

Please print your name:

**Problem 1.** Convert the given system to an augmented matrix and then find all solutions by transforming the system to reduced echelon form and back substituting.

 $\begin{array}{rcrcrc} 2x_1 + x_2 &=& 2\\ -x_1 - x_2 - x_3 &=& 1 \end{array}$