Secondary 2H **Name**_____ **Desk** _____

Unit 6 **Solving Systems Using RREF**

Score _____

SHOW ALL WORK.

1. Perform the indicated row operations on the given matrix.

$$\left[\begin{array}{ccc|c} 3 & -3 & -1 & 6 \\ 8 & -5 & 5 & -1 \\ 0 & -6 & -9 & -3 \end{array}\right]$$

a. R2↔ R3

b. $(-1) \cdot R3 + R2 \rightarrow R2$

Use Gauss-Jordan Elimination to solve #2 – 5.

2. x + y = 5
   2x + 3y = 10

3. x + 2y = 3
   –x – 2x = -5

4. 3x + 4y + 5z = 18
   2x – y + 8z = 13
   5x – 2y + 7z = 20

5. $-4x - 6z = -12$
   $-6x - 4y - 2z = 6$
   $-x + 2y + z = 9$

Challenge Problem: Solve the following system of equations using a matrix.

2x + y = 3
y – z = 1
x + 2w = 0
3z = w