1. Find the reduced echelon form of this matrix.

$$\begin{pmatrix} 2 & 1 & 0 \\ 1 & 0 & -1 \\ 1 & -1 & -3 \end{pmatrix}$$

2. Show that this matrix is row equivalent to the one in the prior question.

$$\begin{pmatrix} 3 & 2 & 1 \\ 0 & 2 & 4 \\ 2 & 0 & -2 \end{pmatrix}$$

3. Find what combination of these rows

$$\begin{pmatrix} 2 & 1 & 0 \end{pmatrix} \quad \begin{pmatrix} 1 & 0 & -1 \end{pmatrix} \quad \begin{pmatrix} 1 & -1 & -3 \end{pmatrix}$$

makes the row $\begin{pmatrix} 3 & 2 & 1 \end{pmatrix}$.