

Linear - Quiz 1

Name: _____

1. (4 points) Determine if the system is consistent. You do not need to completely solve the system, but you should explain your reasoning (briefly) for why the system is consistent or not.

$$\begin{array}{rcccc} x_1 & & +3x_3 & & = & 2 \\ & x_2 & & -3x_4 & = & 3 \\ & -2x_2 & +3x_3 & +2x_4 & = & 1 \\ 3x_1 & & & +7x_4 & = & -5 \end{array}$$

2. (6 points) Choose x and y such that the system has

- (a) No solution
- (b) A unique solution
- (c) Infinitely many solutions

$$\left[\begin{array}{cc|c} 1 & x & 3 \\ 2 & 10 & y \end{array} \right]$$

Explain your reasoning.