

Using MathType for the Worksheets: Word 2003 edition

As explained in various locations inside our course, you are required to use **MathType** to compose all of the mathematics in your worksheet. In the Discussions board I've posted a message explaining how you can download MathType; in this document I'll explain how to use MathType to insert mathematical expressions into your worksheets.

After downloading MathType, you should download your worksheet from the Dropbox in D2L. You should **save** the worksheet on your computer (and consider re-saving periodically while you're working in it) in order to avoid losing any of your work if anything "weird" happens to your computer. Then, you should open your worksheet in MS Word. (If you don't have MS Word, you'll need to open it in OpenOffice or LibreOffice, two free software that are compatible with MS Word.) You should see something that looks like the image shown in [Figure 1](#).

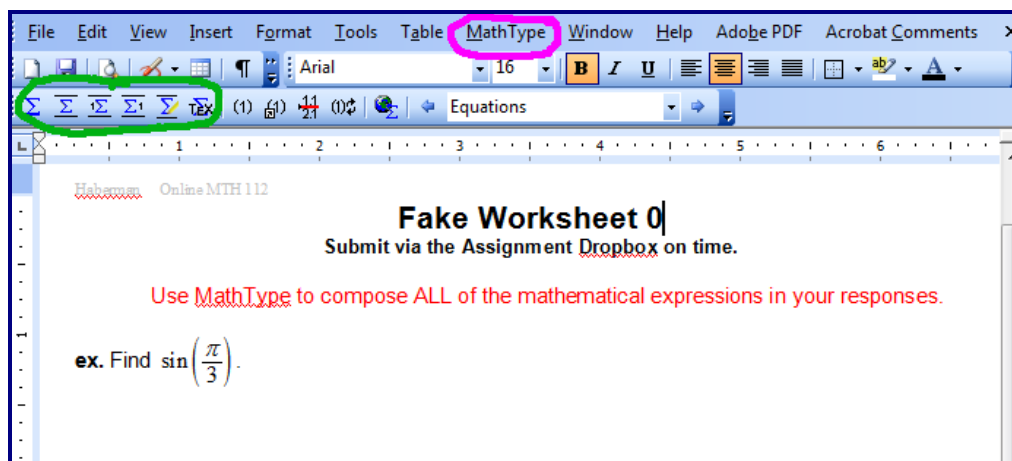


Figure 1: A worksheet opened in MS Word. Circled in pink is the MathType tab; circled in green are the MathType buttons that you may or may not automatically get on your tool bar after downloading.

If you click on the MathType tab, the option " Σ Insert Inline Equation" is the one you're going to want to use most of the time. (See [Figure 2](#).)

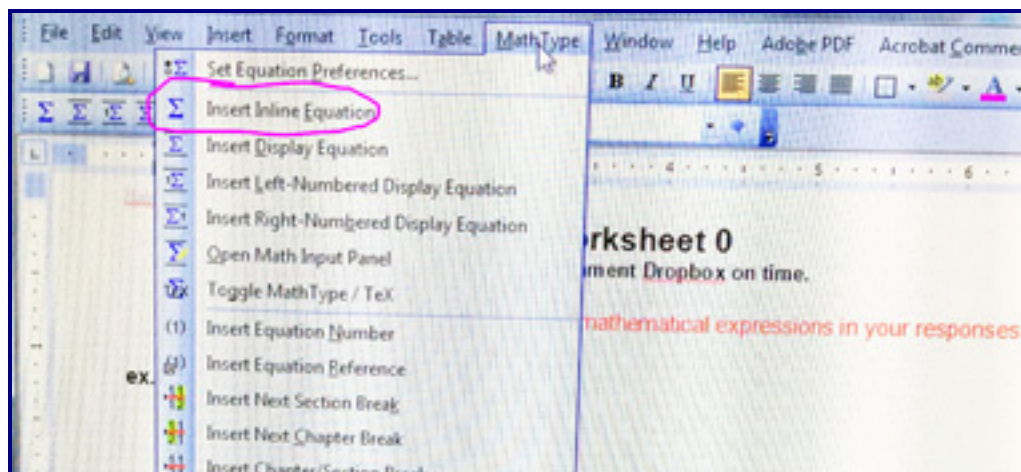


Figure 2: Circled in pink is the MathType option that is recommend. With your cursor in the location where you want to compose your response, click on this option to open a MathType Window. (Sorry this is so blurry!)

Of course, you're welcome to investigate how the other options work and use in a circumstance where the formatting it provides is useful but I use MathType all the time (e.g., I used it to create all of the math in my online lecture notes) and I *always* use this option and *never* use any of the other options, so my recommendation is to use this option!

After putting your cursor in the location where you want to compose your response (i.e., after putting your cursor in the space underneath the question), click on " Σ Insert Inline Equation" and a MathType window should open; you should see something like what's shown in Fig. 3.

