

Stand-alone eBook Navigation

A Stand-alone eBook is a collection of related PDF files with a unified navigation system. It is distributed to the user as an independent app via the App Store, and includes the CDF kernel as part of the deployment. Stand-alone eBooks open to a cover image, and then load an in-document table of contents. Navigation within the content is also made available via pop-over (as shown).

Splash Screen

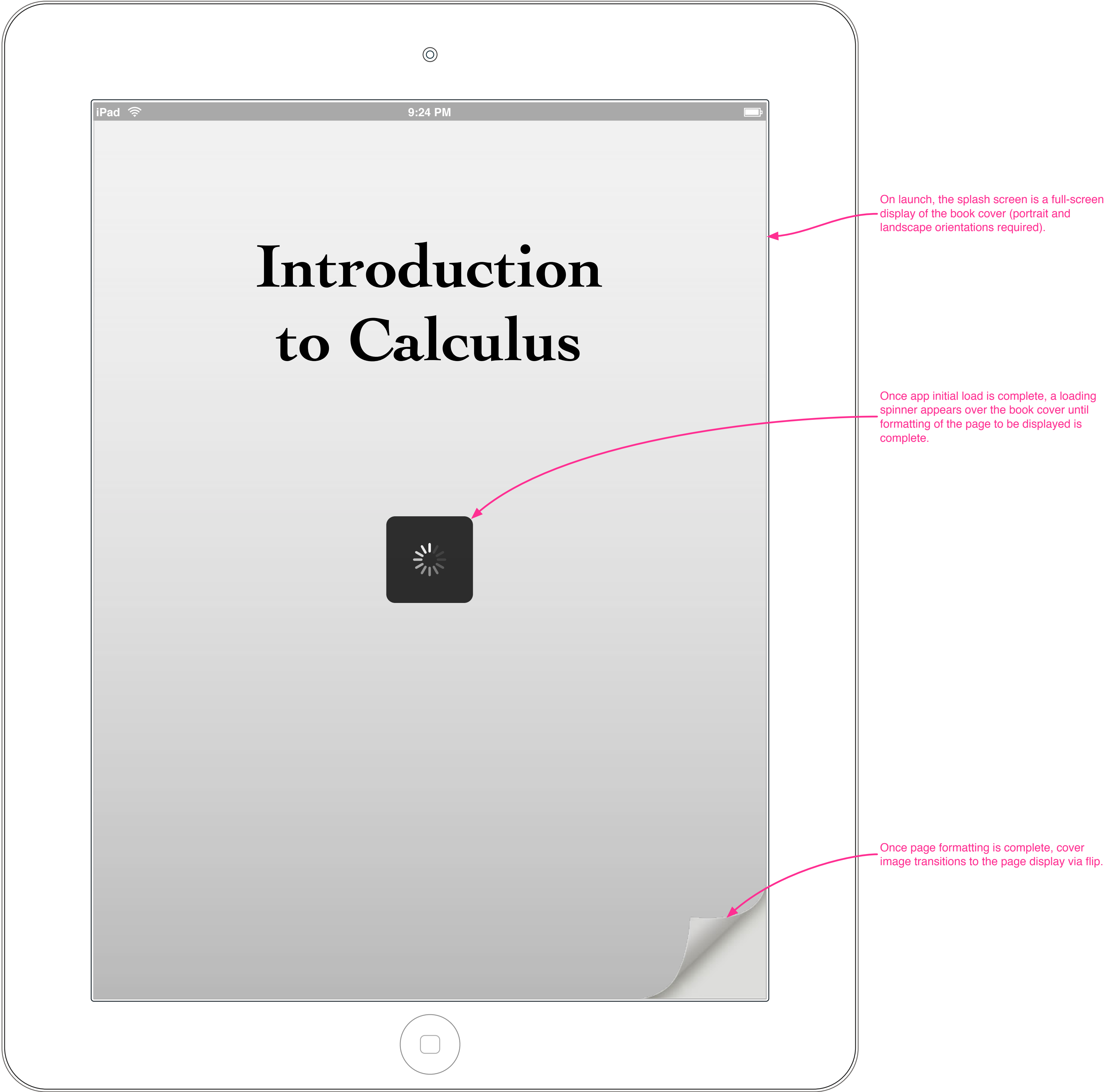
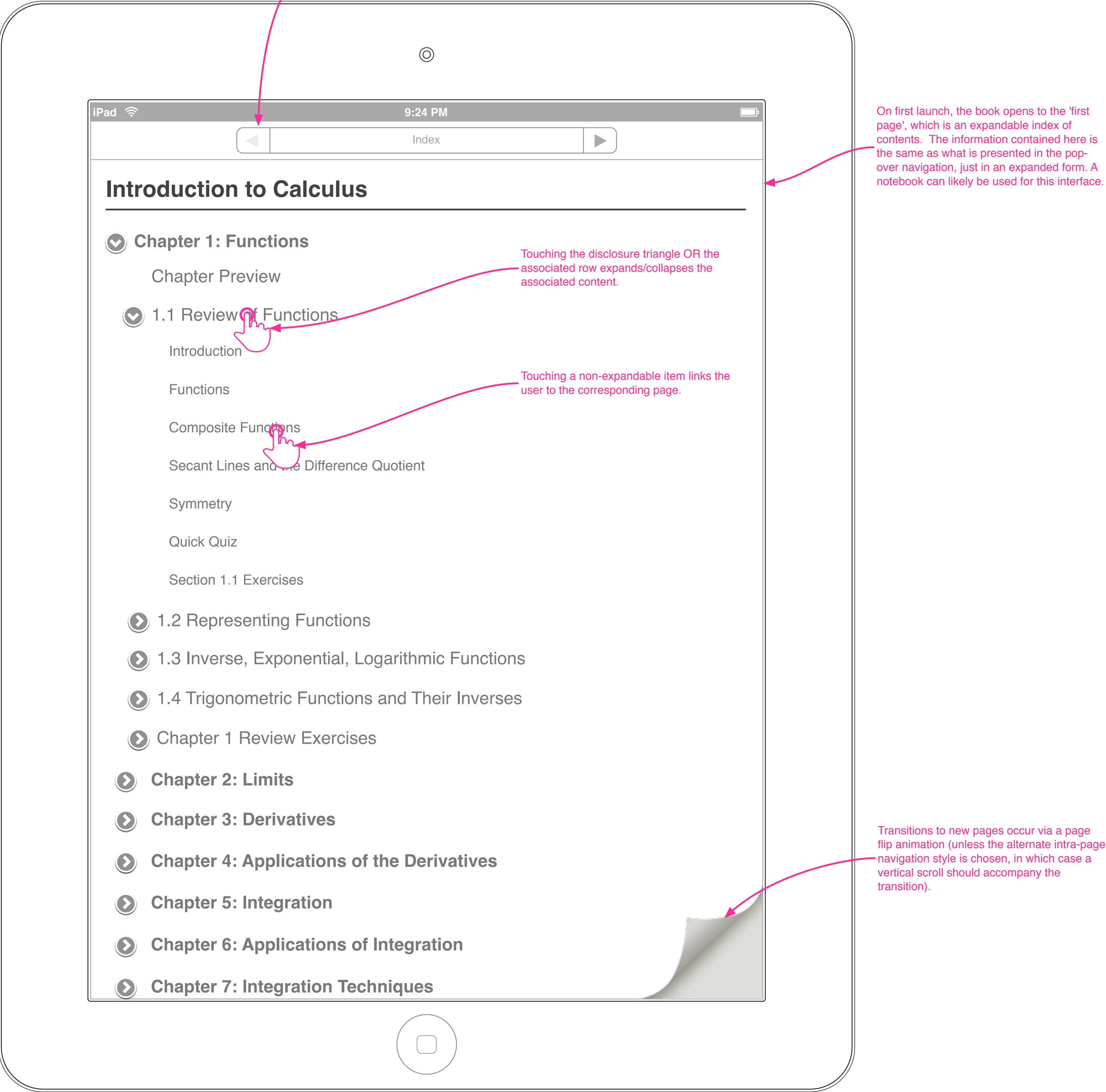
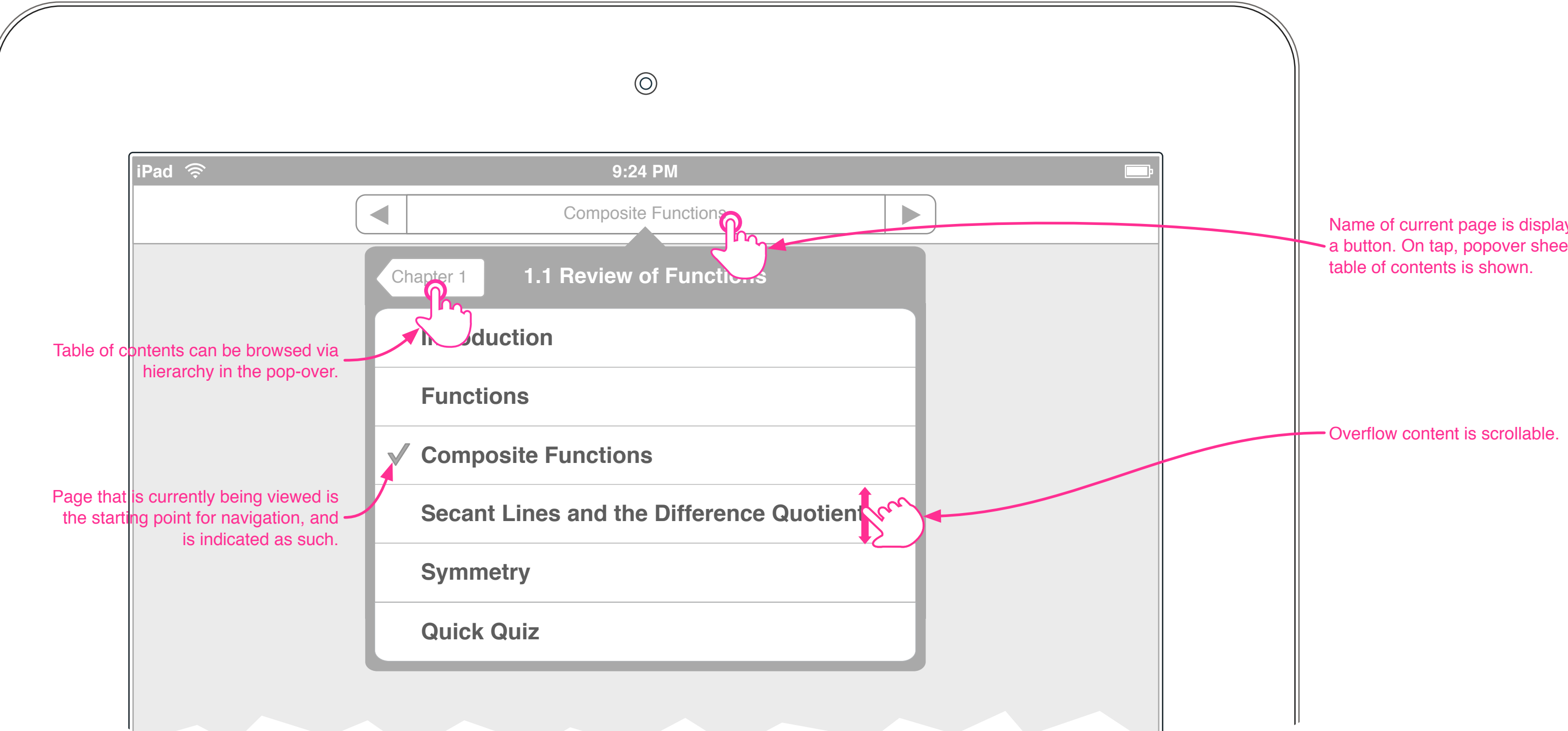


