

Math 2210-002/010 Quiz 2

Name: \_\_\_\_\_

Due: 2/11/19

This is a two-stage quiz. You will receive this back with each question graded pass/fail in our next class meeting. You have until the date specified above to submit corrections for partial credit.

1. (6 points) Solve the following linear system by way of finding a particular matrix in reduced echelon form.

$$x_1 - 7x_2 + 6x_4 = 5$$

$$x_3 - 2x_4 = -3$$

$$-x_1 + 7x_2 - 4x_3 + 2x_4 = 7$$

2. Consider the vectors  $\mathbf{a} = \begin{bmatrix} 2 \\ 1 \end{bmatrix}$  and  $\mathbf{b} = \begin{bmatrix} -1 \\ 3 \end{bmatrix}$  in  $\mathbb{R}^2$ .

(i) (2 points) Compute the linear combination of  $\mathbf{a}$  and  $\mathbf{b}$  with weights  $c_1 = -2$  and  $c_2 = 1$ .

(ii) (2 points) Sketch this linear combination below.

