



California Open Online Library for Education & Accessibility

COOL4Ed (the California Open Online Library for Education) was created so that faculty can easily find, adopt, utilize, review and/or modify free and open etextbooks for little or no cost. The COOL4Ed accessibility open textbook evaluations can inform faculty, staff, and students how the free and open etextbooks meet 15 accessibility “checkpoints” that could impact the learning of learners with a range of disabilities.

SUMMARY OF ACCESSIBILITY EVALUATION:

Textbook: Precalculus

Format of Textbook: PDF

Assistive Technology (AT) Evaluation Score: Overall	6.2 (Maximum score = 10)
<p>Assistive Technologies (AT) Evaluations applies specialized tools and software in the accessibility evaluation process. These specialized assistive technologies, see list below, are typically not used or available by the general public into the accessibility evaluation process.</p> <ul style="list-style-type: none"> • Accessibility features of desktop operating systems (e.g. high-contrast display themes, settings from the Keyboard and Mouse control panels) • Accessibility-related software included with desktop operating systems (e.g. VoiceOver, Microsoft Narrator) • Third-party accessibility software and hardware: • Screen readers (e.g. JAWS, Window Eyes) • Magnification software (e.g. ZoomText Magnifier/Reader, MAGIC Pro with Speech) • Reading software for users with learning disabilities (e.g. Read and Write Gold, Kurzweil 3000) • Refreshable Braille displays 	
Non- Assistive Technology (NAT) Evaluation Score: Overall	6.1 (Maximum score =10)
<p>Non-Assistive Technologies (NAT) Evaluations applies only native or basic tools and software such as the keyboard and Narrator in the accessibility evaluation process. These non-assistive technologies are readily available and used by the general public.</p>	



COOL4Ed Accessibility Evaluation Methods:

The California State University [Accessible Technology Initiative](#) and [MERLOT](#) (Multimedia Educational Resources for Learning and Online Teaching) developed the rubric or “checkpoints” for the accessibility evaluation. [CAST](#), a nationally recognized organization with expertise in accessibility and UDL, reviewed and affirmed the appropriateness and value of the accessibility evaluation rubric and contributed the references and support resources to help people learn how best to design, evaluate, and remediate the learning materials to maximize the accessibility of the learning resources for all. The “checkpoints” have been built upon the Section 508 technical standards and has been organized and tailored to the typical characteristics of digital resources used in higher education courses.

The accessibility evaluations were performed by the [Center for Usability in Design and Accessibility](#) at California State University, Long Beach; faculty and graduate students with expertise in human factors, usability, and accessibility performed the evaluations of over 150 free and open etextbooks. COOL4ed.org has published the accessibility evaluation rubric and provides a detailed description of the methodology used to evaluate the accessibility of the etextbooks in COOL4ed.

LOOKING FOR DETAILED ACCESSIBILITY REPORTS?

[See Detailed Accessibility Evaluation Report using Assistive Technologies](#)

[See Detailed Accessibility Evaluation Report using Non-Assistive Technologies](#)



DETAILED ACCESSIBILITY EVALUATION REPORT using Assistive Technologies

Assistive Technologies (AT) Evaluations applies specialized tools and software in the accessibility evaluation process. These specialized assistive technologies, such as Kurzweil and NVDA, are typically not used or available by the general public into the accessibility evaluation process.

1. Accessibility Documentation

A. The organization providing the online materials has a formal accessibility policy.	Fail
Additional Information:	Did not find any information about Merlot's formal accessibility policy.
B. The organization providing the online materials has an accessibility statement.	Fail
Additional Information:	Did not find any information about Merlot's accessibility statement.
C. An Accessibility Evaluation Report is available from an external organization.	Fail
Additional Information:	Did not find any information about Merlot's accessibility evaluation report.

2. Text Access

A. The text of the digital resource is available to assistive technology that allows the user to enable text-to-speech (TTS) functionality.	Fail
Additional Information:	2/5 pages had proper text to speech capabilities (Pg. 13, 210). The content was read in a logical order with no information skipped. However, the remaining 3 pages had figures, graphs, and equations that were skipped and not read properly, which made it difficult for the reader to follow along with the NVDA reader (Pg. 17, 215, 712).



