

Apple Accessibility Conformance Report

Based on Voluntary Product Accessibility Template® (VPAT®)

Name of Product: Numbers 4.1 for iOS

Product Description: A spreadsheet application for iPhone, iPad, and iPod Touch.

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Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criteria without known defects or meets with equivalent facilitation.
- **Supports with Exceptions:** Some functionality of the product does not meet the criteria.
- **Does Not Support:** Majority of functionality of the product does not meet the criteria.
- **Not Applicable:** The criteria are not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criteria. This can be used only with WCAG 2.0 Level AAA.

WCAG 2.0 Report -

Table 1: Conformance Criteria, Level A -

Criteria	Conformance Level	Remarks and Explanations
1.1.1 Non-text Content: All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except in situations listed in WCAG 2.0 1.1.1.	Supports with exceptions	Numbers provides the ability for spreadsheet authors to include text alternatives for non-text content and that content will be read by VoiceOver; however, it is up to spreadsheet authors to provide this content.
1.2.1 Audio-only and Video-only (Prerecorded): For prerecorded audio-only and prerecorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labeled as such: <ul style="list-style-type: none">• Prerecorded Audio-only: An alternative for time-based media is provided that presents equivalent information for prerecorded audio-only content.• Prerecorded Video-only: Either an alternative for time-based media or an audio track is provided that presents equivalent information for prerecorded video-only content.	Supports with exceptions	It is up to content producers to follow accessibility best practices for media. Numbers supports the pass-through of closed-captioned audio and video descriptions in industry-standard formats.
1.2.2 Captions (Prerecorded): Captions are provided for all prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such.	Supports with exceptions	It is up to content producers to follow accessibility best practices for media. Numbers supports the pass-through of closed-captioned audio and video descriptions in industry-standard formats.

Criteria	Conformance Level	Remarks and Explanations
1.2.3 Audio Description or Media Alternative (Prerecorded): An alternative for time-based media or audio description of the prerecorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such.	Supports with exceptions	It is up to content producers to follow accessibility best practices for media. Numbers supports the pass-through of closed-captioned audio and video descriptions in industry-standard formats.
1.3.1 Info and Relationships: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.	Supports	
1.3.2 Meaningful Sequence: When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined.	Supports	
1.3.3 Sensory Characteristics: Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound.	Supports with exceptions	It is up to spreadsheet authors to follow accessibility best practices; however, iOS provides many alternatives for communicating sensory information, including color filters for conveying color information, labeling of on/off toggles, and increased contrast for distinguishing foreground and background colors.
1.4.1 Use of Color: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports with exceptions	It is up to spreadsheet authors to follow accessibility best practices for the appropriate use of color in their documents; however, iOS provides many alternatives for conveying color information, labeling of on/off toggles, and increased contrast for distinguishing foreground and background colors.
1.4.2 Audio Control: If any audio on a Web page plays automatically for more than 3 seconds, either a mechanism is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level.	Supports	Numbers exposes standard iOS media controls which allow the user to turn off audio that is playing in their documents independently from the system audio level.

Criteria	Conformance Level	Remarks and Explanations
2.1.1 Keyboard: All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints.	Supports	
2.1.2 No Keyboard Trap: If keyboard focus can be moved to a component of the page using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys or other standard exit methods, the user is advised of the method for moving focus away.	Supports	
2.2.1 Timing Adjustable: For each time limit that is set by the content, at least one of the instances in WCAG 2.0 2.2.1 is true.	Supports	

Criteria	Conformance Level	Remarks and Explanations
<p>2.2.2 Pause, Stop, Hide: For moving, blinking, scrolling, or auto-updating information, all of the following are true:</p> <ul style="list-style-type: none"> • Moving, blinking, scrolling: For any moving, blinking or scrolling information that (1) starts automatically, (2) lasts more than five seconds, and (3) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it unless the movement, blinking, or scrolling is part of an activity where it is essential; and • Auto-updating: For any auto-updating information that (1) starts automatically and (2) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it or to control the frequency of the update unless the auto-updating is part of an activity where it is essential. 	Supports	
<p>2.3.1 Three Flashes or Below Threshold: Web pages do not contain anything that flashes more than three times in any one second period, or the flash is below the general flash and red flash thresholds.</p>	Supports	
<p>2.4.1 Bypass Blocks: A mechanism is available to bypass blocks of content that are repeated on multiple Web pages.</p>	Supports	
<p>2.4.2 Page Titled: Web pages have titles that describe topic or purpose.</p>	Supports with exceptions	It is up to spreadsheet authors to title their documents appropriately.
<p>2.4.3 Focus Order: If a Web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability.</p>	Supports	