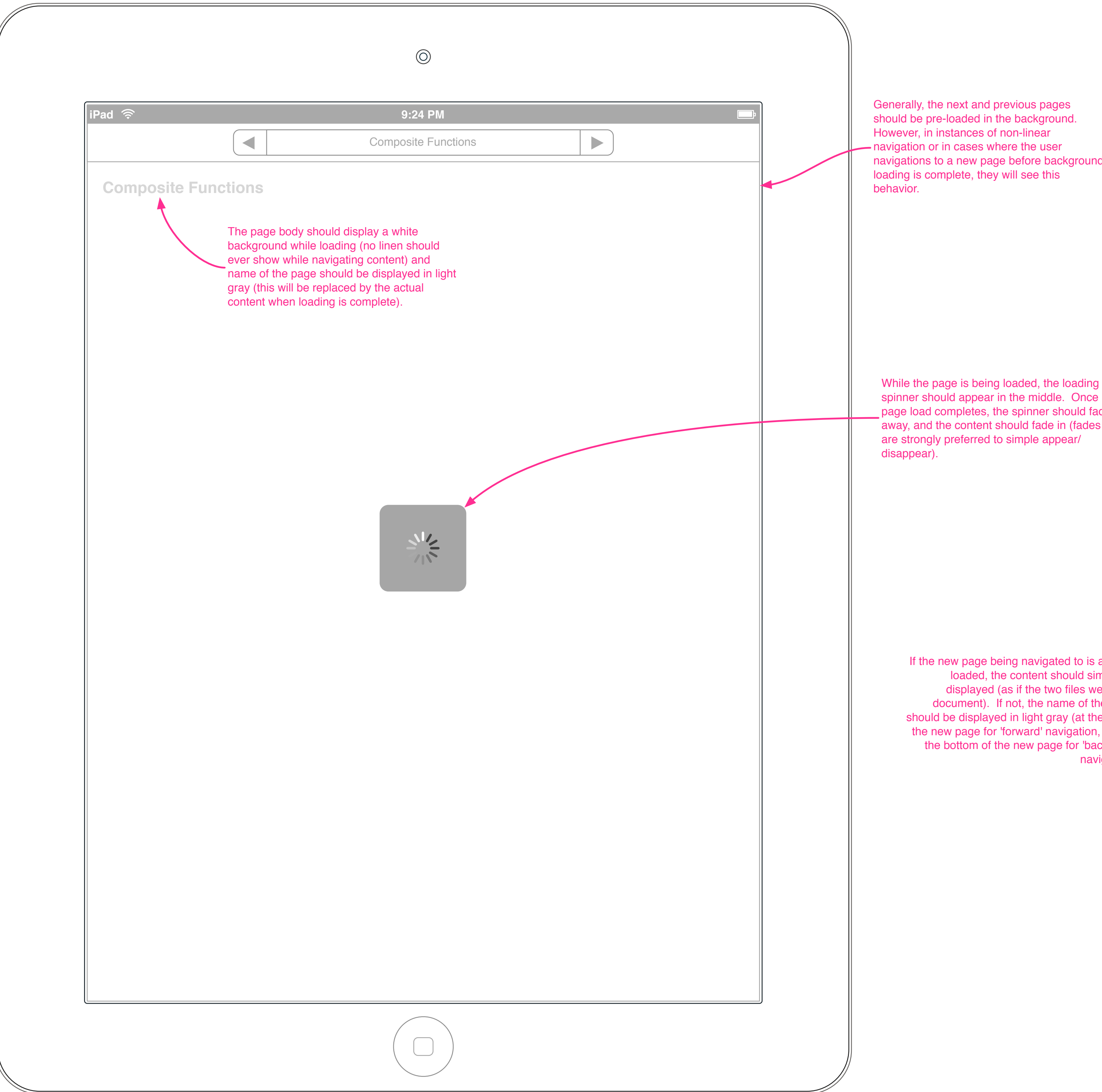
Table of Contents



Quick Navigation