3. Text Adjustment

A. Text is compatible with assistive technology.	Pass
Additional Information:	5/5 pages were able to properly adjust font size (pg. 27, 201, 722, 886, 902). However, the reader had to horizontally scroll in order to read all of the content on the screen.
B. The resource allows the user to adjust the font size and font/background color (or is rendered by an application such as a browser, media player, or reader) that offers this functionality).	Pass
Additional Information:	3/5 pages had proper adjustment of font and background colors (Pg. 173, 230, 334). The remaining 2 pages (Pg. 15, 248) had content that was able to properly adjust colors but it also had content with a gray background that remained the same while the text within the gray area turned green, which made it difficult to read.

4. Reading Layout

A. Text of the digital resource is compatible with assistive technology that allows the user to reflow the text by specifying the margins and line spacing (or is rendered by an application such as a browser, media player, or reader that offers this functionality).	Pass
Additional Information:	5/5 pages had proper reflow of text (Pg. 27, 201, 722, 886, 902), but it is because the text did not readjust when zoomed in or out. The layout of the text remained the same.
B. If the digital resource is an electronic alternative to printed materials, the page numbers correspond to the printed material.	N/A
Additional Information:	No printed version available.



5. Reading Order

<p>A. The reading order for digital resource content logically corresponds to the visual layout of the page when rendered by assistive technology.</p>	<p>Pass</p>
<p>Additional Information:</p>	<p>5/5 pages had proper reading order (Pg. 13, 17, 210, 215, 712). Despite having content that was skipped, the reading order of the textbook was still correct. The textbook was still read in a logical order that even though content was skipped, the reader would still be able to know where they are in the textbook.</p>

6. Structural Markup/Navigation

<p>A. The text of the digital resource includes markup (e.g. tags or styles) that allows for navigation by key structural elements (chapters, headings, pages) using assistive technology (or is rendered by an application such as a browser, media player, or reader that offers this functionality).</p>	<p>Fail</p>
<p>Additional Information:</p>	<p>21/54 pages had text that was properly navigable using the NVDA reader hotkeys (Pg. 10(2), 14(9), 200(5), 905(5)). These were hyperlinks within the text and were navigable using the hotkeys. The remaining 33 pages had headers, lists, and tables that were not properly navigable using the hotkeys (Pg. 13-22, 218-221, 313-323).</p>
<p>B. The text of the digital resource includes markup for bullets and numbered lists that is compatible with assistive technology (or is rendered by an application such as a browser, media player, or reader that offers this functionality).</p>	<p>Fail</p>
<p>Additional Information:</p>	<p>0/10 lists were properly navigable using the NVDA hotkeys (Pg. 13-19, 200, 313, 764(2), 771). The NVDA reader stated that there was "no next list/item."</p>



<p>C. If the text of the digital resource is delivered within an ebook reader application, a method is provided that allows users to bypass the reader interface and move directly to the text content that is compatible with assistive technology.</p>	<p>N/A</p>
<p>Additional Information:</p>	<p>Not using eReader application.</p>

7. Tables

<p>A. Data tables include markup (e.g. tags or styles) that identifies row and column headers in a manner that is compatible with assistive technology (or are rendered by an application such as a browser, media player, or reader that offers this functionality).</p>	<p>Fail</p>
<p>Additional Information:</p>	<p>0/10 tables were properly navigable using the NVDA hotkeys (Pg. 15, 26, 49(2), 50(2), 51, 315(2), 813). The NVDA reader would read the tables as if there were no cells that separated the sections of the table, it read it as if it was normal text. The NVDA reader would state "no next table" when the table hotkey was pressed.</p>