Criteria	Conformance Level	Remarks and Explanations
2.4.4 Link Purpose (In Context): The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general.	Supports with exceptions	It is up to spreadsheet authors to provide appropriate link text that accurately describes the purpose of the link.
3.1.1 Language of Page: The default human language of each Web page can be programmatically determined.	Supports	
3.2.1 On Focus: When any component receives focus, it does not initiate a change of context. (Level A)	Supports	iOS does not change context when an item receives focus. VoiceOver's gesture require the user to perform a double tap to activate.
3.2.2 On Input: Changing the setting of any user interface component does not automatically cause a change of context unless the user has been advised of the behavior before using the component.	Supports	iOS provides an option to speak hints about an item, and the results of an action, when the user navigates to that item.
3.3.1 Error Identification: If an input error is automatically detected, the item that is in error is identified and the error is described to the user in text.	Supports	iOS honors errors and alerts, moves focus to the error/alert, and speaks the description of the error/alert.
3.3.2 Labels or Instructions: Labels or instructions are provided when content requires user input.	Supports	iOS programmatically ties the description of the adjoining label to the description of the input control. If no visible label exists, the assistive technology can programmatically determine and speak the appropriate type of input.
4.1.1 Parsing: In content implemented using markup languages, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and any IDs are unique, except where the specifications allow these features.	Supports	In iOS, the UIKit software framework provides assistive technology with the following for all elements: boundaries, attributes, unique identifiers, and descriptions.

Criteria	Conformance Level	Remarks and Explanations
4.1.2 Name, Role, Value: For all user interface components (including but not limited to: form elements, links and components generated by scripts), the name and role can be programmatically determined; states, properties, and values that can be set by the user can be programmatically set; and notification of changes to these items is available to user agents, including assistive technologies.	Supports	In iOS, the UIKit software framework provides assistive technology with the following for all elements: boundaries, attributes, unique identifiers, and descriptions.

Table 2: Conformance Criteria, Level AA -

Criteria	Conformance Level	Remarks and Explanations
1.2.4 Captions (Live): Captions are provided for all live audio content in synchronized media.	Supports with exceptions	iOS supports video media with closed-captioned audio and video text descriptions provided in industry standard formats. It is up to content authors to provide audio or video text descriptions in their content.
1.2.5 Audio Description (Prerecorded): Audio description is provided for all prerecorded video content in synchronized media.	Supports with exceptions	iOS supports the pass-through of closed-captioned video and video descriptions in industry-standard formats. It is up to content authors to provide audio descriptions for their prerecorded video content.

Criteria	Conformance Level	Remarks and Explanations
<p>1.4.3 Contrast (Minimum): The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, except for the following:</p> <ul style="list-style-type: none"> • Large Text: Large-scale text and images of large-scale text have a contrast ratio of at least 3:1; • Incidental: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement. • Logotypes: Text that is part of a logo or brand name has no minimum contrast requirement. 	Supports with exceptions	<p>It is up to spreadsheet authors to ensure their content meets the minimum contrast requirement.</p> <p>Please see the iOS VPAT for more information.</p>
<p>1.4.4 Resize text: Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality.</p>	Supports with exceptions	<p>Numbers toolbars and menus do not support iOS larger text; however, the spreadsheet content can be scaled up to 400 percent without the use of assistive technology.</p>
<p>1.4.5 Images of Text: If the technologies being used can achieve the visual presentation, text is used to convey information rather than images of text except for the following:</p> <ul style="list-style-type: none"> • Customizable: The image of text can be visually customized to the user's requirements; • Essential: A particular presentation of text is essential to the information being conveyed. 	Supports with exceptions	<p>It is up to spreadsheet authors to provide accessibility descriptions for all imagery used in their documents. In cases where spreadsheet authors fail to provide appropriate alternative text, iOS will also attempt to use OCR technology to determine the text within an image for third party developers. Numbers will attempt to use OCR technology to determine handwritten text for smart annotations.</p>
<p>2.4.5 Multiple Ways: More than one way is available to locate a Web page within a set of Web pages except where the Web Page is the result of, or a step in, a process.</p>	Supports	