Page Loading Behavior



Intra-Page Navigation

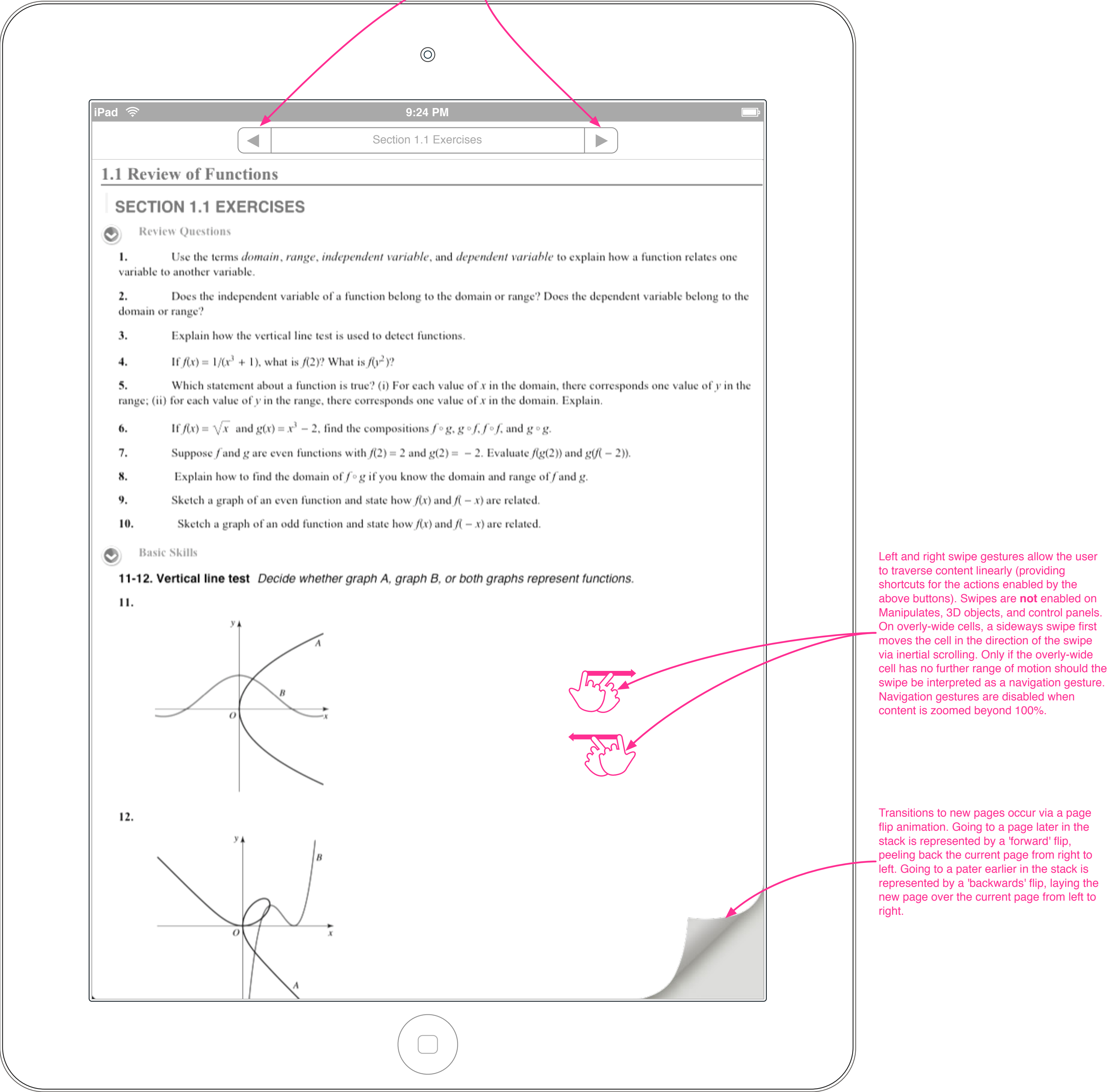