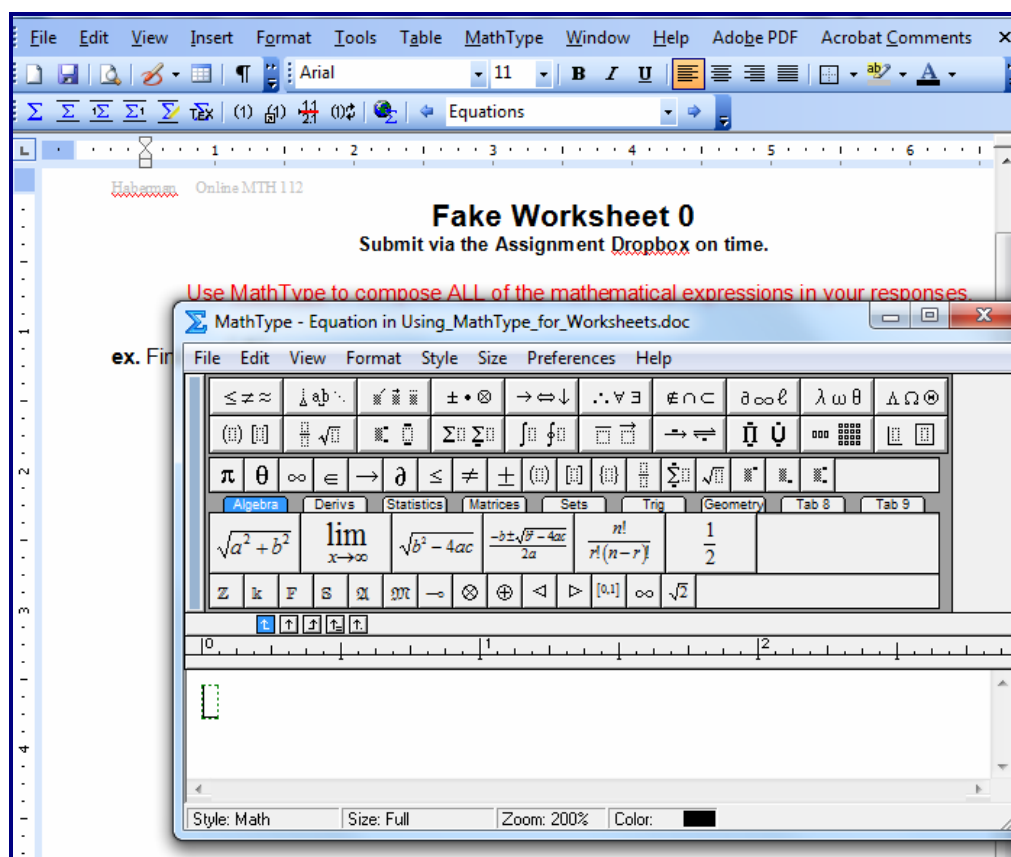


Figure 3: A MathType window opened in MS Word.

It's possible that MathType will open in a different "format" than this; there are lots of preferences that can be set for the appearance of MathType; if your MathType window looks differently than what I'm showing, hopefully there are some overlapping features and you can still use this document to help understand MathType. If your MathType looks different from mine and you can't figure out how to get started, send me an email and we can discuss your situation.

To "answer the question" on this fake worksheet and "Find $\sin\left(\frac{\pi}{3}\right)$ ", you can start by just typing the letters "sin" since everything on your keyboard should produce the same letters and symbols in MathType as they do in "normal text". In Figure 4 (see page 3), I've typed "sin" in MathType. As you type the letters you may notice that they change from italic to not-italic once you finish typing all of the letters: this is because MathType is familiar with some standard functions and knows how best to represent these functions.

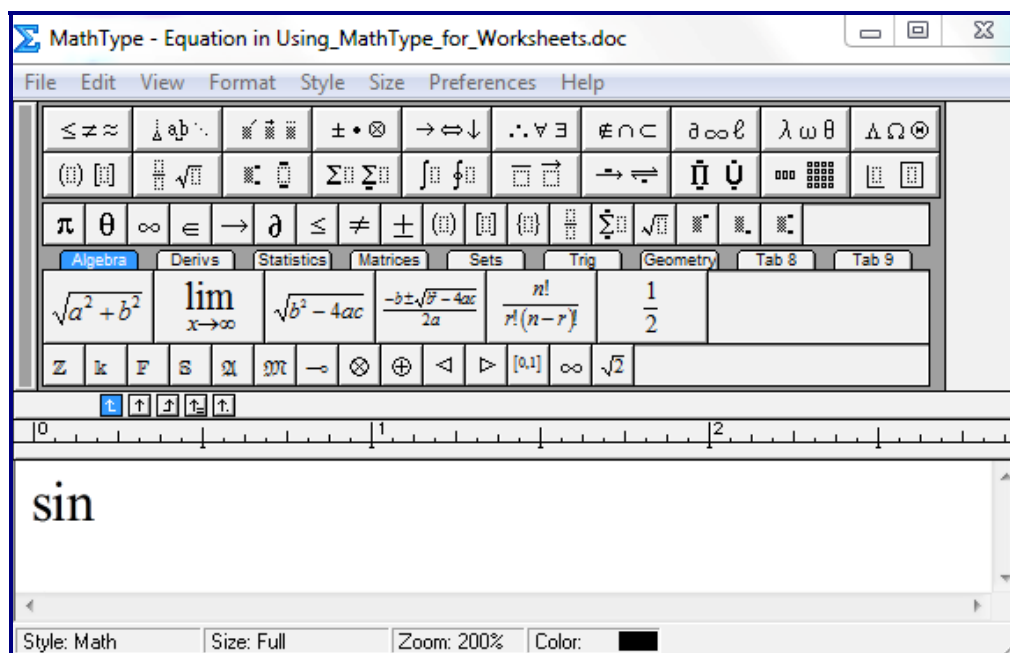


Figure 4: The beginning of our response.

