**Name:** _____

**MATH 101**
**Spring 2022**
**HW 11: Due 04/12**

**Problem 1.** (10pt) Determine whether $(x, y) = (3, -1)$ is a solution to the following system of equations:

$$4x - 6y = 18$$
$$5x + y = 12$$

**Problem 2.** (10pt) Use substitution to solve the following system of equations:

$$2x - y = 11$$
$$5x + 2y = 14$$

**Problem 3.** (10pt) Use elimination to solve the following system of equations:

$$3x - 5y = -23$$
$$2x + 10y = 10$$

**Problem 4.** (10pt) Determine whether the following system of equations has a solution:

$$-3x + 5y = -4$$
$$6x - 15y = 18$$