Criteria	Conformance Level	Remarks and Explanations
2.4.6 Headings and Labels: Headings and labels describe topic or purpose.	Supports	It is up to spreadsheet authors to mark their documents up using heading paragraph styles. In the case that spreadsheet authors fail to do this, Numbers will attempt to recognize headings based on their font attributes and context and provide those to users of assistive technology.
2.4.7 Focus Visible: Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.	Supports	Numbers shows a focus outline for objects that have keyboard focus and an insertion point for text areas that are focused by the keyboard.
3.1.2 Language of Parts: The human language of each passage or phrase in the content can be programmatically determined except for proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text.	Supports with exceptions	Numbers allows spreadsheet authors to provide a spreadsheet locale that will be used to programmatically determine the text of a spreadsheet. Moreover, iOS will switch to the appropriate speech synthesizer for that language.
3.2.3 Consistent Navigation: Navigational mechanisms that are repeated on multiple Web pages within a set of Web pages occur in the same relative order each time they are repeated, unless a change is initiated by the user.	Supports	
3.2.4 Consistent Identification: Components that have the same functionality within a set of Web pages are identified consistently.	Supports	
3.3.3 Error Suggestion: If an input error is automatically detected and suggestions for correction are known, then the suggestions are provided to the user, unless it would jeopardize the security or purpose of the content.	Supports	iOS provides error information, warnings, and suggestions, spoken when using iOS Accessibility.

Criteria	Conformance Level	Remarks and Explanations
<p>3.3.4 Error Prevention (Legal, Financial, Data): For Web pages that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or that submit user test responses, at least one of the following is true:</p> <ul style="list-style-type: none"> • Reversible: Submissions are reversible. • Checked: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them. • Confirmed: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission. 	Supports	

2017 Section 508 Report -

Chapter 3: Functional Performance Criteria -

Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision. Where a visual mode of operation is provided, ICT shall provide at least one mode of operation that does not require user vision.	Supports	Please see the iOS VPAT for more information.
302.2 With Limited Vision. Where a visual mode of operation is provided, ICT shall provide at least one mode of operation that enables users to make use of limited vision.	Supports	Please see the iOS VPAT for more information.

Criteria	Conformance Level	Remarks and Explanations
302.3 Without Perception of Color. Where a visual mode of operation is provided, ICT shall provide at least one visual mode of operation that does not require user perception of color.	Supports with exceptions	It is up to spreadsheet authors to follow best practices for the use of color in their documents. iOS uses color to convey information in on/off labels, but provides the ability to enable labels in the Accessibility settings. Please see the iOS VPAT for more information.
302.4 Without Hearing. Where an audible mode of operation is provided, ICT shall provide at least one mode of operation that does not require user hearing.	Supports with exceptions	It is up to spreadsheet authors to provide non-audible content alternatives for audible content in their documents. Please see the iOS VPAT for more information.
302.5 With Limited Hearing. Where an audible mode of operation is provided, ICT shall provide at least one mode of operation that enables users to make use of limited hearing.	Supports	Please see the iOS VPAT for more information.
302.6 Without Speech. Where speech is used for input, control, or operation, ICT shall provide at least one mode of operation that does not require user speech.	Supports	Please see the iOS VPAT for more information.
302.7 With Limited Manipulation. Where a manual mode of operation is provided, ICT shall provide at least one mode of operation that does not require fine motor control or simultaneous manual operations.	Supports	Please see the iOS VPAT for more information.
302.8 With Limited Reach and Strength. Where a manual mode of operation is provided, ICT shall provide at least one mode of operation that is operable with limited reach and limited strength.	Supports	Please see the iOS VPAT for more information.