Next, we can construct the parentheses that envelop our input value; list like the letters in “sin” which we get from our keyboard, we can get our parentheses from the parentheses on our keyboard. But those parentheses are “normal size” and will be dwarfed by the fractional input value so we can create parentheses that will “warp themselves” to whatever size is appropriate for our input value by utilizing the MathType symbol-palate. Finding the symbols that you want to use in MathType is user-friendly – although possibly a bit tedious when you’ve never used MathType before: all you need to do is to click on each “menu button” to see what’s available in that menu. The symbols that represent each button are usually suggestive of what’s in that menu. For example, you want parentheses so you should look for a button that has a symbol that might represent parentheses; in Figure 5, I’ve circled the relevant button.

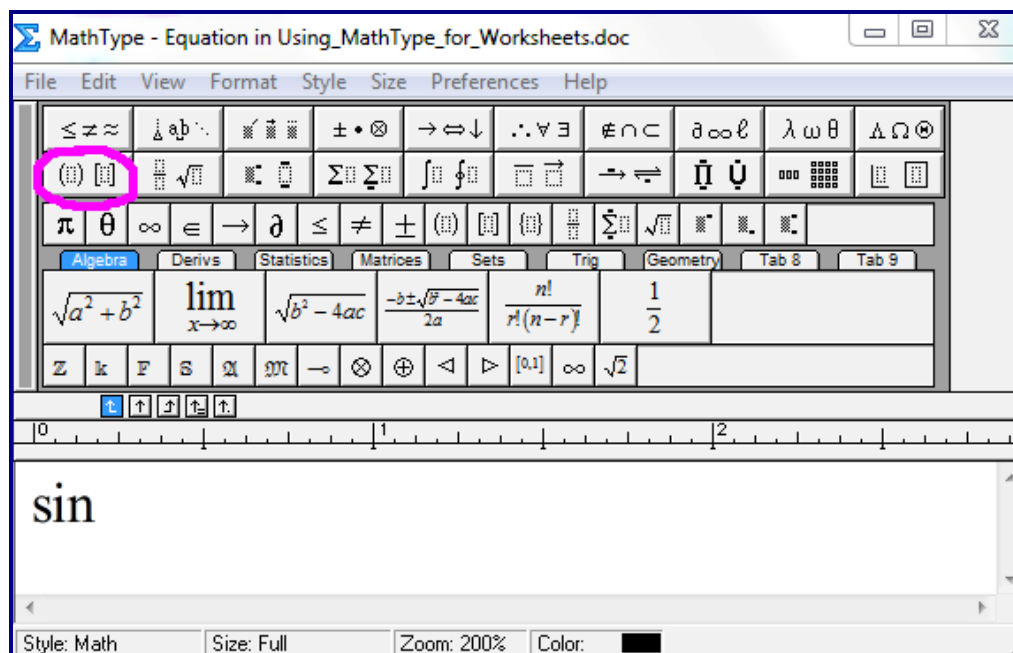


Figure 5: The button for the menu that includes parentheses is circled in pink.

If you click on the button circled in [Figure 5](#), you can see the options available in that menu; see [Figure 6](#). (While you're at it, I encourage you to click on EVERY button and glance through all of the available symbols to get a sense of what's available.)