8. Hyperlinks

<p>A. In-book links take you to a location within the textbook. For example, the table of contents would be considered in-book links and embedded links take you to the correct location in the book.</p>	<p>Pass</p>
<p>Additional Information:</p>	<p>30/30 within book hyperlinks functioned properly (Pg. 3-27(16), 200(5), 304(4), 518(5)).</p>
<p>B. Live hyperlinks take you to any website or webpages external to the book.</p>	<p>Pass</p>
<p>Additional Information:</p>	<p>18/20 live hyperlinks functioned properly (Pg. 10-23(7), 201, 722, 804, 886, 902(2), 903, 905(4)). The remaining 2 hyperlinks were links to websites that</p>



	could not be reached or the website was moved to another website (Pg. 904, 905). 16/20 hyperlinks had proper descriptions of where the links are connected to online (Pg. 13-23(5), 201, 722, 804, 886, 902(2), 903, 905(4)). The remaining 4 links (Pg. 10(2), 904, 905) were labeled as URLs.
C. Live links take you to the correct webpage that is functioning properly.	Pass
Additional Information:	18/20 live hyperlinks functioned properly (Pg. 10-23(7), 201, 722, 804, 886, 902(2), 903, 905(4)). The remaining 2 hyperlinks were links to websites that could not be reached or the website was moved to another website (Pg. 904, 905).
D. Live links are descriptive enough for the users to know where it should take them.	Pass
Additional Information:	16/20 hyperlinks had proper descriptions of where the links are connected to online (Pg. 13-23(5), 201, 722, 804, 886, 902(2), 903, 905(4)). The remaining 4 links (Pg. 10(2), 904, 905) were labeled as URLs.

9. Color and Contrast

A. All information within the material that is conveyed using color is also available in a manner that is compatible with those that do not perceive color, and information conveyed by color is also conveyed in other ways.	Pass
Additional Information:	54/54 pages had consistent color redundancy of headers, text, and links (Pg. 1-20, 200-220, 200-520). Headers and text were consistently black against a white or gray background and links were consistently blue against a white background.
B. Information is conveyed from the sub-categories for contrast.	Pass
Additional Information:	54/54 pages had headers with proper color contrast (Pg. 1-20, 200-220, 500-520). Headers were black against a white background. 54/54 pages had text with proper color contrast (Pg. 1-20, 200-220, 500-



	520). Text was black against a white background. 54/54 pages had simple images with proper color contract (Pg. 1-20, 200-220, 500-520). Simple images were black and white.
C. Contrast for headers passed WCAG AA standards for large texts (contrast ratio 3:1).	Pass
Additional Information:	54/54 pages had headers with proper color contrast (Pg. 1-20, 200-220, 500-520). Headers were black against a white background.
D. Contrast for text passed WCAG AA standards for normal texts (contrast ratio of 4.5:1).	Pass
Additional Information:	54/54 pages had text with proper color contrast (Pg. 1-20, 200-220, 500-520). Text was black against a white background.
E. Contrast for simple images (for example, images of atoms) passed WCAG AA standards (contrast ratio of 4.5:1).	Pass
Additional Information:	54/54 pages had simple images with proper color contract (Pg. 1-20, 200-220, 500-520). Simple images were black and white.

10. Language

A. The text of the digital resource includes markup that declares the language of the content in a manner that is compatible with assistive technology.	N/A
Additional Information:	Do not have Adobe Pro/Complete version.
B. If the digital resource includes passages in a foreign language, these passages include markup that declares the language in a manner that is compatible with assistive technology.	N/A
Additional Information:	Do not have Adobe Pro/Complete version.



11.Images

<p>A. Non-decorative images have alternative text that is compatible with assistive technology (or is rendered by an application such as a browser, media player, or reader that offers this functionality).</p>	<p>Fail</p>
<p>Additional Information:</p>	<p>0/109 pages had images that were properly described by the NVDA reader (Pg. 1-50, 200-220, 300-320, 500-520, 700-900). The images themselves were skipped or only the numbers in the images were read aloud. When only the numbers were read aloud, it was as if the numbers were not a part of an image.</p>
<p>B. Decorative images are marked with null alternate text or contain markup that allows them to be ignored by assistive technology.</p>	<p>N/A</p>
<p>Additional Information:</p>	<p>No decorative images found.</p>
<p>C. Complex images, charts, and graphs have longer text descriptions that are compatible with assistive technology (or are rendered by an application such as a browser, media player, or reader) that offers this functionality).</p>	<p>Fail</p>
<p>Additional Information:</p>	<p>0/109 pages had images that were properly described by the NVDA reader (Pg. 1-50, 200-220, 300-320, 500-520, 700-900). The images themselves were skipped or only the numbers in the images were read aloud. When only the numbers were read aloud, it was as if the numbers were not a part of an image.</p>