Criteria	Conformance Level	Remarks and Explanations
302.9 With Limited Language, Cognitive, and Learning Abilities. ICT shall provide features making its use by individuals with limited cognitive, language, and learning abilities simpler and easier.		Please see the iOS VPAT for more information.

Chapter 4: Hardware -

Please see the [VPATs for iPhone and iPad](#) for more information.

Chapter 5: Software -

Criteria	Conformance Level	Remarks and Explanations
501.1 Scope – Incorporation of WCAG 2.0 AA	See WCAG 2.0 section	See information in WCAG Section
502 Interoperability with Assistive Technology		
502.2.1 User Control of Accessibility Features. Platform software shall provide user control over platform features that are defined in the platform documentation as accessibility features.	Supports	Accessibility features can be controlled within General Settings or via the user configured accessibility Shortcuts.
502.2.2 No Disruption of Accessibility Features. Software shall not disrupt platform features that are defined in the platform documentation as accessibility features.	Supports	iOS includes an accessibility API that enables applications to interact with assistive technologies without disrupting the system or each other. Details of the Accessibility API are available on the Apple Developer web site: https://developer.apple.com/technologies/ios/accessibility.html
502.3 Accessibility Services		
502.3.1 Object Information. The object role, state(s), properties, boundary, name, and description shall be programmatically determinable.	Supports	
502.3.2 Modification of Object Information. States and properties that can be set by the user shall be capable of being set programmatically, including through assistive technology.	Supports	
502.3.3 Row, Column, and Headers. If an object is in a data table, the occupied rows and columns, and any headers associated with those rows or columns, shall be programmatically determinable.	Supports	It is up to the spreadsheet author to structure tables with appropriate column and row headers. Numbers will expose these as headers to assistive technology.

Criteria	Conformance Level	Remarks and Explanations
502.3.4 Values. Any current value(s), and any set or range of allowable values associated with an object, shall be programmatically determinable.	Supports	
502.3.5 Modification of Values. Values that can be set by the user shall be capable of being set programmatically, including through assistive technology.	Supports	
502.3.6 Label Relationships. Any relationship that a component has as a label for another component, or of being labeled by another component, shall be programmatically determinable.	Supports	It is up to the spreadsheet author to provide adequate labels for non-textual content. Numbers will expose these labels to assistive technology.
502.3.7 Hierarchical Relationships. Any hierarchical (parent-child) relationship that a component has as a container for, or being contained by, another component shall be programmatically determinable.	Supports	
502.3.8 Text. The content of text objects, text attributes, and the boundary of text rendered to the screen, shall be programmatically determinable.	Supports	
502.3.9 Modification of Text. Text that can be set by the user shall be capable of being set programmatically, including through assistive technology.	Supports	
502.3.10 List of Actions. A list of all actions that can be executed on an object shall be programmatically determinable.	Supports	
502.3.11 Actions on Objects. Applications shall allow assistive technology to programmatically execute available actions on objects.	Supports	

Criteria	Conformance Level	Remarks and Explanations
502.3.12 Focus Cursor. Applications shall expose information and mechanisms necessary to track focus, text insertion point, and selection attributes of user interface components.	Supports	
502.3.13 Modification of Focus Cursor. Focus, text insertion point, and selection attributes that can be set by the user shall be capable of being set programmatically, including through the use of assistive technology.	Supports	
502.3.14 Event Notification. Notification of events relevant to user interactions, including but not limited to, changes in the component's state(s), value, name, description, or boundary, shall be available to assistive technology.	Supports	
<p>502.4 Platform Accessibility Features. Platforms and platform software shall conform to the requirements in ANSI/HFES 200.2, Human Factors Engineering of Software User Interfaces — Part 2: Accessibility (2008) (incorporated by reference, see 702.4.1) listed below:</p> <ul style="list-style-type: none"> A. Section 9.3.3 Enable sequential entry of multiple (chorded) keystrokes; B. Section 9.3.4 Provide adjustment of delay before key acceptance; C. Section 9.3.5 Provide adjustment of same-key double-strike acceptance; D. Section 10.6.7 Allow users to choose visual alternative for audio output; E. Section 10.6.8 Synchronize audio equivalents for visual events; F. Section 10.6.9 Provide speech output services; and G. Section 10.7.1 Display any captions provided. 	Supports	iOS provides Accessibility settings for modifying the mentioned options, such as Key Repeat, speech output, and alternative for speech feedback.