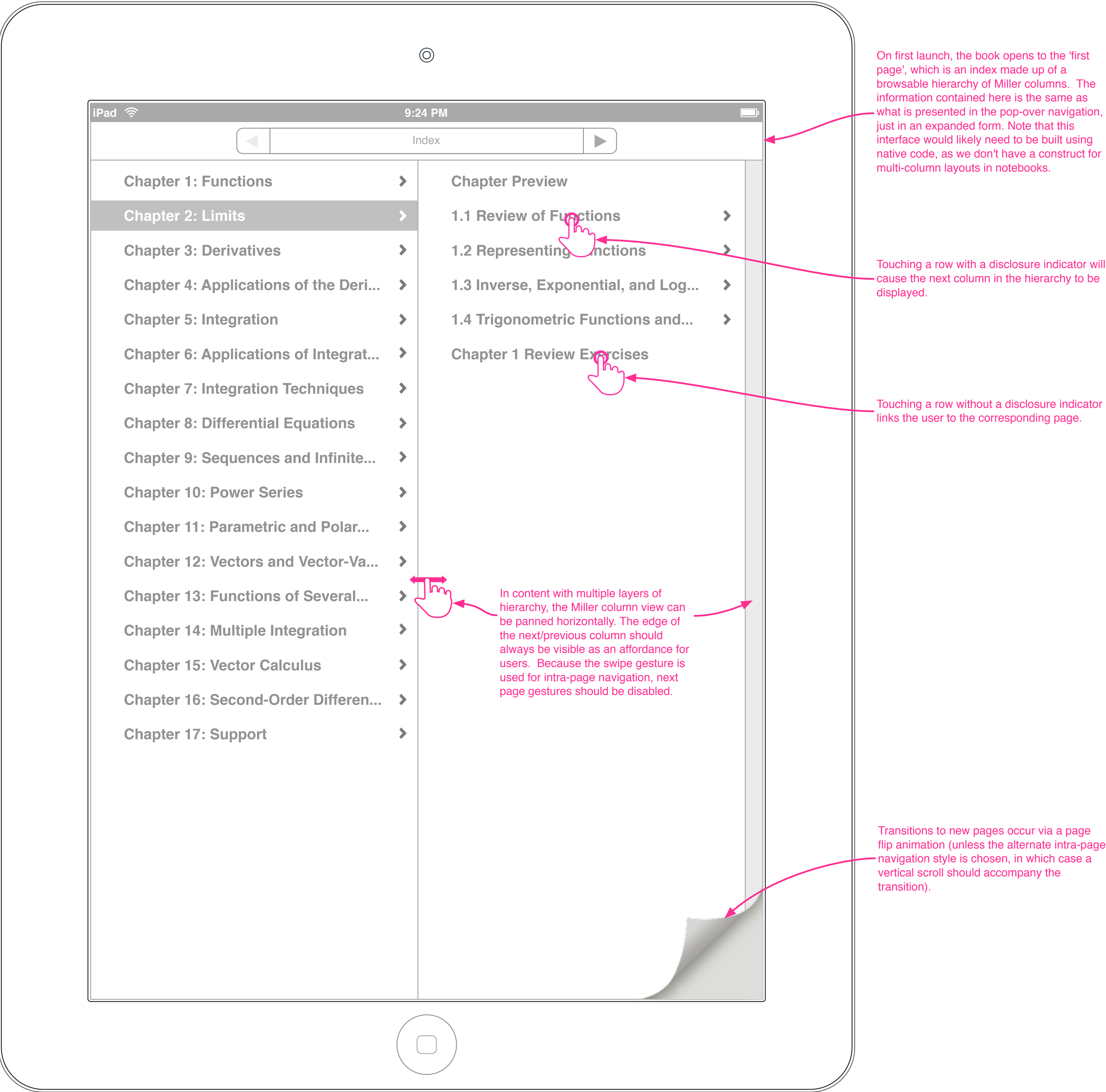
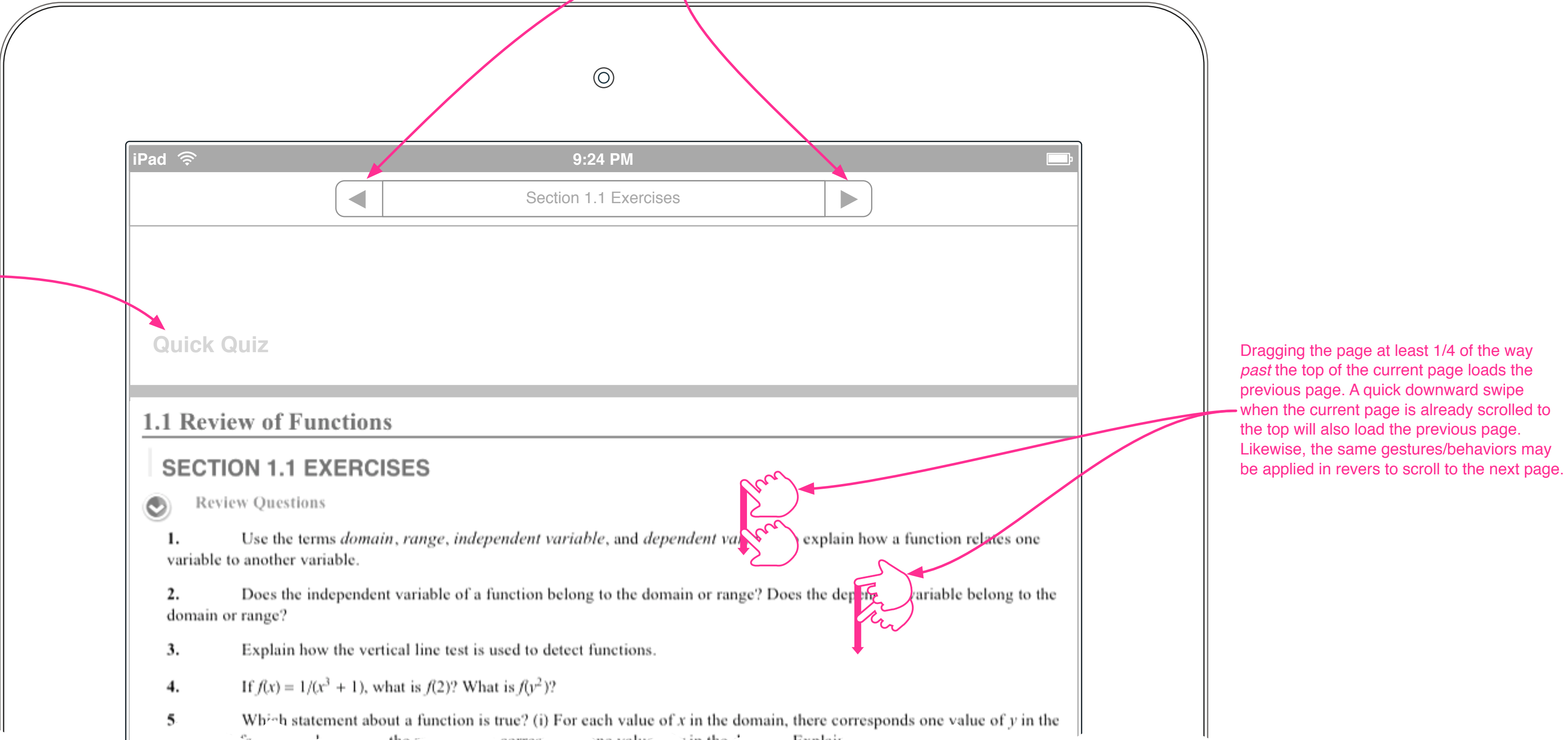


