

You have 20 minutes to complete the quiz. No calculators.

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

1. (5 points) Find all solutions of the following linear system:

$$\begin{aligned} -2x_1 + 2x_2 &= 4 \\ x_1 - x_2 &= -2 \end{aligned}$$

2. (5 points) Consider the following linear system:

$$\begin{aligned} cx + y &= 5 \\ x + y &= 2 \end{aligned}$$

For what values of  $c$  does this system have no solutions? For which values of  $c$  does it have a unique solution? For which values of  $c$  does it have infinitely many solutions?