Criteria	Conformance Level	Remarks and Explanations
503 Applications		
503.2 User Preferences. Applications shall permit user preferences from platform settings for color, contrast, font type, font size, and focus cursor.	Supports	Please see the iOS VPAT for more information.
503.3 Alternative User Interfaces. Where an application provides an alternative user interface that functions as assistive technology, the application shall use platform and other industry standard accessibility services.	Supports	Please see the iOS VPAT for more information.
503.4 User Controls for Captions and Audio Description.		
503.4.1 Caption Controls. Where user controls are provided for volume adjustment, ICT shall provide user controls for the selection of captions at the same menu level as the user controls for volume or program selection.	Supports	Numbers supports the native iOS caption controls. Please see the iOS VPAT for more information.
503.4.2 Audio Description Controls. Where user controls are provided for program selection, ICT shall provide user controls for the selection of audio descriptions at the same menu level as the user controls for volume or program selection.	Supports	Numbers supports the native iOS audio description controls. Please see the iOS VPAT for more information.
504 Authoring Tools		
504.2 Content Creation or Editing. Authoring tools shall provide a mode of operation to create or edit content that conforms to Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0 (incorporated by reference, see 702.10.1) for all supported features and, as applicable, to file formats supported by the authoring tool. Authoring tools shall permit authors the option of overriding information required for accessibility.	See WCAG 2.0 section	See information in WCAG Section

Criteria	Conformance Level	Remarks and Explanations
504.2.1 Preservation of Information Provided for Accessibility in Format Conversion. Authoring tools shall, when converting content from one format to another or saving content in multiple formats, preserve the information required for accessibility to the extent that the information is supported by the destination format.	Supports with exceptions	Numbers attempts to preserve all information when converting from one format to another; however, different formats have different capabilities and total preservation of information is not always possible.
504.2.2 PDF Export. Authoring tools capable of exporting PDF files that conform to ISO 32000-1:2008 (PDF 1.7) shall also be capable of exporting PDF files that conform to ANSI/AIIM/ISO 14289-1:2016 (PDF/UA-1) (incorporated by reference, see 702.3.1).	Does not support	
504.3 Prompts. Authoring tools shall provide a mode of operation that prompts authors to create content that conforms to Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0 (incorporated by reference, see 702.10.1) for supported features and, as applicable, to file formats supported by the authoring tool.	Does not support	
504.4 Templates. Where templates are provided, templates allowing content creation that conforms to Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0 (incorporated by reference, see 702.10.1) shall be provided for a range of template uses for supported features and, as applicable, to file formats supported by the authoring tool.	Does not support	

Chapter 6: Support Documentation and Services -

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope		
602 Support Documentation		
602.2 Accessibility and Compatibility Features. Documentation shall list and explain how to use the accessibility and compatibility features required by Chapters 4 and 5. Documentation shall include accessibility features that are built-in and accessibility features that provide compatibility with assistive technology.	Supports	Please see the iOS VPAT for more information.
602.3 Electronic Support Documentation. Documentation in electronic format, including Web-based self-service support, shall conform to Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0 (incorporated by reference, see 702.10.1).	Supports	Please see the iOS VPAT for more information.
602.4 Alternate Formats for Non-Electronic Support Documentation. Where support documentation is only provided in non-electronic formats, alternate formats usable by individuals with disabilities shall be provided upon request.	Supports	Please see the iOS VPAT for more information.
603 Support Services		
603.2 Information on Accessibility and Compatibility Features. ICT support services shall include information on the accessibility and compatibility features required by 602.2.	Supports	Please see the iOS VPAT for more information.
603.3 Accommodation of Communication Needs. Support services shall be provided directly to the user or through a referral to a point of contact. Such ICT support services shall accommodate the communication needs of individuals with disabilities.	Supports	Please see the iOS VPAT for more information.

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