

1. Consider the following linear system:

$$\begin{array}{rcccccccl} x_1 & + & 5x_2 & - & 2x_3 & & & = & 0 \\ & & - & 2x_2 & + & x_3 & - & x_4 & = & -1 \\ & & & & & & & x_4 & = & 5 \end{array}$$

- (a) Is this system in *triangular form*, *echelon form*, or neither?
- (b) Which variables are *leading variables*?
- (c) Which variables are *free variables*?
- (d) Find the set of solutions of the system.