

1. Solve the following linear system by transforming its augmented matrix into reduced echelon form.

$$\begin{array}{rrrrrrcl} 2x_1 & + & 4x_2 & + & x_3 & - & 3x_4 & = & -2 \\ x_1 & + & 2x_2 & - & x_3 & & & = & 2 \\ & & x_2 & + & x_3 & - & 2x_4 & = & -3 \\ x_1 & - & 4x_2 & - & 7x_3 & - & x_4 & = & -19 \end{array}$$