

Solving Matrix Equations Using the Ti-89 Titanium

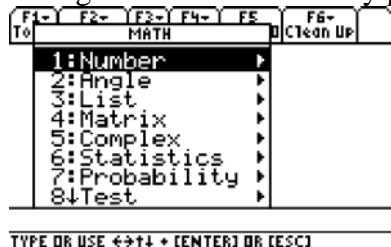
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We will begin by solving these equations.

$$\begin{aligned} 3x + 4y &= 1 \\ 2x - 2y &= 2 \end{aligned}$$

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

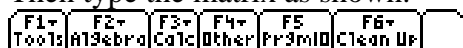
First go to the math menu by pressing 2nd, MATH.



Then go into Matrix and select the rref(Function.



Then type the matrix as shown.



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

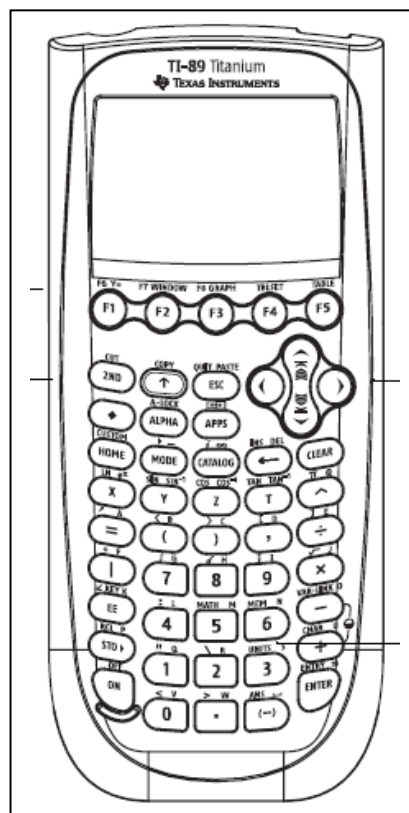
Press the Enter button and the answers should appear. This method will also work for 3X3 matrices.



■ rref($\begin{bmatrix} 3 & 4 & 1 \\ 2 & -2 & 2 \end{bmatrix}$)

$$\begin{bmatrix} 1. & 0. & .714285714286 \\ 0. & 1. & -.285714285714 \end{bmatrix}$$

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



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

$$X = 0.714285714286$$

$$Y = -0.285714285714$$