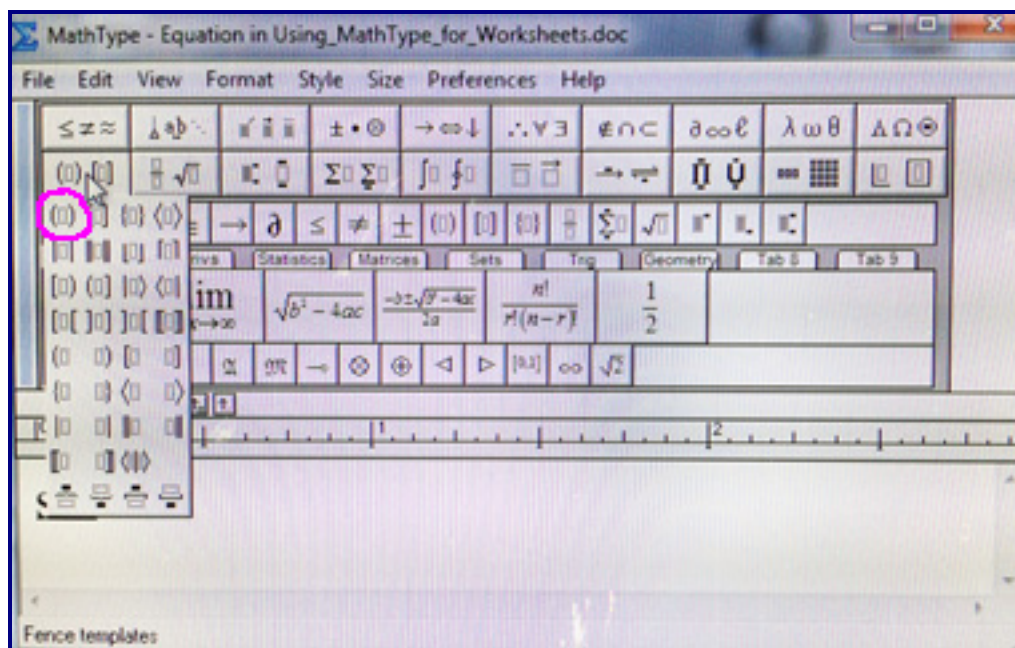


Figure 6: After clicking the button that shows parentheses, a drop-down menu opens. The first choice on the top-left (circled in pink) looks like a dotted region inside a pair of parentheses. (This is typical of a formatting template in MathType, with the dotted region representing the space where you can insert your own symbols.) After clicking on this option, parentheses should appear next to “sin”; see [Figure 7](#).

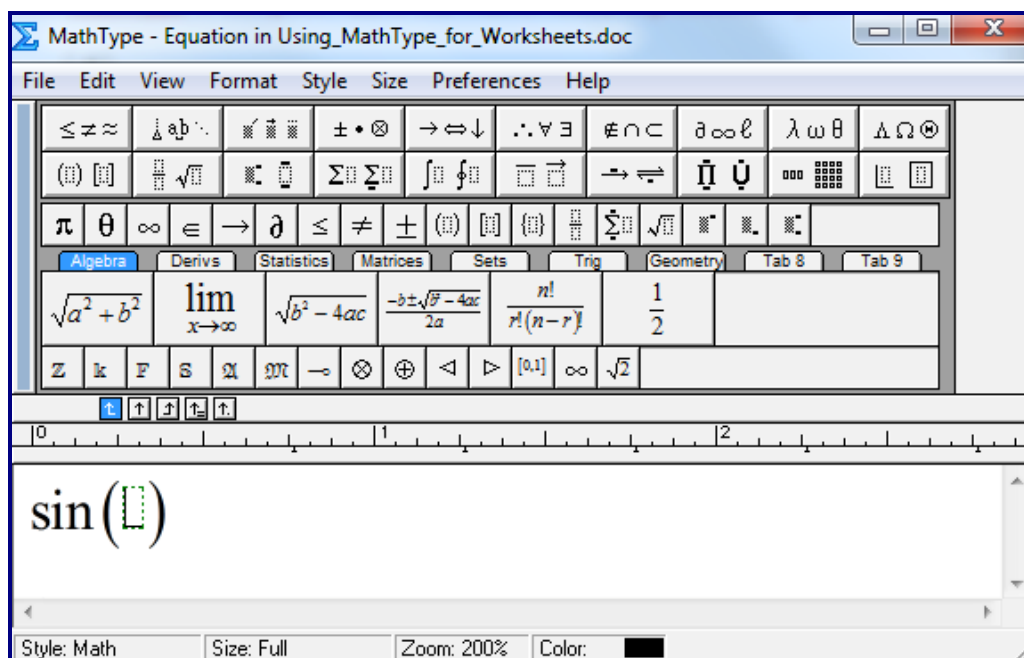


Figure 7: Parentheses inserted next to “sin”.

Now you need to create the fractional input value, $\frac{\pi}{3}$. Put your cursor in the dotted region inside the parentheses and then search the menu buttons for one that might contain a template for a fraction. In Figure 8, I've circled the relevant menu button.

