

Name: _____

MATH 108

Fall 2021

HW 2: Due 09/28

*“Listen, I’m not the nicest guy in the universe, because I’m the smartest,
and being nice is something stupid people do to hedge their bets.”*

–Rick Sanchez, Rick & Morty

Problem 1. (10pt) Solve the following system of equations:

$$2x - y = 5$$

$$x + y = 1$$

Problem 2. (10pt) Solve the following system of equations:

$$4x - 3y = 10$$

$$6x + 5y = -4$$

Problem 3. (10pt) Solve the following system of equations:

$$\begin{aligned}\frac{1}{2}x - \frac{1}{6}y &= -1 \\ x - \frac{1}{3}y &= -2\end{aligned}$$

Problem 4. (10pt) Solve the following system of equations:

$$6x - 5y = 1$$

$$3x + 10y = 3$$

Problem 5. (10pt) Plot the solution set to the system of inequalities:

$$4x + y \leq 1$$

$$x - 2y \leq -20$$

Problem 6. (10pt) Plot the solution set to the system of inequalities:

$$\begin{aligned}x &\geq 1 \\ -3x + y &\geq -4\end{aligned}$$