Grima MAT 151

Chapter 8 – extra practice test (Answers on page 3)

1) Solve each system of equations using either the substitution method or the elimination method,0 points if no work is shown even if answer is correct.

$2x - 3y = -1$
$x = 2y - 2$

2) Solve each system of equations using either the substitution method or the elimination method,0 points if no work is shown even if answer is correct.

$2x + 4y = 18$
$3x - 5y = 5$

3) Solve each system of equations, by hand **without matrices**, 0 points if no work is shown even if answer is correct. (NO matrices for this solution, an answer with no work will get -10 points)

Hint: pair the middle equation with the other two and drop out the x's

$x + y - 2z = 2$

$-x + y + 3z = 2$

$x - 3y + 3z = 8$

4) Solve the system of equations using matrices and row operations. 0 points if no matrix work is shown even if answer is correct.

$x + 4y = 7$
$-2x + 5y = -1$

5) Use the Matrices defined below to find: $2B + 5D$

$B = \begin{bmatrix} 4 & 5 \\ 1 & 2 \end{bmatrix}$ $D = \begin{bmatrix} 3 & 2 \\ 5 & -1 \end{bmatrix}$

6) Use the Matrices defined below to find: BC

$B = \begin{bmatrix} 4 & 5 \\ 1 & 2 \end{bmatrix}$ $C = \begin{bmatrix} 1 & 0 & -1 \\ 7 & 2 & 4 \end{bmatrix}$

7) Solve the system of equations using Cramer's rule, 0 points if solved with another method, even if answer is correct

$2x + 3y = 7$

$2x + y = 5$

You will get points for finding each of these values on the test.

$D =$ $D_x =$ $D_y =$ $x =$ $y =$

8) Solve the system of equations.

$x + y = 8$
$y^2 + x = 10$

9) Solve the system of equations.
$x + y = 7$
$x^2 + y = 13$

10) Label the x and y-intercepts then sketch a graph of the inequality (Make sure to shade in the correct direction.)

$6x + 3y \leq 18$

11) Label the x and y-intercepts then sketch a graph of the inequality (Make sure to shade in the correct direction.)

$2x + 3y > 12$