Name: Solutions

Determine the null space of the matrix

$$A = \begin{pmatrix} 1 & 2 & -3 & -1 \\ -2 & -4 & 6 & 3 \end{pmatrix}.$$

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

So the null space is spanned by the vectors

$$\begin{pmatrix} -2 \\ 1 \\ 0 \\ 0 \end{pmatrix} \text{ and } \begin{pmatrix} 3 \\ 0 \\ 1 \\ 0 \end{pmatrix}.$$