

- i. Show all relevant work. No work, no credit.
- ii. Write your answers in the spaces provided on the right.
- iii. Staple when you turn in the assignment.
- iv. Due Wednesday, November 19 at the beginning of the class.

**Solve each system of equations using matrix equations,  $Ax=b$ .**

$$1) \begin{cases} 5x + 5y = 5 \\ 4x + 2y = -8 \end{cases}$$

**Solve each system of equations using matrix equations,  $Ax=b$ .**

$$2) \begin{cases} 3x + 3y = 9 \\ 5x + 5y = 10 \end{cases}$$

**Find the inverse of Matrix A.**

3) Let  $A = \begin{bmatrix} -3 & 3 \\ 0 & 2 \end{bmatrix}$ .

**Show that A and B are inverse Matrices.**

4)  $A = \begin{bmatrix} 0 & 3 \\ 3 & 4 \end{bmatrix}$ ,  $B = \begin{bmatrix} -\frac{4}{9} & \frac{1}{3} \\ \frac{1}{3} & 0 \end{bmatrix}$

5)  $A = \begin{bmatrix} 1 & 3 & 2 \\ 1 & 3 & 3 \\ 2 & 7 & 8 \end{bmatrix}$ ,  $B = \begin{bmatrix} -3 & 10 & -3 \\ 2 & -4 & 1 \\ -1 & 1 & 0 \end{bmatrix}$