12.Multimedia

<p>A. A synchronized text track (e.g. open or closed captions) is provided with all video content.</p>	<p>N/A</p>
<p>Additional Information:</p>	<p>No multimedia content found.</p>
<p>B. A transcript is provided with all audio content.</p>	<p>N/A</p>



Additional Information:	No multimedia content found.
C. Audio/video content is delivered via a media player that is compatible with assistive technology. This includes support for all criteria listed in Section 15 below.	N/A
Additional Information:	No multimedia content found.

13.Flickering

A. The digital resource content does not contain anything that flashes more than three times in any one-second period.	Pass
Additional Information:	No flickering content.

14.Science, Technology, Engineering, and Math (STEM)

A. STEM figures have appropriate markup that indicates that the image is a figure.	Fail
Additional Information:	0/10 figures had proper markup (Pg. 16(3), 17(2), 112, 221, 736, 849(2)). The figures were not labeled as figures.
B. STEM graphs have appropriate markup that indicates that the image is a graph.	Fail
Additional Information:	0/10 graphs had proper markup (Pg. 19(2), 20(2), 112, 215(2), 512, 517, 712). Graphs were not labeled as graphs or figures.
C. STEM equations have appropriate markup that indicates that the image is an equation.	Pass
Additional Information:	10/10 equations had proper markup (Pg. 14(4), 15, 16(2), 200, 215, 313). Equations were all visible and were not blacked out.
D. STEM tables have appropriate markup that indicates the image is a table.	Fail
Additional Information:	0/10 tables had proper markup (Pg. 15, 26, 49(2), 50(2), 51, 315(2), 813). The tables were not navigable



	using the NVDA hotkeys because they were not labeled.
E. STEM figures have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.	Fail
Additional Information:	0/10 figures had proper notation markup (Pg. 16(3), 17(2), 112, 221, 736, 849(2)). When read aloud by the NVDA reader, the figures were not described in detail, and if the figures had captions, only the captions were read aloud. However, the captions still did not contain enough information to properly describe what the figures contained.
F. STEM graphs have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.	Fail
Additional Information:	0/10 graphs had proper notation markup (Pg. 19(2), 20(2), 112, 215(2), 512, 517, 712). When read aloud by the NVDA reader, the graphs were not described in detail, and if the graphs had captions, only the captions were read aloud. However, the captions still did not contain enough information to properly describe what the graphs contained.
G. STEM equations have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.	Fail
Additional Information:	0/10 equations had proper notation markup (Pg. 14(4), 15, 16(2), 200, 215, 313). Equations were not read properly. Variables were read with different letters, division signs were skipped, less than and greater than signs were skipped, negative signs were skipped, infinity signs were read as "1", subtraction signs were skipped, exponents were read as regular numbers, and sometimes the reader cannot figure out what is being read in the equations.



H. Assistive technology used can access the content from the STEM tables.	Fail
Additional Information:	0/10 tables were properly navigable using the NVDA hotkeys (Pg. 15, 26, 49(2), 50(2), 51, 315(2), 813). The NVDA reader would read the tables as if there were no cells that separated the sections of the table, it read it as if it was normal text. The NVDA reader would state "no next table" when the table hotkey was pressed.

15. Interactive Elements

A. Each interactive element (e.g. menu, hyperlink, button) and function (e.g. annotations) allows keyboard-only operation both with and without assistive technology.	N/A
Additional Information:	No interactive elements found.
B. Each interactive element conveys information to assistive technology regarding the element's name, type, and status (e.g. "Play, button, selected").	N/A
Additional Information:	No interactive elements found.
C. All instructions, prompts, and error messages necessary to complete forms are conveyed as text to assistive technology (or are rendered by an application such as a browser, media player, or reader that offers this functionality).	N/A
Additional Information:	No interactive elements found.