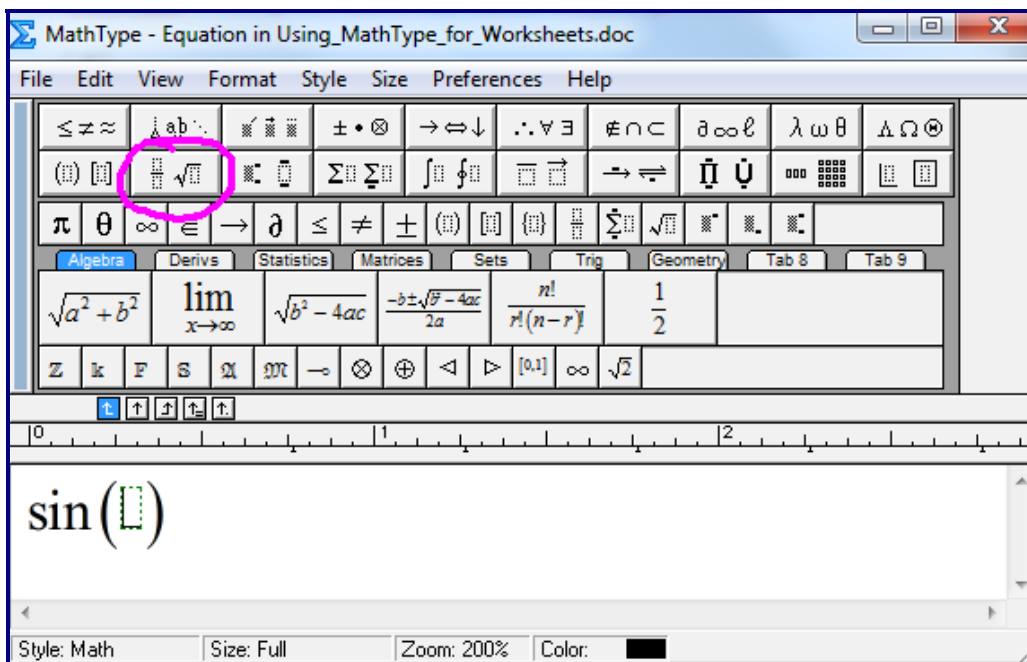


Figure 8: The menu that contains a template for a fraction is circled in pink..

After clicking on the menu circled in Fig. 8, both templates in the first row produce a nice fraction with a horizontal fraction bar; see Fig. 9. Either one will work but the one on the left gives a “full-sized fraction” so I’ll use that here. (The one on the right produces a smaller sized fraction.)

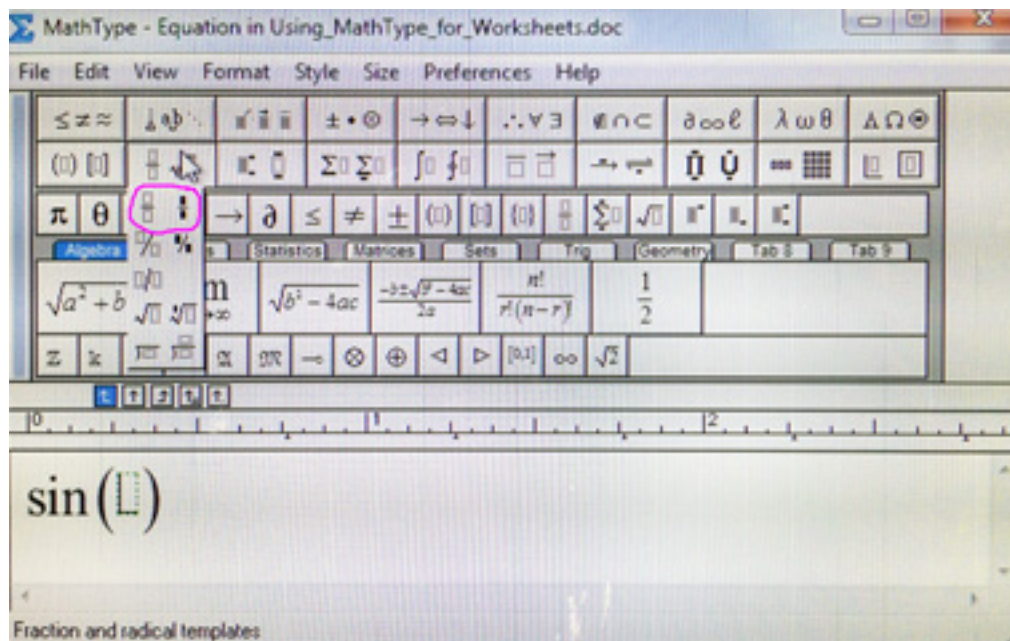


Figure 9: Both options (circled in pink) in the first row in this menu can be used to create a fraction with a horizontal fraction bar.

After clicking on the “large fraction template” (on the left inside the pink circle in Figure 9), you’ll get a template for a fraction inside the parentheses; see Figure 10.

