ALG 2 Unit 10 Test Practice

#1) Info → 2 × 3 matrix

#2) Find the determinant of a 2×2 matrix

#3) $\begin{vmatrix} -3 & 4 \\ 2 & 5 \end{vmatrix}$ $\begin{vmatrix} 5 & -5 \\ 1 & -1 \end{vmatrix}$

#4) $\begin{vmatrix} 1 & 2 & 0 \\ -3 & 4 & -1 \\ 0 & 3 & 5 \end{vmatrix}$ ← must use a GC:
→ Mat A (place into 3×3)
→ OPTN → MAT → DET

#5) Does the inverse exist?

Are these matrices inverses of one another?

$A = \begin{bmatrix} 2 & 0 \\ -1 & 5 \end{bmatrix}$ $B = \begin{bmatrix} \frac{1}{2} & 0 \\ \frac{1}{10} & \frac{1}{5} \end{bmatrix}$

#6) Write a matrix equation for the given system of equations.

$$\begin{aligned} x - 2y + z &= 9 \\ 4x \quad\; + 6z &= 0 \\ y - z &= 2 \end{aligned}$$

#7) Write the dimensions of the given matrix

$$\begin{bmatrix} 2 & -6 \\ 3 & -1 \\ 0 & 4 \end{bmatrix}$$

#8) Perform the indicated operation.

#9)
$$\begin{bmatrix} 0 & 3 \\ -1 & 5 \end{bmatrix} + \frac{1}{4}\begin{bmatrix} -4 & -16 \\ 12 & 0 \end{bmatrix}$$

#10) Find the product,
$$\begin{bmatrix} 2 & 1 \\ -3 & 0 \end{bmatrix}\begin{bmatrix} -3 & -2 \\ 4 & 5 \end{bmatrix}$$

#11) Find the inverse
$$A = \begin{bmatrix} 6 & -1 \\ -2 & 5 \end{bmatrix}$$

#12) Solve the matrix equation. Must show work for multiplication

#13)

#14)
$$\begin{bmatrix} 2 & 1 & 0 \\ -1 & 0 & 3 \\ 3 & -1 & 2 \end{bmatrix}\begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 0 \\ -8 \\ -11 \end{bmatrix}$$