

#16 Start row reducing

$$A = \begin{bmatrix} 1 & 0 & 0 & -2 & -3 \\ 0 & 2 & 2 & 0 & 0 \\ 0 & 0 & 1 & 3 & 1 \\ -2 & 3 & 2 & 1 & 5 \end{bmatrix} \sim$$

$$\left. \begin{bmatrix} 1 & 0 & 0 & -2 & -3 \\ 0 & 0 & 2 & 6 & 2 \\ 0 & 0 & 1 & 3 & 1 \\ 0 & 1 & 0 & -3 & 1 \end{bmatrix} \right\}$$

one a scalar
multiple of the
other \Rightarrow

row of zeros (doesn't hurt!)

Ah ha! Three pivots, so I could transform into echelon form + we'd have a solution (or rather, an infinite number of solns).