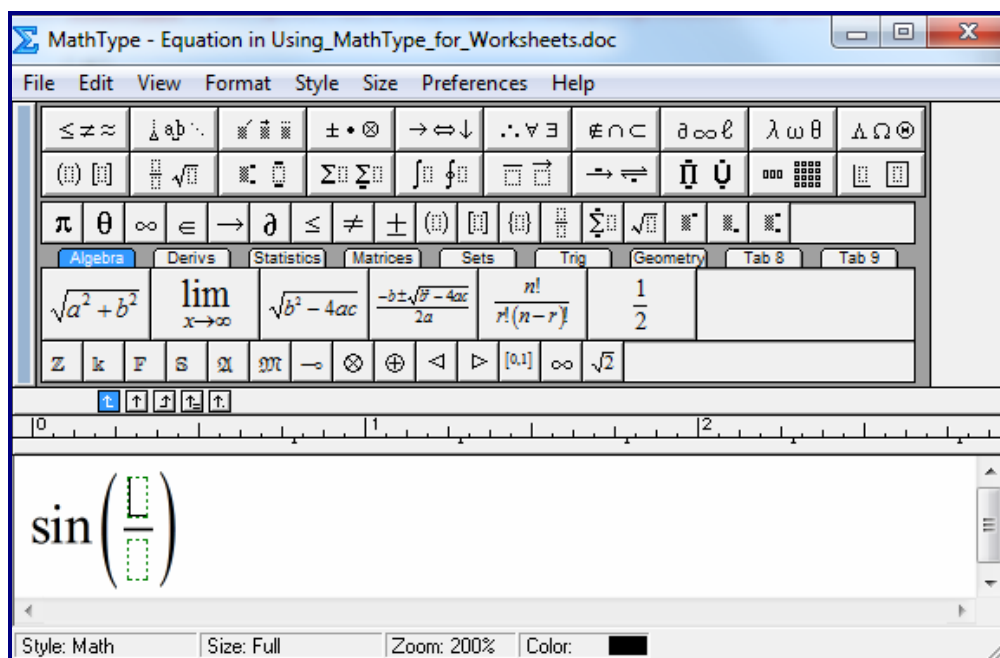


Figure 10: A fraction template inserted inside the parentheses.

Next, we need to insert “ π ” in the numerator and “3” in the denominator. We can get “3” by using the symbol on our keyboard. (As discussed previously, all of the symbols on your keyboard can be inserted in MathType by using your keyboard.) To create “ π ”, you need to access the menu that has Greek letters. As mentioned before, when you’re new to MathType, it can be a bit tedious trying to find the symbols that you want to find, but you just need to be patient and click on each menu until you find what you need; see Figure 11.

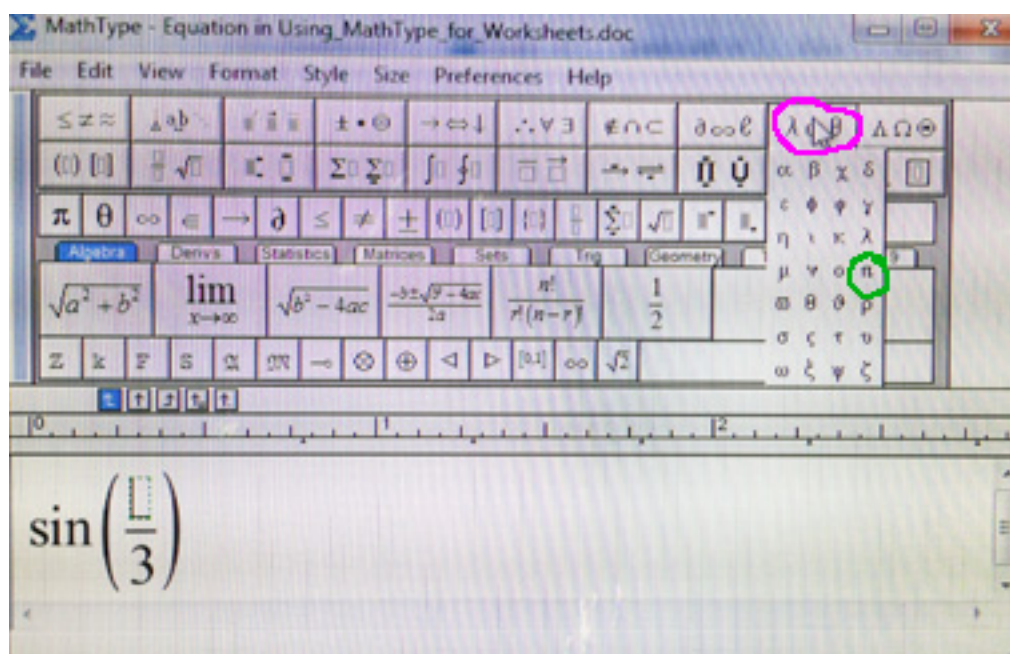


Figure 11: The button for the menu with Greek letters is circled in pink and the π symbol is circled in green.

After inserting the π symbol in the numerator of the input value, you now need to create an equal sign in order to communicate what “ $\sin\left(\frac{\pi}{3}\right)$ ” equals. Equal signs appear on most keyboards (probably in the upper right corner) so you can create an equal sign just by pressing that key on your keyboard. See Figure 12.

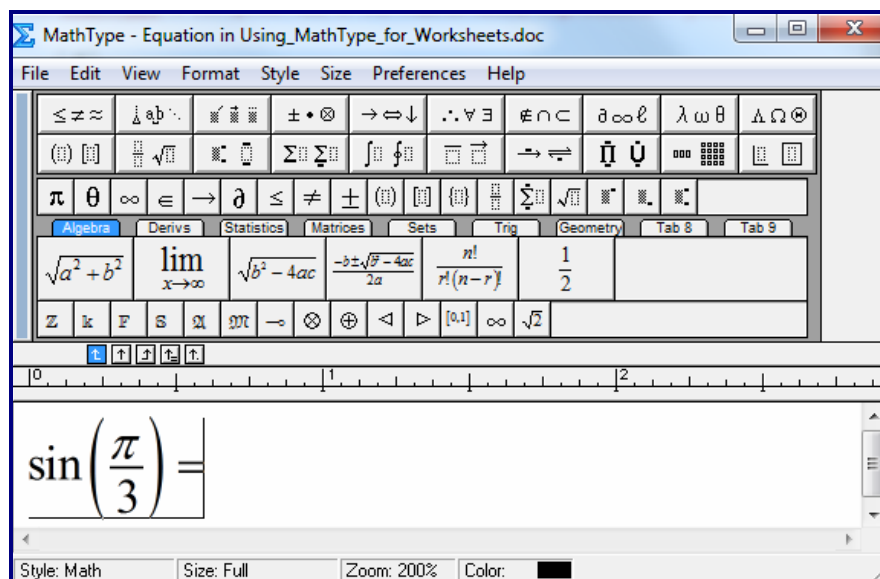


Figure 12: An equal sign inserted next to $\sin\left(\frac{\pi}{3}\right)$.

Now we need to construct the fraction $\frac{\sqrt{3}}{2}$ since that's what $\sin\left(\frac{\pi}{3}\right)$ equals. First, let's create a template for a fraction using the same menu option that we used to create the input $\frac{\pi}{3}$; then, we need to create “ $\sqrt{3}$ ” in the numerator. Looking at the menu buttons for something that might contain a radical symbol, you'll notice that radicals seem to be in the same menu as fractions, so you should click on that menu. See Figure 13.

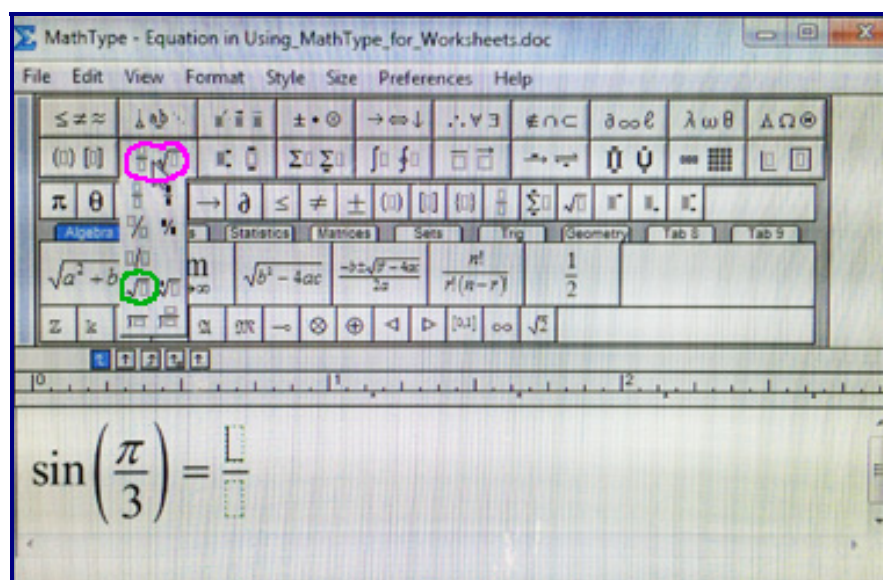


Figure 13: The button for the menu with a template for radicals is circled in pink and the template for a radical is circled in green.

After clicking on the template for a radical shown in Figure 13, a radical sign will show in your MathType menu with a dotted region to insert the input for the radical. Put your cursor inside this region and press the key for “3” on your keyboard. Now you can move your cursor to the denominator of the fraction and press the key for “2” on your keyboard to create the symbol in the denominator. Your response is finished and you’re ready to insert your MathType object into your MS Word document. There are a couple of ways to accomplish this but all you need to do is to close the MathType window by clicking on the “x” in the top-right corner; see Figure 14.

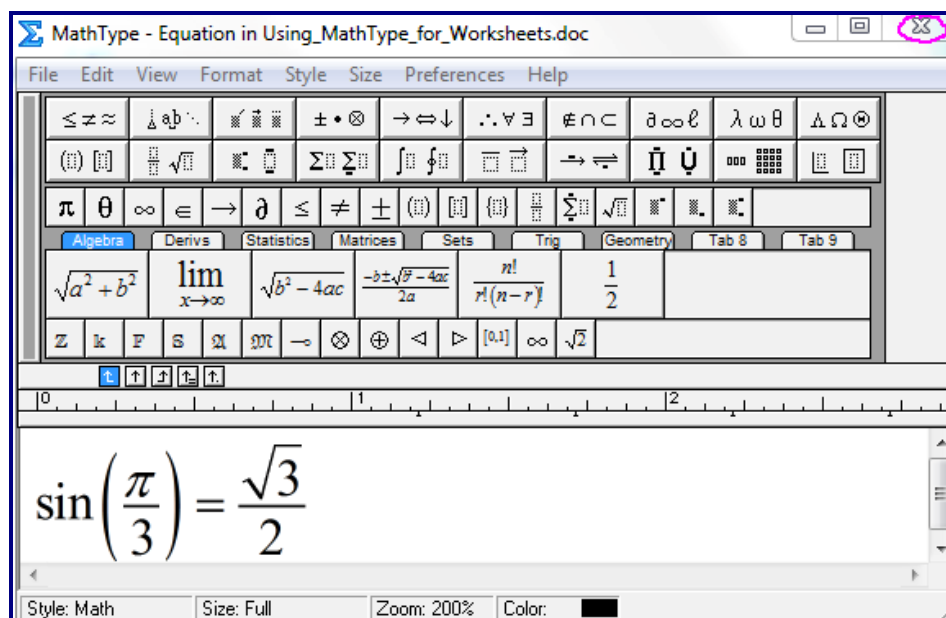


Figure 14: To insert your MathType object into your worksheet, close the MathType window by clicking on the “x” in the top right corner, circled in pink.

The first time you do this, a window will pop-up asking you if you want to “Save changes”; before you click “Yes”, first click on the box next to “Don’t show this”;

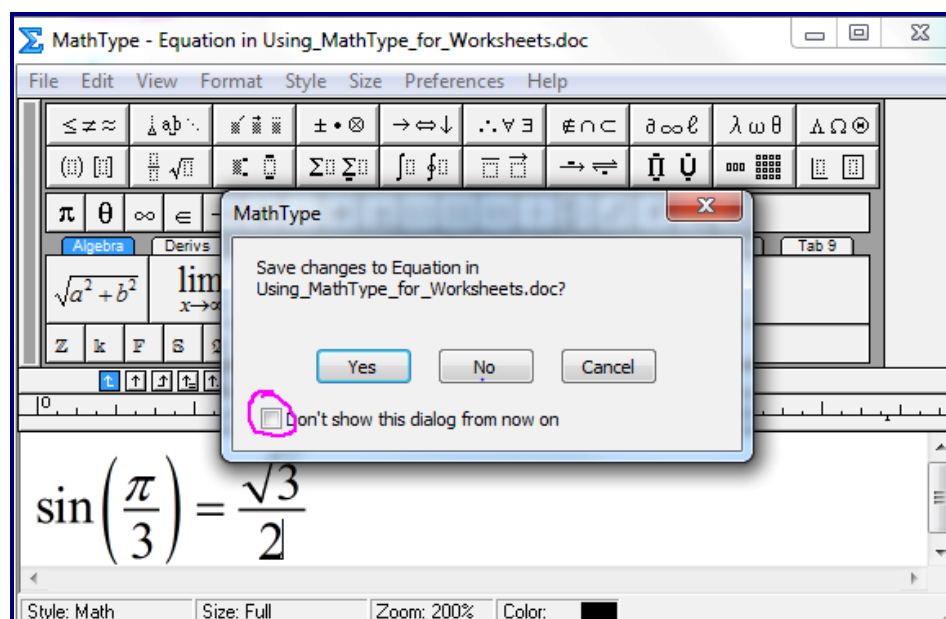


Figure 15: Click on the box circled in pink before clicking on “Yes”.

next time you close a MathType object, it will automatically be inserted into your worksheet. Then, click “Yes” and your object should be inserted into your worksheet; see Figure 16.

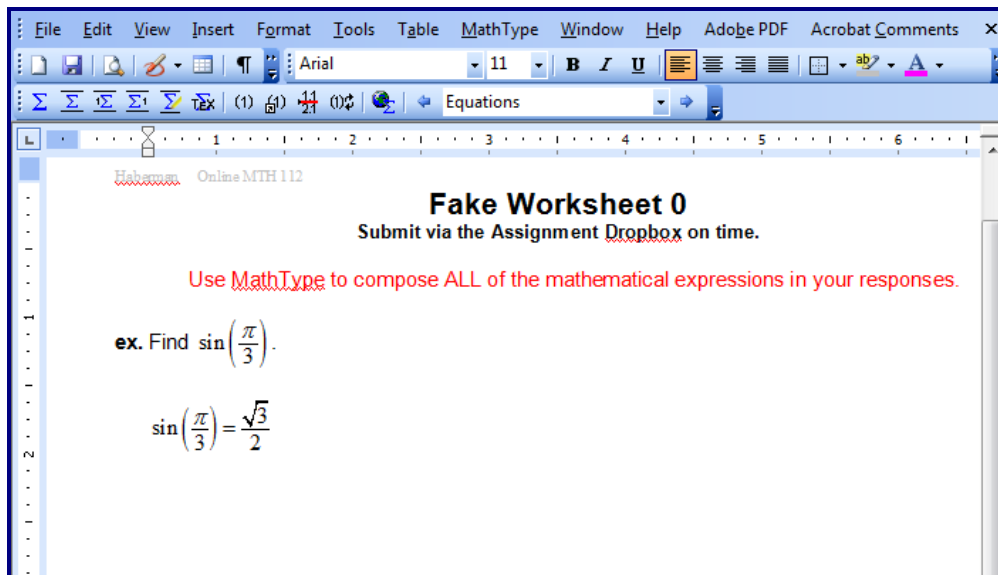


Figure 16: The MathType object inserted into MS Word.

I hope this helps you get started using MathType for your worksheets. If you have any questions about this document or about your efforts to use MathType, don't hesitate to ask.