Table of Contents (alternate)



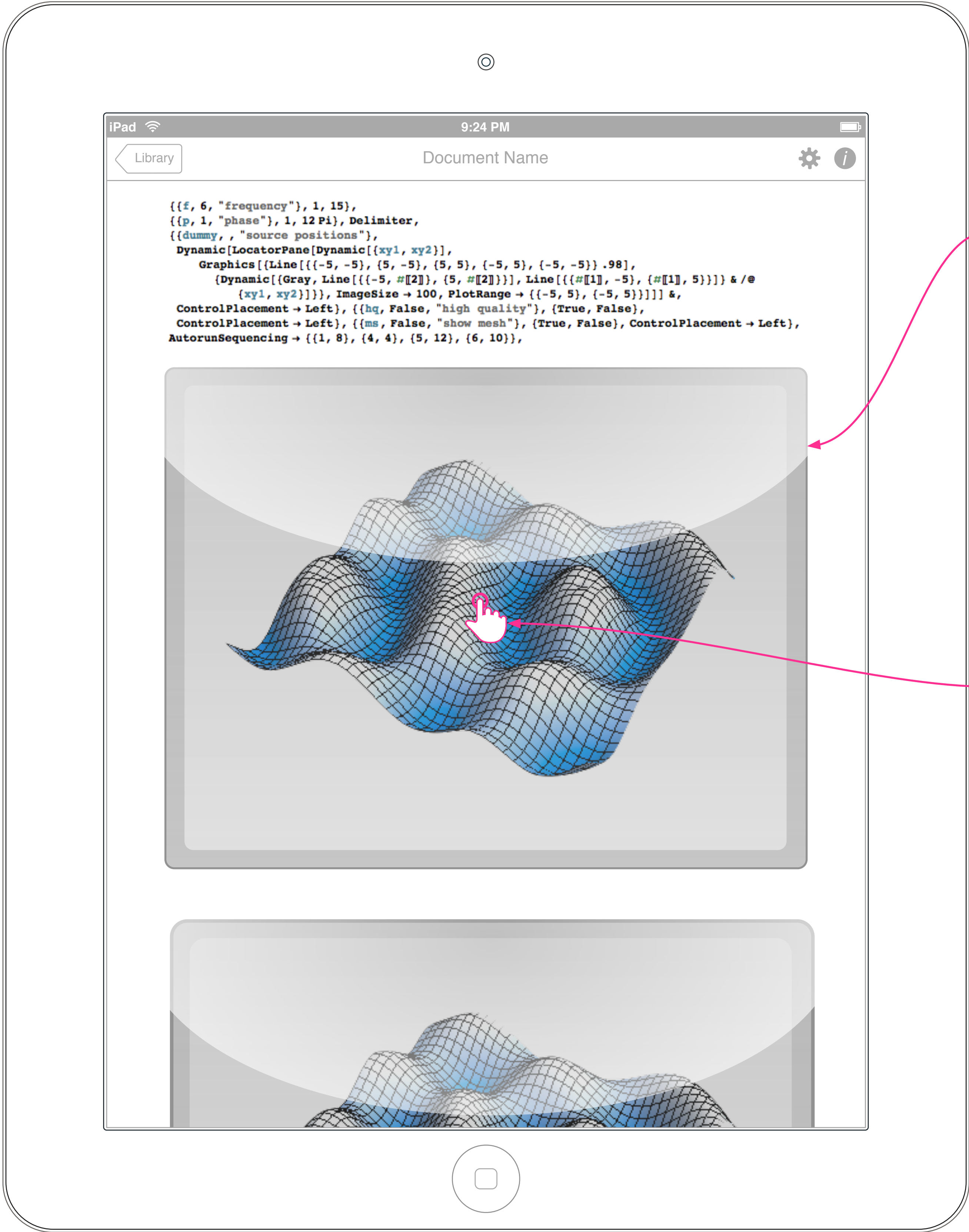
Intra-Page Navigation (alternate)





## Interactive Objects

Manipulates and 3D objects are a cornerstone function of CDF functionality, and the interactions are necessarily different on touch devices than they are on desktops. On iOS, the controls for Manipulates are moved into a docked control panel, similar to a keyboard, and the viewport for the content is shrunk to accommodate.



When interactive object is active, 'Done' and full screen buttons are added to the control bar.

When Manipulate / 3D object is inactive, an iOS-style "glow" is applied to the entire element to indicate actionability. Using button-like affordances to signify actionability is a standard construct on iOS.

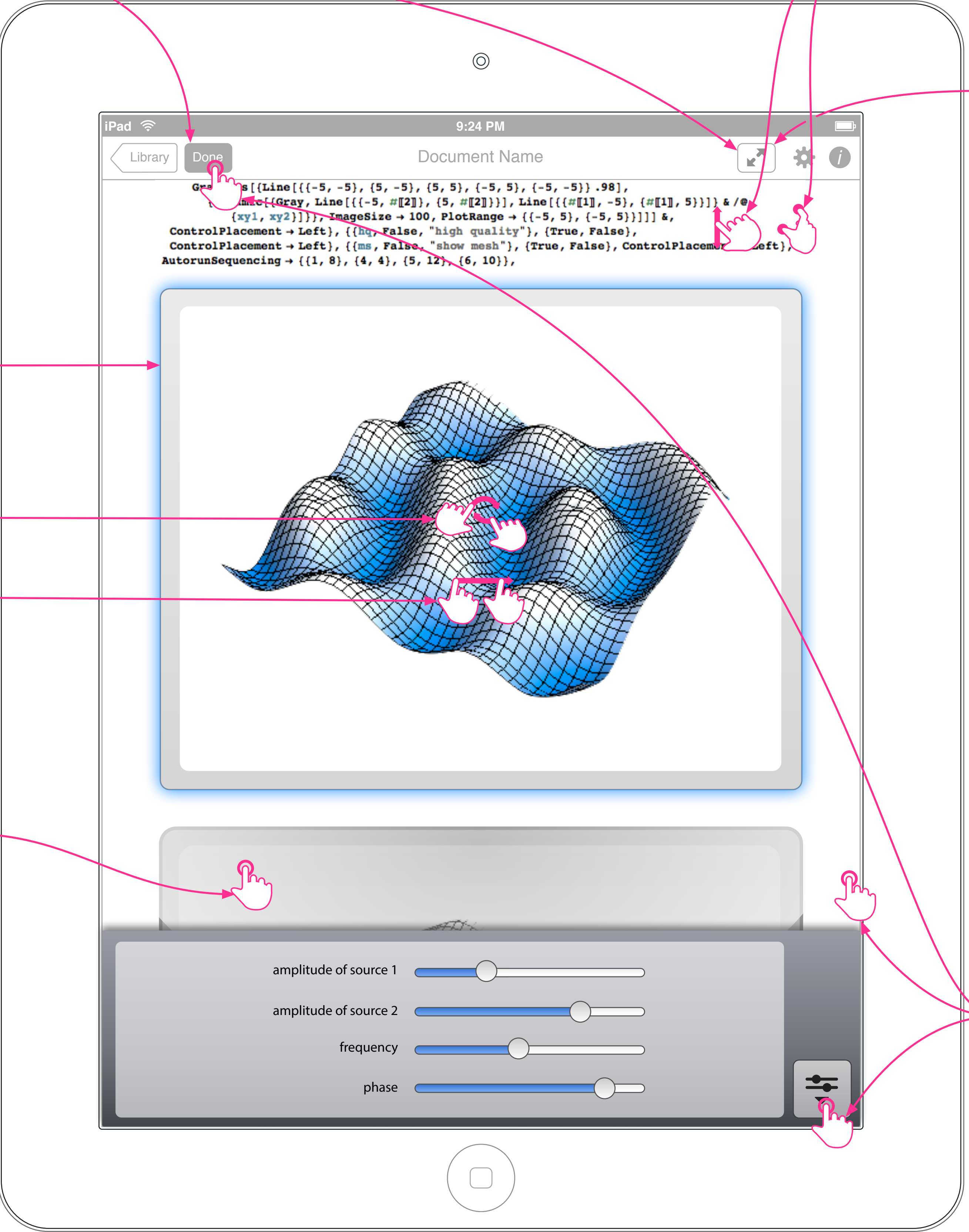
When Manipulate / 3D object is active, an iOS-style "glow" is applied around the outside of the object.

