

Solve the problems and get your answer in final form. Then copy your solutions **neatly written** onto this form.

1. Consider the system

$$\begin{aligned}x_1 + 3x_2 + 5x_3 &= -11 \\5x_1 + 16x_2 + 27x_3 &= -60 \\2x_1 + 6x_2 + 11x_3 &= -19\end{aligned}$$

Write the augmented coefficient matrix A for this system, and then use elementary row operations to find the matrix B that is the reduced row echelon form (RREF) of A . Show each matrix that you produce in the sequence of matrices that ends with B . Use the shorthand notation I prescribed to indicate each elementary row operation that you perform. Use B to write down the solution set of the original system.

2. Follow the directions in Exercise #1 for the following system.

$$\begin{aligned}5x_1 - 10x_2 - 14x_3 &= 58 \\ -2x_1 + 4x_2 + 6x_3 &= -24\end{aligned}$$