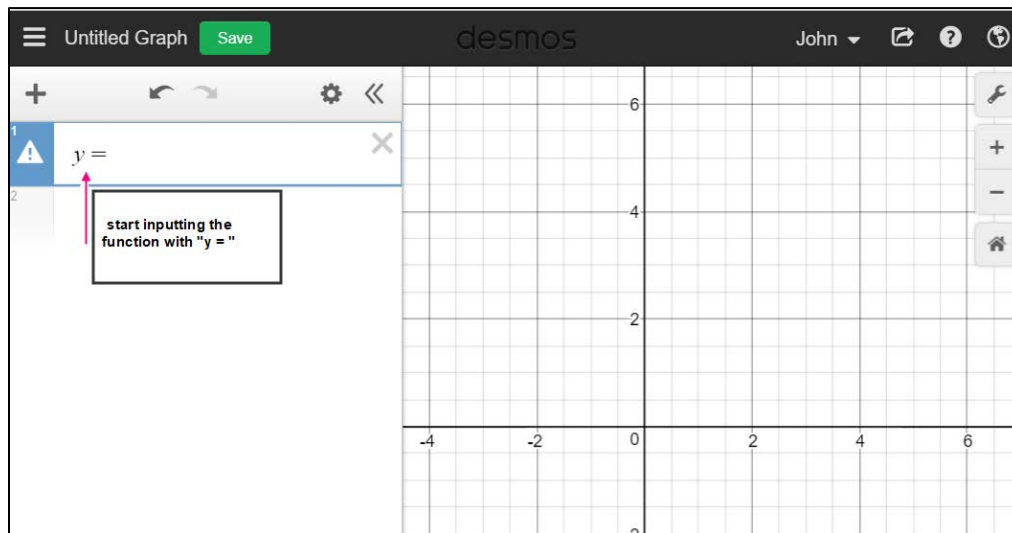


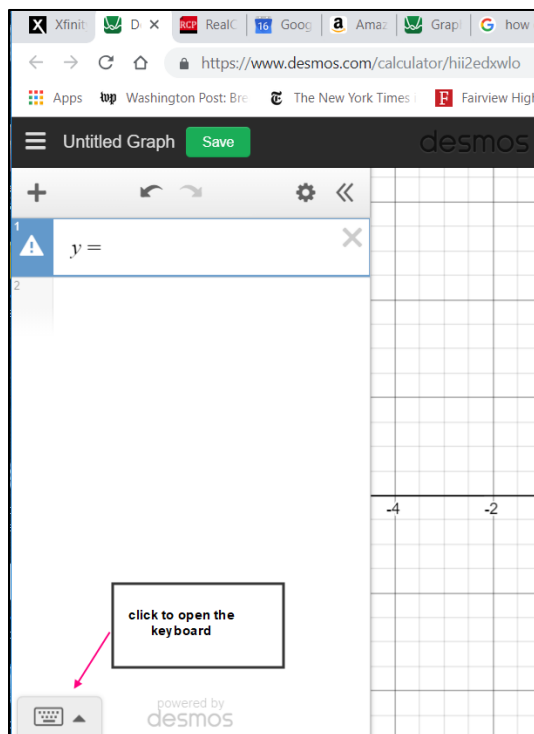
Using Desmos (desmos.com) to Graph Logarithmic Functions of Any Base

Start at the [desmos.com](https://www.desmos.com) website.

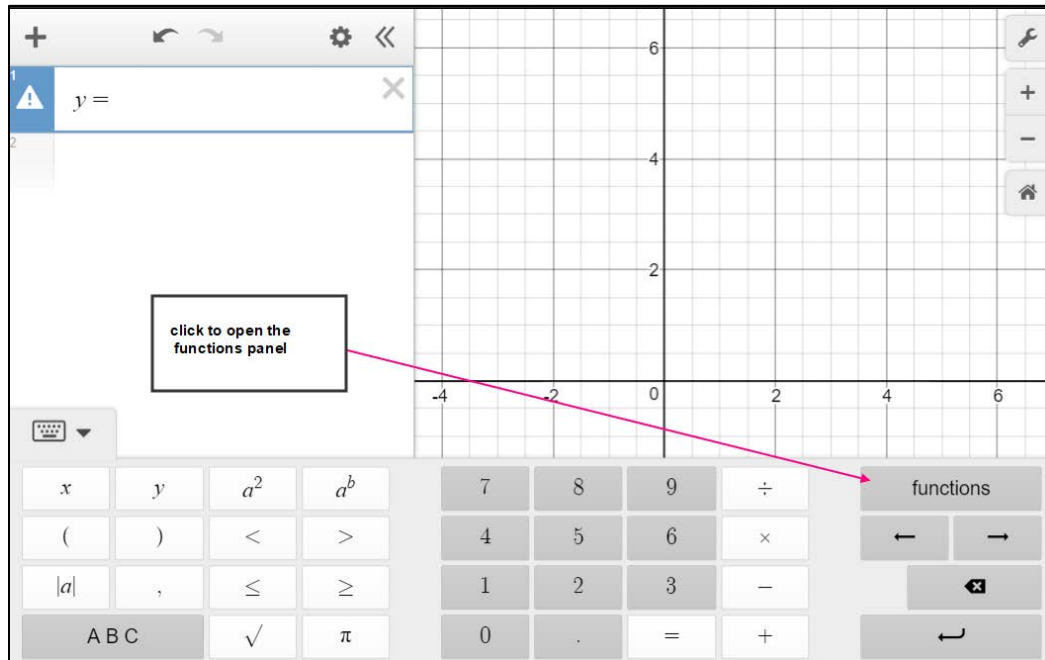
Step 1:



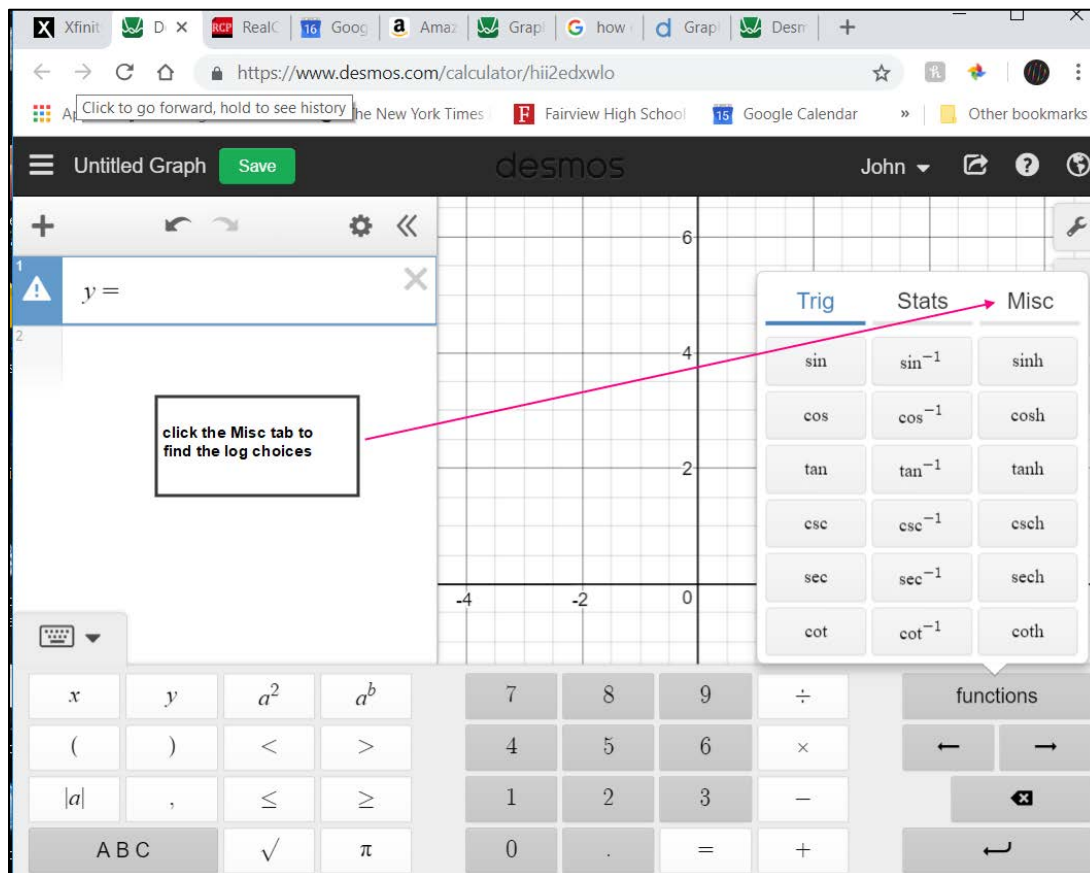
Step 2:



Step 3:



Step 4:



Step 5:

The screenshot shows the Desmos calculator interface. The top navigation bar includes the text "Untitled Graph" and a green "Save" button. The main workspace features a coordinate plane with x and y axes ranging from -4 to 6. A function input box on the left contains "y =". A callout box with a black border and white background contains the text "this one allows us to specify the base (shown as 'a')". A pink arrow points from this callout box to the \log_a button in the "Misc" tab of the function menu. The function menu is open, showing three tabs: "Trig", "Stats", and "Misc". The "Misc" tab is selected and contains the following buttons: lcm, gcd, mod, ceil, floor, round, abs, sign, %, exp, ln, $\sqrt{\quad}$, log, \log_a , $\frac{d}{dx}$, \int , Σ , and Π . The bottom toolbar includes buttons for x , y , a^2 , a^b , 7, 8, 9, \div , and a "functions" button.

Step 6:

The screenshot shows the Desmos calculator interface after selecting the \log_a function. The function input box now displays "y = log ()". A callout box with a black border and white background contains the text "this template opens up where we can now specify the base for the log and also the variable 'x' that we want to take the log of". A pink arrow points from this callout box to the input field in the function template. The rest of the interface, including the coordinate plane and the bottom toolbar, remains the same as in Step 5.

Step 7:

