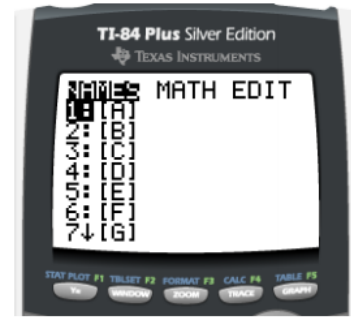This is what your TI-84 calculator looks like. The TI-83 calculator is similar in look and uses all the same key processes.

Shift Key
Arrow Keys
MATH Key
Inverse Key

Step 1: To access the matrix features of your calculator, you need to press the shift key then the inverse key.
This takes you to the matrix feature of the calculator, which looks like:

*If this feature has been used before, then the dimensions of the matrices entered will appear next to the matrix

Step 2: Press the right arrow key two times until EDIT is highlighted.

Step 3: Select a matrix by using the down arrow until the desired matrix is highlighted. (Here we will use matrix [A], so we do not need to use the arrows). Press ENTER to edit the matrix.

Step 4: Enter the number of rows of your matrix, then press ENTER. Enter the number of columns of your matrix, then press ENTER. (Here we are using a 3 x 4 matrix)

Step 5: When we enter our matrix, we enter it by rows. Enter the first row, then the second row, then the third row. Your screen should look similar to:

*The screen can only display 3 columns. To display the column that you cannot see, use the arrow keys to move from one end of the matrix to the other.

*The line between the 3rd and 4th columns of our augmented matrix will not appear on the calculator.

Step 6: Now that we have our matrix entered into the calculator, we need to find the Reduced Row Echelon Form of our matrix. To do this, enter the matrix feature by pressing shift then the inverse key. Press the right arrow key once until MATH is highlighted. Arrow down until rref(is highlighted. Your screen should look like:

Press ENTER. Your screen should look like:

Now go back into the matrix feature by pressing shift and then the inverse key. Arrow down to highlight your matrix, if necessary, and press ENTER. Now you are back to the main screen. Close the parentheses around your matrix. Your screen should look like:
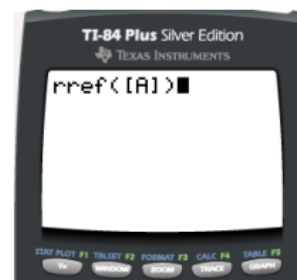
Press ENTER to solve the matrix. The result should look like:
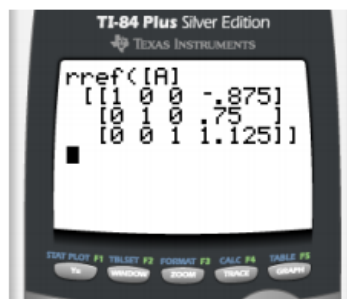
The calculator will always express the answer as a decimal. We can either leave the answer in decimal form or convert it to fractions (if possible). Here we will convert our decimals into fractions.

Converting your results into fractions: Press the MATH key once (this MATH key is below the ALPHA key). The highlighted option converts decimals into fractions. Press ENTER once to get back to the home screen, then press ENTER a second time to carry out the operation. The result will look like:

Converting your results into fractions: Press the MATH key once (this MATH key is below the ALPHA key). The highlighted option converts decimals into fractions. Press ENTER once to get back to the home screen, then press ENTER a second time to carry out the operation. The result will look like:

The first row shows that x is equal to -7/8, the second row shows that y is equal to 3/4, and the third row shows that z is equal to 9/8.