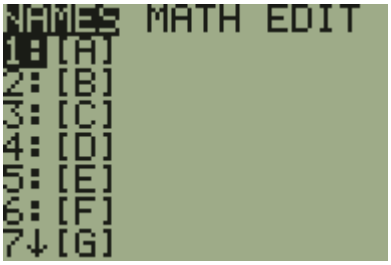
Solving Linear Systems Using Matrices

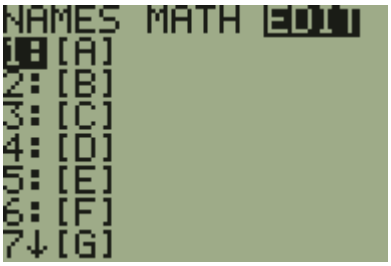
Example: $\begin{cases} 18x + 3y - 22z = -507 \\ 18x + 29y + 8z = 171 \\ -18x - 16y - 47z = 492 \end{cases} \Rightarrow \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 18 & 3 & -22 \\ 18 & 29 & 8 \\ -18 & -16 & -47 \end{bmatrix}^{-1} \begin{bmatrix} -507 \\ 171 \\ 492 \end{bmatrix}$

1. Enter the matrices.

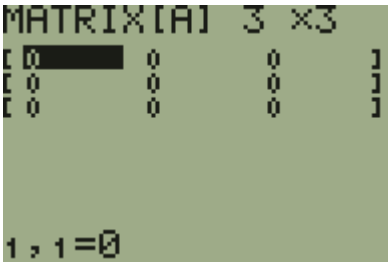
Press **2ND** x^{-1} to get the MATRIX menu



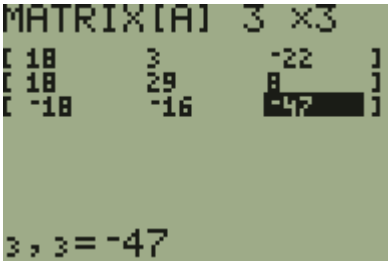
Arrow right to **EDIT**
Select **1: [A]** by pressing **ENTER**

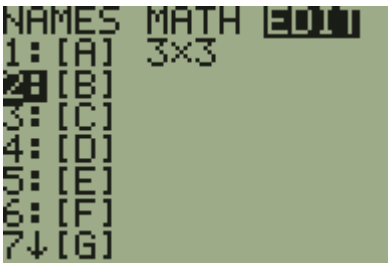
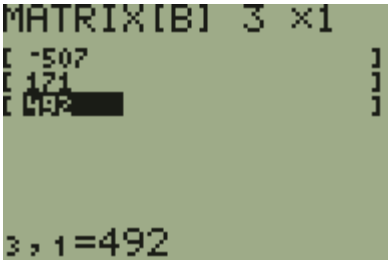


Enter the correct dimensions of the matrix



Enter the numbers



Press **2ND** x^{-1} to get the MATRIX menu Arrow over to **EDIT** Select **2: [B]** by pressing **ENTER**	
Enter the correct dimensions of the matrix Enter the numbers	
Press **2ND MODE** to Quit	
2. Enter the equation to find the solution.	
Press **2ND** x^{-1} to get the MATRIX menu Select **1: [A]** by pressing **ENTER** Press x^{-1} Press **2ND** x^{-1} to get the MATRIX menu Select **2: [B]** by pressing **ENTER**	
Press **ENTER** again.