3D objects can be rotated and panned with gestures while the Manipulate / 3D object is active.

Locators inside the graphic area can be moved while the Manipulate / 3D object is active.

Tapping on an inactive Manipulate / 3D object should scroll the the object to the top half of the screen to allow space for the control panel to pop-up.

Tapping on another Manipulate / 3D object while one is active deactivates the original object, and activates the new one.



Scrolling and pinch-zooming work if initiated off of the active Manipulate / 3D object. Object remains active even if scrolled off-screen.

Fullscreen objects load in a "sheet view", which is constrained by width and height of the viewport.

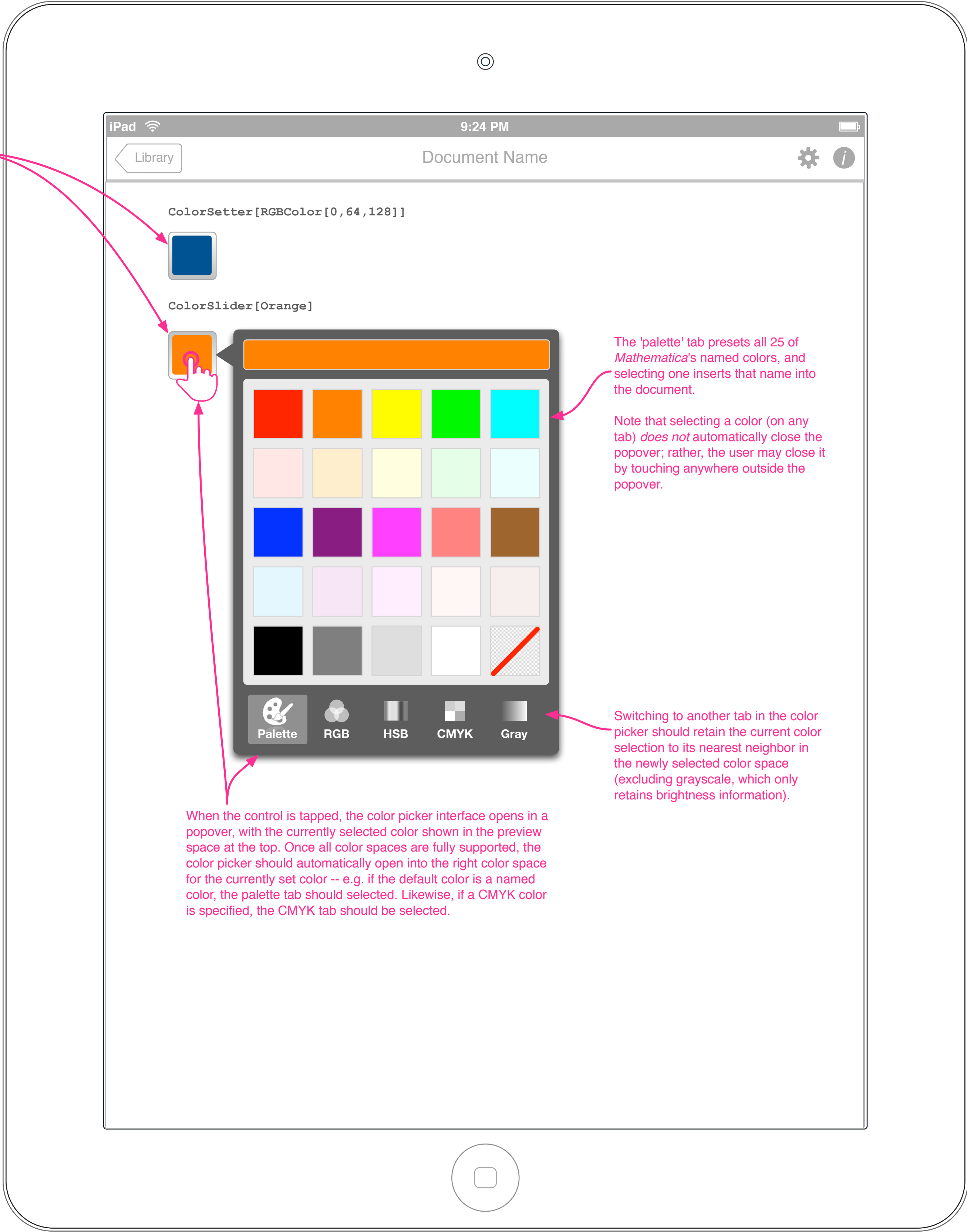
Tapping the 'control dismiss' button, tapping anywhere off of the active Manipulate / 3D object, OR tapping the 'Done' button will deactivate it.



