prompt, and teaching tips related to technology and number sense skills. All of these resources also seem to be available online and on the CDs that come with the program. There are also tutorial videos for the units. They involve watching someone doing more examples for you.</p>
Organization	<p>Holt Algebra I was judged by our panel to be the most traditional of curriculum resources and this applies to the organization of the materials as well. As one panel member observed, this text is very similar, when one overlooks the elaborate “support” materials, to texts published nearly 40 years ago. In a retrograde motion from earlier editions, no doubt in the hope of capturing more “market share,” the publishers have reorganized these materials in a regression to the mean of the familiar. It moves through the very familiar trajectory of expressions to equations (one-step, two-step, multi-step) to inequalities (one-step, two-step, multi-step) to linear functions in all their forms, to polynomials and an entire chapter on factorization before an introduction to quadratic functions. The irony, of course, is that this organization of an algebra text, with most of the emphasis on learning the grammar of algebra, and little on the actual application of the language, has not proved successful for many of our students for far too many years.</p>