Math 3160 - Quiz 4

Name:_____

1. Find the determinant of the following matrices by row reduction. $A =$
$$\begin{bmatrix} 1 & 2 & 3 \\ 0 & 2 & 3 \\ 0 & 0 & 3 \end{bmatrix}$$

2. Find the determinant of the following matrices by any method. $B =$
$$\begin{bmatrix} 1 & 0 & 3 \\ 1 & 2 & 0 \\ 0 & 2 & 3 \end{bmatrix} \text{ and } C = \begin{bmatrix} 1 & 1 & 1 \\ k & k & k \\ k^2 & k^2 & k^2 \end{bmatrix}$$

3. Use Cramers's rule to solve the following SLE (Sytem of Linear Equations).
$$\begin{cases} 4x & -2y & +z & = 1 \\ & & +4z & = 12 \\ & y & -z & = 3 \end{cases}$$
$$\begin{cases} x & -2y & & = 0 \\ x & +3y & +z & = 5 \\ & & -z & = -1 \end{cases}$$

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