Color Picker

Used for ColorSetter and ColorSlider. ColorSetter generally uses the system-default color picker (which is not provided by iOS), and ColorSlider generally uses a thumbnail sized hue spectrum (which is simply incompatible with touch). This interface makes it possible to set a precise value for a color without needing to enter numbers manually.

Both ColorSetter and ColorSlider are represented by a swatch that can be tapped to activate the color picker interface. Note that on iOS, the swatch should have a button-like border to provide affordance as a control.

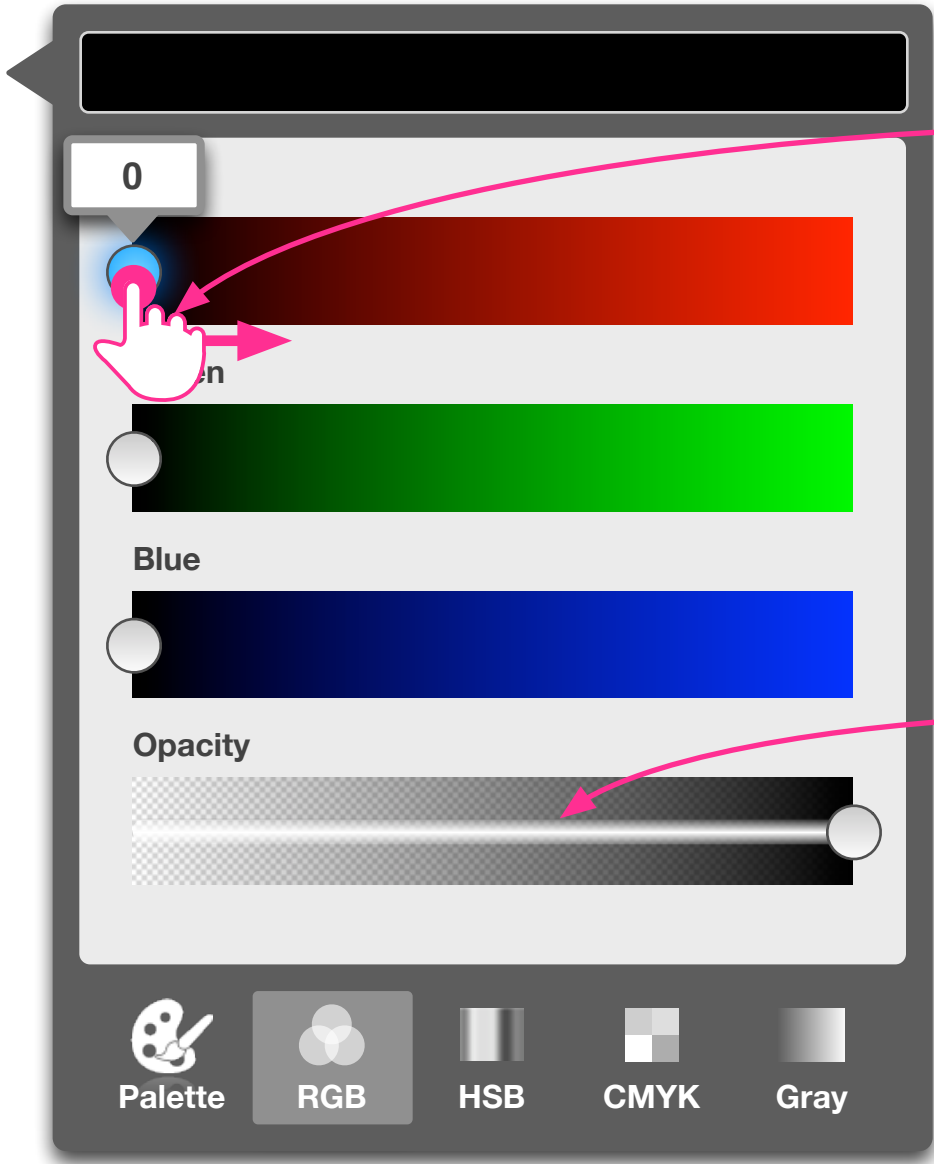


When the control is tapped, the color picker interface opens in a popover, with the currently selected color shown in the preview space at the top. Once all color spaces are fully supported, the color picker should automatically open into the right color space for the currently set color -- e.g. if the default color is a named color, the palette tab should selected. Likewise, if a CMYK color is specified, the CMYK tab should be selected.

The 'palette' tab presets all 25 of *Mathematica*'s named colors, and selecting one inserts that name into the document.

Note that selecting a color (on any tab) *does not* automatically close the popover; rather, the user may close it by touching anywhere outside the popover.

Switching to another tab in the color picker should retain the current color selection to its nearest neighbor in the newly selected color space (excluding grayscale, which only retains brightness information).



On drag of a color slider, the slider knob glows to indicate activity, and a pop-up indicates the currently selected value. The currently selected color is always displayed in real time both in the upper swatch and on the control button in-document.

Much like Apple's iPhoto on the iPad, the sliders have no track, but rather, the entire gradient swatch serves as the touch area, with a trailing line behind the slider knob indicating the axis of motion.

