

# Solving Matrix Equations Using the Ti-89 Titanium

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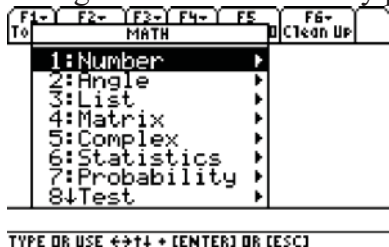
We will begin by solving these equations.

$$3x + 4y = 1$$

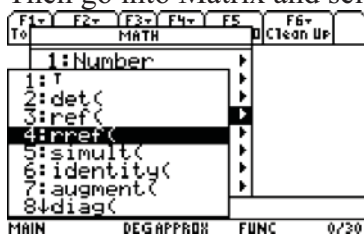
Note: the solution is  $x = 0.714$ ,  $y = -0.286$

$$2x - 2y = 2$$

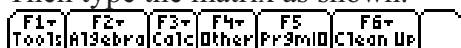
First go to the math menu by pressing 2<sup>nd</sup>, MATH.



Then go into Matrix and select the rref( Function.

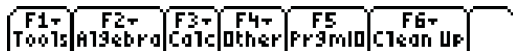


Then type the matrix as shown.



`rref([3,4,1;2,-2,2])`

Press the Enter button and the answers should appear. This method will also work for 3X3 matrices.

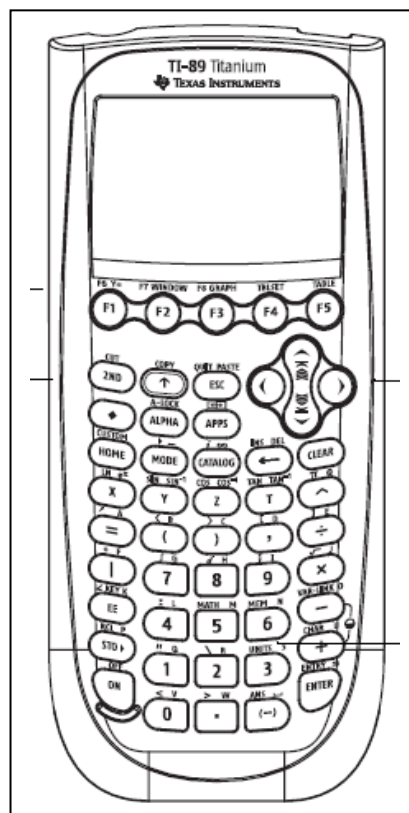


`rref([3 4 1  
2 -2 2])`

`[1. 0. .714285714286  
0. 1. -.285714285714]`

`rref([3,4,1;2,-2,2])`

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We have successfully solved the set of equations. The solution is:

$$X = 0.714285714286$$

$$Y = -0.285714285714$$