

Review Matrices 2

1. $3(A-C) = \begin{bmatrix} -27 & 18 \\ -9 & 21 \end{bmatrix}$

2. $|D| = -12$

3. $-\frac{1}{2}(AD) = \begin{bmatrix} -29\frac{1}{2} & 35\frac{1}{2} & -9 \\ 5 & -25\frac{1}{2} & 3 \end{bmatrix}$

4. C^{-1} = does not exist as $\text{Det} = 0$

5. $B^2 = \begin{bmatrix} -8 & -3 \\ 4 & -11 \end{bmatrix}$

6. $D^{-1} = \begin{bmatrix} -\frac{1}{3} & -\frac{2}{3} & -\frac{2}{3} \\ \frac{1}{6} & -\frac{1}{6} & -\frac{1}{6} \\ \frac{1}{12} & \frac{13}{12} & \frac{7}{12} \end{bmatrix}$

7. $|B| = 10$

8. $2A - 3B + C = \begin{bmatrix} -6 & 9 \\ -9 & 11 \end{bmatrix}$

9. $\begin{bmatrix} 8+6y & 2 \\ -10 & 2x \end{bmatrix} + \begin{bmatrix} 1 & 6-5z \\ 2 & 4 \end{bmatrix} = \begin{bmatrix} y-3 & 3 \\ -8 & -2 \end{bmatrix}$

$$2x + 4 = -2$$

$$2x = -6$$

$$\boxed{x = -3}$$

$$8 + 6y + 1 = y - 3$$

$$9 + 6y = y - 3$$

$$5y = -12$$

$$\boxed{y = -12/5}$$

$$2 + 6 - 5z = 3$$

$$8 - 5z = 3$$

$$-5z = -5$$

$$\boxed{z = 1}$$

$$10. \quad 2x - (-12) = 6 - 3x$$

$$2x + 12 = 6 - 3x$$

$$5x = -6$$

$$\boxed{x = -6/5}$$

$$11. \quad (20x + 0 + 3x) - (-2x + 0 + 10x) = 15$$

$$23x - 8x = 15$$

$$15x = 15$$

$$\boxed{x = 1}$$

12.

$$\begin{bmatrix} 1 & 1 \\ 2 & -1 \end{bmatrix} \cdot \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} -6 \\ 2 \end{bmatrix}$$

$$\begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} -4/3 \\ -14/3 \end{bmatrix}$$

13.

$$\begin{bmatrix} 4 & -2 \\ 7 & 1 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 6 \\ 15 \end{bmatrix}$$

$$\begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 2 \\ 1 \end{bmatrix}$$

14.

$$\begin{bmatrix} 3 & 1 & 2 \\ 6 & -2 & 0 \\ 3 & 1 & -2 \end{bmatrix} \begin{bmatrix} a \\ b \\ c \end{bmatrix} = \begin{bmatrix} 6 \\ 2 \\ 0 \end{bmatrix}$$

$$\begin{bmatrix} a \\ b \\ c \end{bmatrix} = \begin{bmatrix} 2/3 \\ 1 \\ 3/2 \end{bmatrix}$$

15.

	Wins	Losses
Braves	59	29
Mariners	37	51
Cubs	48	39

16.

(A)

3x4

5x3

$\boxed{5 \times 4}$

8x5

(B)

4x5

5x3

4x1

$\boxed{5 \times 3}$

(AB)

$\boxed{3 \times 5}$

$\boxed{\text{No Solution}}$

5x1

8x3