Solve the system

$$\begin{aligned} 5x+7y+12z &= 134,000 \\ 2x+3y+\ 5z &= \ 56,000 \\ x+\ y+\ \ z &= \ 14,000 \end{aligned}$$

using the inverse matrix of the coefficient matrix

$$A=\begin{bmatrix} 5 & 7 & 12 \\ 2 & 3 & 5 \\ 1 & 1 & 1 \end{bmatrix}$$

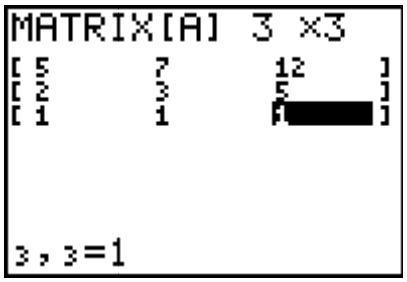
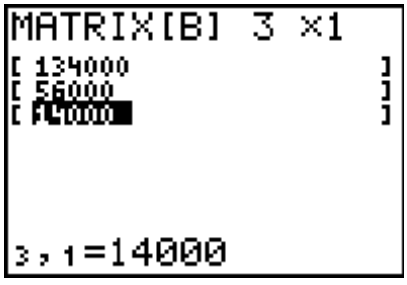
and the constant matrix

$$B=\begin{bmatrix} 134,000 \\ 56,000 \\ 14,000 \end{bmatrix}$$

We'll calculate

$$X = A^{-1}B$$

to find the solution to the system of equations.

Enter the matrices A and C 1. Press 2nd x^{-1} to edit the matrix. 2. Move to the EDIT tab and select 1: [A]. 3. Enter matrix A.	
4. Repeat the process and enter matrix B. 5. Press 2nd MODE to QUIT and return to the home screen.	

Find the product matrix of A^{-1} and B on the home screen

6. Press [2nd][x^{-1}] to enter the name of the matrix A.
7. Use the [x^{-1}] key to place the inverse sign after of matrix A as shown.

   Press [2nd][x^{-1}] to enter the name of the matrix B. Note that you do not need to see the inverse matrix of A.
8. Press [ENTER] to see the product.