DETAILED ACCESSIBILITY EVALUATION REPORT using Non-Assistive Technologies

Non-Assistive Technologies (NAT) Evaluations applies only native or basic tools and software such as the keyboard and Narrator in the accessibility evaluation process. These non-assistive technologies are readily available and used by the general public.

1. Accessibility Documentation

A. The organization providing the online materials has a formal accessibility policy.	Fail
Additional Information:	No content found.
B. The organization providing the online materials has an accessibility statement.	Fail
Additional Information:	No content found.
C. An Accessibility Evaluation Report is available from an external organization.	Fail
Additional Information:	No content found.

2. Text Access

A. The text of the digital resource is available to assistive technology that allows the user to enable text-to-speech (TTS) functionality.	Pass
Additional Information:	Pgs 30-40 were checked. The text is available to be used by assistive technology. The text-to-speech functionality allows users to hear each page being read in a top-down, left-to-right fashion. However, special characters in formulas/equations discernable by Adobe Read Out Loud (see pg 32).

3. Text Adjustment

A. Text is compatible with assistive technology.	Pass
Additional Information:	Pgs 30-40 were checked. Text reflows with size adjustment. However, when reflow option is



	selected the text becomes condensed so as to remove any spaces between words.
B. The resource allows the user to adjust the font size and font/background color (or is rendered by an application such as a browser, media player, or reader) that offers this functionality).	Pass
Additional Information:	Pgs 30-40 were checked. The document successfully supports adjustment of text color when using a black background and green text. However, not all graphs change to the change to the designated colors (see pg 33-35).

4. Reading Layout

A. Text of the digital resource is compatible with assistive technology that allows the user to reflow the text by specifying the margins and line spacing (or is rendered by an application such as a browser, media player, or reader that offers this functionality).	Pass
Additional Information:	Pgs 30-40 were checked. Text reflows with zoom. However, when reflow option is selected the text becomes condensed so as to remove any spaces between words.
B. If the digital resource is an electronic alternative to printed materials, the page numbers correspond to the printed material.	N/A
Additional Information:	Need additional information. We do not have printed material to compare it too.

5. Reading Order

A. The reading order for digital resource content logically corresponds to the visual layout of the page when rendered by assistive technology.	Pass
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Additional Information:	Pgs 200-220 were checked. While the reading order for paragraphs was executed in a logical fashion, the manner in which graphs were read was not easily understood (see pg 203).
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6. Structural Markup/Navigation

A. The text of the digital resource includes markup (e.g. tags or styles) that allows for navigation by key structural elements (chapters, headings, pages) using assistive technology (or is rendered by an application such as a browser, media player, or reader that offers this functionality).	Fail
Additional Information:	No method provided that allows user to bypass sections of text. The tagged PDF, Title, Bookmarks, and Headings all failed using the accessibility checker.
B. The text of the digital resource includes markup for bullets and numbered lists that is compatible with assistive technology (or is rendered by an application such as a browser, media player, or reader that offers this functionality).	Fail
Additional Information:	No markups found. The Tagged PDF, Title, Bookmarks, and Headings all failed.
C. If the text of the digital resource is delivered within an ebook reader application, a method is provided that allows users to bypass the reader interface and move directly to the text content that is compatible with assistive technology.	N/A
Additional Information:	No additional eReader used.

