This quiz has two problems worth 10 points.

1. (5 points) The question below concerns the system of equations $x + y = 3$ and $-x + y = 1$.

   (a) (1 point) Write this system as a matrix·vector equation of the form $A\mathbf{x} = \mathbf{b}$.

   (b) (4 points) This system of equations has solution $x = 1$, $y = 2$. **Draw** the row and column pictures in this case. Label which one is which. Your pictures don't need to be perfect but they should be roughly correct and labelled.

2. (5 points) Reduce the system below to upper triangular form using two row operations. List the pivots and the multipliers. Solve by back substitution.

$$\begin{array}{rcrcl} x & & & + & z = 0 \\ 2x & + & 3y & - & z = 3 \\ & & 4y & + & z = 2 \end{array}$$