

Sample Questions to the Final Exam in Math 1111—Chapter 6

Section 6.1

1. Solve the following system of equations by using the method of substitution:

$$5x + y = 11 \text{ and } 3x - 2y = 4.$$

- a. $\left(\frac{15}{13}, \frac{68}{13}\right)$ b. (2, 21) c. (2, 1) d. $\left(\frac{15}{8}, -15\right)$ e. None of these

2. The point of intersection for the following system of equations (using the method of substitution) is:

$$3x - 2y = 16$$

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

- a. $\left(\frac{136}{23}, \frac{50}{23}\right)$ b. (12, 10) c. (12, -38) d. No solution e. None of these

3. Solve the following system of equations using the method of substitution:

$$2x - 3y = 11 \text{ and } -4x + 6y = 1.$$

- a. No solution b. $\left(\frac{17}{2}, 2\right)$ c. Infinitely many solutions d. (4, -1) e. None of these

4. The x-coordinate of the point of intersection of the following system of equations

(using the method of substitution) is: $\frac{1}{3}x - \frac{3}{5}y = -2$ and $2x - y = 14$.

- a. 25.5 b. 37 c. 44 d. 12 e. None of these

Section 6.2

1. Solve the following system of equations using the method of elimination:

$$6x - 5y = 4 \text{ and } 3x + 2y = 1.$$

- a. $\left(2, \frac{8}{5}\right)$ b. $\left(-\frac{2}{9}, -\frac{8}{5}\right)$ c. $\left(-\frac{8}{5}, -\frac{68}{25}\right)$ d. $\left(\frac{13}{27}, -\frac{2}{9}\right)$ e. None of these

2. The y-coordinate of the point of intersection of the following system of equations (using the method of elimination) is:

$$2x - 3y = -2$$

$$x - y = 4$$

- a. 12 b. 10 c. $\frac{74}{13}$ d. 37 e. None of these

3. The point of intersection for the following system of equations (using the method

of elimination) is: $6x - 8y = 2$ and $\frac{9}{2}x - 6y = \frac{3}{2}$.

- a. $\left(\frac{3}{2}, 4\right)$ b. $\left(\frac{2}{3}, \frac{1}{4}\right)$ c. Infinitely many solutions d. No solution e. None of these

4. Use the method of elimination to solve the system: $4x - 6y = 7$ and $y = \frac{2}{3}x + 5$.

- a. $\left(\frac{11}{8}, -\frac{1}{4}\right)$ b. No solution c. Infinitely many solutions d. $\left(-\frac{3}{8}, -\frac{17}{12}\right)$ e. None of these