7. Tables

A. Data tables include markup (e.g. tags or styles) that identifies row and column headers	Fail
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<p>in a manner that is compatible with assistive technology (or are rendered by an application such as a browser, media player, or reader that offers this functionality).</p>	
<p>Additional Information:</p>	<p>Pgs 226-232 were checked. Using the accessibility checker, the rows, TH and TD, headers and regularity all failed. Manual check with Read Out Loud separated and read tables by row, left-to-right, top-down. Special characters such as "-" were not identified by the text-to-speech function.</p>

8. *Hyperlinks*

<p>A. In-book links take you to a location within the textbook. For example, the table of contents would be considered in-book links and embedded links take you to the correct location in the book.</p>	<p>Pass</p>
<p>Additional Information:</p>	<p>Within book links in the Table of Contents work and navigation links passed the Accessibility Check.</p>
<p>B. Live hyperlinks take you to any website or webpages external to the book.</p>	<p>Pass</p>
<p>Additional Information:</p>	<p>20/20 live links worked. Pgs 160-248 were checked.</p>
<p>C. Live links take you to the correct webpage that is functioning properly.</p>	<p>Pass</p>
<p>Additional Information:</p>	<p>20/20 live links worked. Pgs 160-248 were checked.</p>
<p>D. Live links are descriptive enough for the users to know where it should take them.</p>	<p>Fail</p>
<p>Additional Information:</p>	<p>3/20 live links had a description. Pgs 160-248. There is a mix of url and single word descriptions (ex. "Augustin Cauchy" and ""paper" on pg 269, "website" and "http://www.ohiobiz.com/census/Lake.pdf on pg 230, "Ruffini" and "Horner" on pg 258, and "Rene Descartes" on pg 273, "here" and "page" on pg 274. Only a few of the links found had adequate</p>



	description "Bureau of Transportation Statistics" on pg 166 and 201).
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9. Color and Contrast

A. All information within the material that is conveyed using color is also available in a manner that is compatible with those that do not perceive color, and information conveyed by color is also conveyed in other ways.	Pass
Additional Information:	Pgs 300-360 were checked. Different font sizes and types were used. Chapter headings were larger when compared to subheadings. Body paragraph text was smallest overall, with italics and bold used to emphasize. However, within book links cannot be identified by something other than color.
B. Information is conveyed from the sub-categories for contrast.	Pass
Additional Information:	Overall score
C. Contrast for headers passed WCAG AA standards for large texts (contrast ratio 3:1).	Pass
Additional Information:	Pgs 300-360 were checked. Large chapter headings passed with a ratio of 21.0:1.
D. Contrast for text passed WCAG AA standards for normal texts (contrast ratio of 4.5:1).	Pass
Additional Information:	Pgs 300-360 were checked. The text was above the ratio 20.5:1.
E. Contrast for simple images (for example, images of atoms) passed WCAG AA standards (contrast ratio of 4.5:1).	Pass
Additional Information:	Pgs 100-900 were checked. Simple images passed with a ratio of 21.0:1 (see pg 165), 7.33:1 (see pg 496) and 10.46:1 (see pgs 556, 642), 9.29:1 (see pg 837).



10. Language

<p>A. The text of the digital resource includes markup that declares the language of the content in a manner that is compatible with assistive technology.</p>	<p>Fail</p>
<p>Additional Information:</p>	<p>Using the accessibility checker the primary language failed.</p>
<p>B. If the digital resource includes passages in a foreign language, these passages include markup that declares the language in a manner that is compatible with assistive technology.</p>	<p>Fail</p>
<p>Additional Information:</p>	<p>Using the accessibility checker the primary language failed.</p>

11. Images

<p>A. Non-decorative images have alternative text that is compatible with assistive technology (or is rendered by an application such as a browser, media player, or reader that offers this functionality).</p>	<p>Fail</p>
<p>Additional Information:</p>	<p>Pgs 165, 496, 556, 642, 837 were checked. The text offered descriptions but they were included in the paragraph text, not directly below the image. Accessibility Checker failed figures and alternate text.</p>
<p>A. Decorative images are marked with null alternate text or contain markup that allows them to be ignored by assistive technology.</p>	<p>N/A</p>
<p>Additional Information:</p>	<p>No content found.</p>
<p>B. Complex images, charts, and graphs have longer text descriptions that are compatible with assistive technology (or are rendered by an application such as a browser, media player, or reader) that offers this functionality).</p>	<p>Fail</p>



Additional Information:	Only two complex images found (see pgs 556, 642). However, description for either of these is not adequate. Accessibility Checker failed figures and alternate text.
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12.Multimedia

A. A synchronized text track (e.g. open or closed captions) is provided with all video content.	N/A
Additional Information:	No content found.
B. A transcript is provided with all audio content.	N/A
Additional Information:	No content found.
C. Audio/video content is delivered via a media player that is compatible with assistive technology. This includes support for all criteria listed in Section 15 below.	N/A
Additional Information:	No content found.

13.Flickering

A. The digital resource content does not contain anything that flashes more than three times in any one-second period.	Pass
Additional Information:	Pgs 4-14 were checked. No flickering content was observed. Using the accessibility checker, screen flicker passed.

14.Science, Technology, Engineering, and Math (STEM)

A. STEM figures have appropriate markup that indicates that the image is a figure.	Fail
Additional Information:	0/10 were appropriately described (see pgs 76, 77, 78, 79, 81, 82). Overall, figures failed to have appropriate descriptions. Figures do not have descriptions or tags. Read Out Loud did not recognize some of the characters in the equation.



<p>B. STEM graphs have appropriate markup that indicates that the image is a graph.</p>	<p>Fail</p>
<p>Additional Information:</p>	<p>0/10 were properly described (see pgs 104, 105, 106, 109, 110, 112, 113, 114). Overall graphs were not properly marked up with appropriate descriptions. A description was not available. Read Out Loud did not give a coherent read of the graph. Often the graphs were completely skipped over (see pg 105).</p>
<p>C. STEM equations have appropriate markup that indicates that the image is an equation.</p>	<p>Fail</p>
<p>Additional Information:</p>	<p>0/10 equations contained a description. There are equations found in every part of the book, some being examples and others being practice problems. No descriptions available. Read Out Loud function read from left-to-right, top-down. However, not all the characters were read correctly.</p>
<p>D. STEM tables have appropriate markup that indicates the image is a table.</p>	<p>Fail</p>
<p>Additional Information:</p>	<p>0/10 tables contained a description of the table (see pgs 120, 122, 123, 129, 231). No descriptions available. Read Out Loud function read from left-to-right, top-down. However, not all the characters were read correctly.</p>
<p>E. STEM figures have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.</p>	<p>Fail</p>
<p>Additional Information:</p>	<p>0/10 were appropriately described (see pgs 76, 77, 78, 79, 81, 82). Overall, figures failed to have appropriate descriptions. Figures do not have descriptions or tags. Read Out Loud did not recognize some of the characters in the equation.</p>
<p>F. STEM graphs have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.</p>	<p>Fail</p>



Additional Information:	0/10 were properly described (see pgs 104, 105, 106, 109, 110, 112, 113, 114). Overall graphs were not properly marked up with appropriate descriptions. A description was not available. Read Out Loud did not give a coherent read of the graph. Often the graphs were completely skipped over (see pg 105).
G. STEM equations have appropriate notation markup that conveys both the notation (presentation) and meaning (semantics) of the STEM content.	Fail
Additional Information:	0/10 equations contained a description. There are equations found in every part of the bok, some being examples and others being practice problems. No descriptions available. Read Out Loud function read from left-to-right, top-down. However, not all the characters were read correctly.
H. Assistive technology used can access the content from the STEM tables.	Fail
Additional Information:	0/10 tables contained a description of the table (see pgs 120, 122, 123, 129, 231). No descriptions available. Read Out Loud function read from left-to-right, top-down. However, not all the characters were read correctly.

15. Interactive Elements

A. Each interactive element (e.g. menu, hyperlink, button) and function (e.g. annotations) allows keyboard-only operation both with and without assistive technology.	N/A
Additional Information:	No Interactive Elements Present.
B. Each interactive element conveys information to assistive technology regarding the element's name, type, and status (e.g. "Play, button, selected").	N/A
Additional Information:	No Interactive Elements Present.



C. All instructions, prompts, and error messages necessary to complete forms are conveyed as text to assistive technology (or are rendered by an application such as a browser, media player, or reader that offers this functionality).	N/A
Additional Information:	No Interactive Elements Present.

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